Data Management- van Woesik and Burkepile 2018

All data used in this study will be managed by the Biological and Chemical Oceanography Data Management Office (BCO-DMO) at Woods Hole (http://bco-dmo.org/data/). For example, the data for van Woesik's recent NSF sponsored project (NSF OCE-1219804) on coral diseases is located on the BCO-DMO website at: http://www.bco-dmo.org/project/562563. Data for the active NSF grant, **Adjustment of western Pacific Ocean coral reefs to sea-level rise and ocean warming,** is located at: https://www.bco-dmo.org/node/709534/. Additionally, the data for Burkepile's recent NSF sponsored projects (NSF OCE-1130786 and NSF OCE-1547952) are located on the BCO-DMO website at http://www.bco-dmo.org/project/529590 and http://www.bco-dmo.org/project/628989 respectively.

The amount of data this project will be considerable. Successful completion of objectives and comparisons relies on quality control and data management starting early and continuing throughout the program. Microsoft Access ® will be used to create a relational database where all data from all study sites will be entered and also kept at Florida Institute of Technology as a central repository. Using a comprehensive relational database provides a means of quality control to ensure all required data are collected and entered, and will ease comparisons without wasting time deciphering individual Excel worksheets, which vary across users.

This database will allow external researchers to query specific information based on these shared attributes, thus creating new spreadsheets ready for new analyses. The key to successful queries lies in the proper linkage of data-tables. The required tables for this project are listed below with the required attributes: Site information (Longitude, Latitude, Year, Month, Date, average Depth, and Exposure), Coral, Cover, Bleaching, Disease, Habitat, MPA, Species, and Region. All the environmental data will also be available in the relational database. Data for the current proposal will be also made available to BCO-DMO by early 2019, in the 2nd year of the project (which will end at the end of spring 2019). As in previous awards, van Woesik will make available all the data-analysis code (both the R code and JAGS) by mid-2019. There will be line by line annotations within the body of the code. R. van Woesik has a policy that all newly written code that comes for his lab should be shared so that the field moves forward, but also that there is an archived record which is repeatable, annotated, and sharable.

The project will employ a dedicated technician for ensuring data have gone through quality assurance, and are properly curated and accessible. The technician, working with the PIs, Post-doc and PhD student, will be responsible for the database and ensuring that is it fully functional and shared widely with the coral reef community. This person will also be instrumental in our outreach to the community of reef conservationists and managers.