SBC LTER Food web Studies Using Stable Isotopes
Sediment
Field and Laboratory Protocol

Field Collection

In May 2002, SBC LTER collected sediment samples from four core research sites in the Santa Barbara Channel (Arroyo Quemado 34.4677^0 N 120.1193^0 W, Carpinteria 34.3902^0 N 119.5399^0 W, Mohawk 34.3944^0 N 119.7300^0 W and Naples 34.4239^0 N 119.9503^0 W). Divers used acid-washed glass jars to collect sediment samples at distances of 0, 50, 100, 250, 500 and 1000 meters offshore of the nearest terrestrial runoff source at each site. Two samples, 10 meters apart, were collected at each distance. Samples were transferred to coolers or buckets and transported back to the laboratory.

Laboratory Sample Processing

All samples were labeled with date, site, distance and replicate number and then dried in a drying oven set at 60^0 C. The samples were then individually ground using a ceramic mortar and pestle. The mortar and pestle is cleaned with 70% EtOH and dried each time the sample distance or site changed. Replicate samples from the same distance and site were ground consecutively and the mortar and pestle was cleaned between the samples by vigorous scrubbing with a Kim wipe tissue. All other tools used in the sample processing (forceps etc.) were cleaned whenever the distance or site changed. After grinding, the samples were placed in labeled plastic scintillation vials and stored in either the drying oven or in a dessicator to prevent moisture contamination.

Samples are sent to the University of California at Santa Barbara Marine Science Institute Analytical Lab (http://www.msi.ucsb.edu/analab/analabtexts/analab.htm) for isotope analysis.

Data Reporting

The MSI Analytical lab emails the data in ASCII or excel format to the email address provided on a sample submission sheet. These data are then incorporated into the appropriate dataset.