Data Management Plan

Oceanographic Data Types and Standards: Collectively, the PI's and collaborators will be responsible for coordinating data collection, data QA/QC, data sharing, and data archiving. The primary types of observational data will include the following: Cell counts of plankton populations sorted by flow cytometry, particulate nitrogen concentrations and δ15N (bulk and population-specific), nitrate $\delta^{15}N$ and $\delta^{18}O$ from water samples, and molecular sequences (18S rDNA and microbial meta-transcriptomics).

Metadata for each of type of measurement will be collated into a single file. Submission of these data will be linked to the mean CTD-bottle data (pressure, temperature, salinity, calculated density, dissolved oxygen, fluorescence, turbidity and nutrients) that are generated by the HOT program, so that the data are in a useful format, both to us and to our colleagues who are interested in collaborating and sharing data.

Policies for Access and Sharing: Within two years of collection and analysis, our **observational data** will be made available by sending the quality-controlled data to the BCO-DMO (Biological & Chemical Oceanography Data Management Office) following their submission guidelines. After unit conversion, quality control, and sample processing are complete, the data will be uploaded and made publicly available at http://bcodmo.org/data. The data can be downloaded in Excel, Matlab, netcdf, and ODV file formats.

Sequences obtained through Illumina high-throughput sequencing platforms will be stored in long-term storage space provided to UNC researchers by UNC-CH Research Computing and deposited in public sequence databases: all large sequence libraries will be deposited into the Sequence Read Archive (SRA) managed by NCBI. Further processed sequence data files will be made available on the PIs laboratory websites.

Policies and Provisions for Data Use and Distribution: There will not be any permission restrictions placed on the data.

Plans for Internal Data Sharing: The investigators (Granger, Marchetti and White), graduate students, and the post doc will communicate at least once a month using phone conferencing. All will share an internal website for data assimilation. Participants will meet annually at conferences to discuss project planning, progress, and experimental design. The graduate students will also spend time at UH to interact with collaborators. Jointly, these activities will ensure extensive communication among the project participants.