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## State Water Resources Control Board

October 25, 2016

Dr. Daniele Bianchi  
UCLA Institute of the Environment and  
Sustainability  
La Kretz Hall, Suite 300  
Los Angeles, CA 90095-1496

Dear Dr. Bianchi:

This letter is to convey our support to participate as a science partner in proposed project titled "*Integrated Modeling of Harmful Algal Genus Pseudo-Nitzschia to Support Ecosystem Prediction and Environmental Management in the Southern California Current System*", being submitted to the NOAA National Ocean Service's National Competitive Harmful Algal Bloom Programs: The Ecology and Oceanography of Harmful Algal Blooms (ECO HAB) for funding.

I understand that the proposed study will: 1) build off the existing coupled physical and biogeochemical model of hypoxia and acidification of the California Current Large Marine Ecosystem (CCLME) to add predictions of domoic acid (DA) production, focusing on the regions of San Francisco Coast, Central Coast and Southern California Bight, 2) use the model in hindcast mode to understand the relative contributions of anthropogenic nutrients, pCO<sub>2</sub>, and temperature on DA production, and 3) transmit these findings to coastal zone managers and help them explore their implications for marine resource management and pollution control.

Elevated levels of domoic acid are having major impacts on California's commercial and recreational shellfisheries, including Dungeness crab and rock crab, leading to health advisories and fishery closures. Last year alone the economically important Dungeness crab season was delayed several months due to elevated levels of domoic acid. Nutrient loading from land-based activities is believed to exacerbate HABs such as Pseudo-Nitzschia, but controlled experiments are not possible fully to test this hypotheses. A model is needed to fully explore how land-based discharges have the potential to impact the PN blooms and domoic acid production in coastal waters. Integrating HABs with the existing ROMS acidification and hypoxia model makes great sense, as it will allow us an opportunity to look at impacts to designated uses from multiple stressors.

My organization pledges to provide support this project providing technical review of the products of this proposed project and to work with the project team to translate the findings to state and regional water quality control board agencies and other key stakeholders.

I pledge support for this project and look forward to working with you, should it be funded. If you have any questions please contact Mr. Rik Rasmussen of my staff at (916) 341-5541 (e-mail [rik.rasmussen@waterboards.ca.gov](mailto:rik.rasmussen@waterboards.ca.gov) )

Sincerely,



Jonathan Bishop  
Chief Deputy Director