Resource Sharing and Data Management Plan

We have read and agree to abide by NSF-wide guidelines and award conditions for scientific conduct and data management. Results, data, and collections will be made available to qualified researchers upon request, provided that the quantities and time requirements for compliance do not compromise our research objectives. We will also address and document data sharing issues in annual and final reports. Finally, we fully agree to release all data generated by this study at the conclusion of the project, even if it is prior to publication of that data in peer-reviewed manuscripts. 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.

Products of the Research: Data will be disseminated to peers, prior to publication through research seminars, oral and poster presentations at conferences by PIs and students. Protocols are a major product of this research: along with their dissemination through lectures and the proposed workshop, it is our intent to make these freely available through the *protocols.io* portal where they will be given a readily identifiable DOI and be searchable and citable). For informatics and modeling work that is involved, we will include code generated as part of the workflow (linked *via* GitHub).

As required by NSF, all oceanographic data will be deposited in the Biological and Chemical Oceanographic Data Management Office (BCODMO) no later than two years after its collection (even if that occurs before publication). We note that all field work in our proposal involves "cruises of opportunity" as guests aboard HOT cruises, and as a complement to the data submitted by HOT, we will also submit, within one year after the cruise:

1. Diel profiles of surface mixed layer HOOH concentration: in situ HOOH concentrations will be measured from samples collected over the diel by the on-board seawater sampling system. File types: Excel files.

2. HOOH (light) production rates: Photochemical rates of HOOH production (in filter-sterilized seawater) will be measured in seawater collected at a mixed layer depth. File types: Excel files.

3. HOOH and phytoplankton dynamics: HOOH and cell abundance data will be collected from the HOOH, nutrient, and community manipulation experiments in on-deck incubators. File types: Excel files.

Data Format: All data will be preserved as standard Microsoft Office formats (Word, Excel) and backed up as PDF files to ensure ready access to anyone with a freely available PDF reader. In cases where there are not standard sharing sites for data, we will post data as model results associated with *protocol.io* approaches (this is particularly useful for "negative data").

Access to Data and Data Sharing Practices and Policies: The labs of the senior personnel involved in this project follow general policies concerning the free distribution of data and will provide access to any dataset generated from this work upon request. The datasets will either be transmitted to the requesting party electronically, or will be archived on a CD and mailed if necessary. The availability of the data sets will be communicated to research peers at conferences well before publication, and all data will be fully reported as supplemental material if allowed by the journal and deposited in appropriate databases. It is our intent to publish results in open-access journals to make dissemination as broad as possible.

Policies for Reuse, Redistribution, and Production of Derivatives: The data acquired and preserved in the context of this proposal will be further governed by The University of Tennessee's (UT's) policies pertaining to intellectual property, record retention, and data management. Reuse of all processed data published in scientific journals is subject to policies of the journals, although we will share unprocessed data freely to allow others the opportunity to mine data sets.

Archiving of Data: All original data will be archived on several computers and stored on portable hard drives as copy. Automated backup occurs with offsite server (*e.g.*, at the University of Tennessee all biological databases are backed up daily and stored for a period of weeks). For individual databases, PIs will be responsible for backing up data as it is generated. For example, the Zinser lab uses a three level back up system (1 local, one campus server and one offsite). University of Tennessee faculty and staff has access to three unlimited cloud storage options offsite of labs thanks to agreements with both *Microsoft* and *Google*. Sharing of this information (when requested) is as simple as a click and inserting an email address to share the file.