**Chlorophyll-a threshold analysis to assess eutrophication and HABs risks in the coastal ocean**

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Biogeochemistry and Biology Departments JPA proposal 2018-2019

The goal of the proposed project is to identify chlorophyll thresholds in order to assess eutrophication status in the Southern California Bight (SCB).

Eutrophication of coastal waters remains a priority issue for managing impacts of anthropogenic nutrient inputs. Chlorophyll-a, a common indicator of eutrophication, has been the focus of national scale risk assessments for harmful algal blooms (HABs), and is currently part of the SWRCB’s biostimulatory objectives for nutrient management in California. Sutula et al. (2017) recently developed a statistical approach to identify chlorophyll-a thresholds in San Francisco Bay that have become the basis to assess nutrient over-enrichment and eutrophication status in SFB. These thresholds constitute tipping points, beyond which water quality becomes degraded. The proposed project will build on previous work in SFB, and develop regionally-specific chlorophyll-a thresholds that are protective of human and aquatic life uses in the SCB. Existing historical datasets of chlorophyll-a and HAB measurements will be used as the basis for the assessment.

JPA funds will be used for SCCWRP scientists to collate existing monitoring data on HABs and chlorophyll-a, conduct the analysis of existing data, and summarize the findings in a published manuscript.

Total Project Cost: $50K

The budget requested is for personal time for Meredith Howard (Lead) (25 days), Marcus Beck (20 days), and Martha Sutula (2 days).