Data Management Plan

1. **Types of Data**

   The project will collect and analyze the following data:

   - Conductivity and temperature from mooring and shipboard survey.

   - Horizontal currents from Lowered ADCP and moorings.

   - Finescale temperature from CHIPODs and moored thermistor chains.

2. **Data and Metadata Standards**

   Data will be shared in matlab MAT file format and/or as netCDF files. Data quality will be in accord with published uncertainty ranges for each instrument and within error bars for standard processing techniques. Metadata will include the instrument number, relevant instrument diagnostics, and the location and time of the measurement. Waterhouse and Kelly will be responsible for LADCP-CTD-χpod analysis and mooring data analysis. Kelly will be responsible for ongoing model output.

3. **Data access and sharing**

   All field data collected under this program will be made available as per NSF guidelines within 2 years of collection via published manuscripts, publicly available final reports to NSF, and data archiving with NODC (see below). Recognizing that any individual PI server may become unavailable over time, data will be made available by PI website locations and also by specific request to any colleague.

   The model codes to be employed are all public domain. Published peer-reviewed manuscripts will document the simulations and forcing sufficiently. After the models are verified, any new software and/or setup files will be available for download as open-source software on Kelly's public website. Numerical algorithms will be reported in public presentations and permanently preserved in journal articles. Model products and output will be available at the end of the grant period.

   Ship-based data are collected and sent to appropriate data centers via the Rolling Deck to Repository (R2R) program (http://www.rvdata.us), which is developing fleet-wide management of underway data to ensure preservation of and access to our national oceanographic research data resources.

4. **Data archiving and preservation**

   Aside from the LADCP-shipboard CTD profiles, there are currently no established standards for archiving data from many of the fine-scale sensors used in T-Beam. This is a concern of the Climate Process Team on Ocean Mixing, of which Waterhouse is a member. Presently, Waterhouse is involved in the development of a standard method for formatting and archiving this type of data for public use. We will upload our data to the planned microstructure repository as soon as possible. Field data will be provided to NODC upon project completion. Adequate archiving is anticipated to be an expensive, time-consuming task. Waterhouse and Kelly have included funds for this effort in their budgets.