Data description: This project will collect several types of data, including time-series data on natural stable isotope abundance from organisms and particulate organic matter, experimental data on isotope turnover times and fractionation, and time-series data on fatty acids and compound-specific stable isotopes of fatty acids. Field data will be geo-referenced with GPS coordinates and depth data where appropriate. Experimental data will include metadata on experimental protocols and conditions. In addition, we will rely on data collected by other projects, particularly data on primary production and community structure from Santa Barbara Coastal LTER, and data on phytoplankton production from UCSB-based Plumes and Blooms.
Data management: Our data management will be coordinated with Santa Barbara Coastal LTER Information Management System (IMS) which has been developed to facilitate multidisciplinary research by focusing on ease of access, data organization and integrity, and long-term preservation. The IMS is closely integrated with the Marine Science Institute (MSI), the Institute for Computational Earth Systems Science (www.ICESS.ucsb.edu), and the Ecoinformatics program at the National Center for Ecological Analysis and Synthesis (NCEAS.ucsb.edu). PI Page and postdoc Miller will interact with the IMS staff to ensure efficient operations; both are familiar with the organization of the IMS. Students will be trained in use of the IMS whenever appropriate.

Metadata used in the IMS are based on the network standard, Ecological Metadata Language (EML) with some compatible XML schemas to meet local needs. The data framework contains metadata content, data inclusion, and quality control of metadata and data. Datasets are co-managed by IMS staff and the data owners. *Morpho* is a metadata management tool created for ecologists to manage their metadata and data for publication, and will be used by this project. Morpho was created with support from NSF (with additional support from NCEAS) by the Ecoinformatics group at NCEAS (http://knb.ecoinformatics.org/software/). SBC leverages the Marine Science Institute (MSI) and the UC Santa Barbara campus network infrastructure, and works closely with the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCOweb.org), the Moorea Coral Reef LTER (MCR.lternet.edu), the Institute for Computational Earth Systems Science (www.ICESS.ucsb.edu), and the Ecoinformatics program at the National Center for Ecological Analysis and Synthesis (NCEAS.ucsb.edu). SBC has a dedicated Information Manager with contributions from the project coordinator. Both primary data and metadata, in addition to being made available through the IMS system described above, will be provided to The Biological and Chemical Oceanography Data Management Office (BCO-DMO) for storage and dissemination.

Regular scheduled data backups are carried out by staff from PISCO, MSI and UCSB. Full backups (level 0) are performed monthly, with incremental (level 5) and progressive incremental (level 9) backups weekly and daily, respectively. Five months of disk-to-disk backups are stored on the server, with storage space allocated to the /backup partition as necessary. Disk-to-disk backups are also transferred to a LTO-3 tape drive with appropriate software for offsite archive.