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To whom it may concern –

This letter is to convey my strongest support for the proposal “Integrated modeling of the U.S. West Coast and Southern California Bight”. The proposed work will integrate physical, biogeochemical, and ecosystem models of the California Current, Southern California Bight, and Monterey Bay to assess how nutrient loading from the land impacts ocean pH, dissolved oxygen, and species assemblages. Nutrient loading from land-based activities is believed to exacerbate ocean acidification and hypoxia (OA/H), but controlled experiments are not possible to test hypotheses. A model is needed to fully explore how land-based discharges have the potential to impact the pH and dissolved oxygen in coastal waters. Model results will inform future management actions and policies aimed to reduce OA/H. It should be noted that preliminary work in the Southern California Bight and Monterey has already identified that deep water hypoxia appears to be pervasive. So an understanding of OA/H triggers in this region is urgently needed.

I am currently the chair of the State of California and Oregon Ocean Acidification / Hypoxia Panel that is bringing together experts to address key questions regarding the causes and effects of OA/H in California and Oregon waters. We had our kick off call in May of 2013, so our work has just begun. However, the issue of OA/H impacts from land-based runoff has already been discussed at length during the first call. Clearly, this will be an important topic of discussion during the panel deliberations over the next year. I expect that a major need that will be identified by the panel will be models that aim to quantify the effects of land-based runoff on OA/H. Thus, the UCLA proposal to create such a model is both serendipitous and timely.

Sincerely,

Alexandria Boehm



EDMUND G. BROWN JR.  
GOVERNOR



MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## State Water Resources Control Board

February 15, 2013

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

Dr. Gold:

I am writing to support the project titled "Integrated modeling of the US West Coast and Southern California Bight", the principal investigators for which are Jim Williams and Curtis Deutsch, being submitted to the Ocean Protection Council for funding.

This study will assist the State Water Resources Control Board (State Water Board) staff to better understand the complexity of the fate, distribution, transformation and biogeochemical processes of nutrients and their impact on ocean acidification. At present, some monitoring efforts conducted in the Southern California Bight show that hypoxia and ocean acidification may be impacting our coastal areas. Consequently, the beneficial uses of ocean waters may be at risk. Currently, the influence on hypoxia and ocean acidification from anthropogenic inputs in rivers, storm water and wastewater treatment discharges is unknown.

On March 15, 2011, in Resolution 2011-0013, the State Water Board adopted the California Ocean Plan Triennial Review and Work Plan for 2011-2013. Issue 13 in the Triennial Review, which was decided to be a high priority, acknowledges the need for research to address and understand ocean acidification.

Partnering of the principal investigators with the Southern California Coastal Water Research Project (SCCWRP), using historical data from Bight '08 and from the current monitoring efforts in Bight '13, will provide data for the establishment of the model's boundary conditions and calibration of the model output. This model proposal would contribute valuable information that may be used in the future to refine the water quality objectives in the California Ocean Plan, and future management strategies for ocean acidification and hypoxia off the California coast.

The State Water Board supports this project and we look forward to the results of this valuable scientific effort.

Sincerely,

A handwritten signature in cursive script that reads "Jonathan Bishop".

Jonathan Bishop  
Chief Deputy Director

cc. Cat Kuhlman, Executive Director, Ocean Protection Council.



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL OCEAN SERVICE**  
**National Marine Sanctuary Program**

**West Coast Region**  
99 Pacific Street, Bldg. 200, Suite K  
Monterey, CA 93940

June 25, 2013

The Honorable John Laird, Chair  
California Ocean Protection Council  
California Natural Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Dear Chairman Laird:

As West Coast Regional Director for the Office of National Marine Sanctuaries, I am writing to express our Program's support for funding of the "Integrated Modeling of Ocean Acidification and Hypoxia for the U.S. West Coast and Southern California Bight". The Sanctuary Advisory Councils for the five national marine sanctuaries on the West Coast have identified ocean acidification as a major threat to sanctuary resources. To that end, staff from the west coast national marine sanctuaries, representatives from the advisory councils and outside subject matter experts developed the National Marine Sanctuaries of the West Coast Ocean Acidification Action Plan in August of 2011.

The products generated from the integrated modeling project regarding the effects of nutrient loading from land based sources on ocean acidification and hypoxia under consideration by the Ocean Protection Council (OPC), are critical to the overall understanding of these problems within national marine sanctuaries and the California Current ecosystem. These products will also help address some of the research strategies found in our Ocean Acidification Action Plan. I urge the OPC to fund this project.

We continue to value the partnership between the California Natural Resources Agency, the California Environmental Protection Agency and the Office of National Marine Sanctuaries. Thank you for your continued leadership on ocean issues.

Sincerely,

William J. Douros  
Regional Director

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**National Marine Sanctuary**  
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Port Angeles, WA 98362

**Cordell Bank**  
**National Marine Sanctuary**  
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Olema, CA 94950

**Gulf of the Farallones**  
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**Channel Islands**  
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