

J. DATA MANAGEMENT PLAN

General: The PIs will comply with the data management and dissemination policies described in the *NSF Division of Ocean Sciences Sample and Data Policy (NSF 17-037)*. Data generated from this project will be maintained on physical external hard discs and loaded to a remote cloud-based server. Powers will be responsible for overseeing all data management tasks for the project, including being the primary person responsible for ensuring compliance with the Data Management Plan.

Mechanisms and Policies for Access, Sharing, Re-Use, and Re-Distribution: The oceanographic data, cruise deployment information, data sets, and derived data products stemming from this project will be made publicly available within two years following data generation. Data resulting from this project will be made available through the archive network managed by Biological and Chemical Oceanography Data Management Office (BCO-DMO). Before posting the final data to BCO-DMO, the data will be verified by the PIs. Ship meteorological data, surface seawater salinity and temperature data, and CTD metadata will be submitted through the Rolling Deck to Depository program. We will adhere to and promote standards, policies, and provisions for data and metadata submission, access, re-use, distribution, and ownership as prescribed by the BCO-DMO Terms of Use. The educational website proposed in the Broader Impacts will be hosted by SUNY-ESF and will be publicly available.

Description of Metadata Types: The primary metadata generated from this project that will be submitted to BCO-DMO include (1) CDOM absorption spectra and DOC concentrations in marine samples, (2) C1 – C3 compound (DIC, CO, formate, acetate, formaldehyde, acetaldehyde, glyoxal, glyoxylate, pyruvate, and acetone) photoproduction rate data, (3) spectral irradiance data, and (4) temperature-dependent apparent quantum yield spectra for C1 – C3 compounds.

Broad Dissemination of Final Data and Findings: The PIs will publish findings from this work in journals such as *Limnology and Oceanography* and *Marine Chemistry*. All journal-specific data access policies will be abided and references made to the BCO-DMO database. The PIs, postdoctoral researcher, and graduate student will also present their findings at national conferences such as the AGU/ASLO Ocean Sciences Meeting. Data and findings generated from this project will also be the basis for a Ph.D. dissertation, which will be made available upon submission, and at least two undergraduate students' senior research projects.