



South Orange County Wastewater Authority

October 20, 2008

Ms. Joann Cofrancesco  
Environmental Resource Engineer  
Compliance Assurance Unit  
Regional Water Quality Control Board  
San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA. 92123-4340

Re: CAU:01-0175

Dear Ms. Cofrancesco:

Enclosed you will find a revised Supplemental Environmental Project (SEP) application describing the South Orange County Wastewater Authority's proposed project. This revision includes additional information detailing how the SEP funds would be apportioned within the South California Coastal Water Research Project's Bight 08 Harmful Algal Bloom study. If you have any questions, I can be contacted at (949) 234-5421.

Very truly yours,

SOUTH ORANGE COUNTY RECLAMATION AUTHORITY

A handwritten signature in black ink, appearing to read 'Tom Rosales', written in a cursive style.

Thomas R. Rosales  
General Manager

TR/bf

cc: File

CALIFORNIA REGIONAL WATER QUALITY CONTROL  
BOARD  
SAN DIEGO REGION  
(SDRWQCB)

SUPPLEMENTAL ENVIRONMENTAL PROJECT APPLICATION FORM

Project Requested by South Orange County Wastewater Authority

Name of Project Bight'08 Offshore Water Quality Study

Date of Request October 07, 2008

Point of Contact Brennon Flahive

Phone (949) 234-5419

E-mail bflahive@socwa.com

Project Summary: This project would characterize the extent magnitude and ecological significance of harmful algal blooms to identify the major nutrient sources to the Southern California Bight (SCB) region that may fuel those blooms. The Supplemental Environmental Project (SEP) funds will be used to enhance the Southern California Bight (Bight'08) Water Quality Study. The goal of the Bight'08 water quality study is to quantify nutrient inputs to the coastal ocean and measure the influence of nutrients on algal bloom events, particularly harmful algal blooms ("HABs") that negatively impact the environment, human health, marine wildlife and/or coastal economies. This is a large study, in excess of \$1 million, with over two dozen collaborating agencies including regulatory, regulated, university and nongovernmental organizations. The SEP funds will be used to augment Bight'08 to increase the information in the area of concern.

Total Life Cycle Cost for Project:

Ship contract	\$15,000
Discrete sample analysis	\$15,000
Data analysis and reporting	<u>\$ 7,500</u>
<b>Total Project Cost</b>	<b><u>\$37,500</u></b>

Project Water Body: Pacific Ocean in the Southern California Bight.

Project Proposed Start Date and Time Line:

The ship based field sampling period is from February, 2009 to June 2009. A sample summary report for the RWQCB can be completed by July 2009. The laboratory analysis and subsequent data analysis will occur between July 2009 and June 2010. A Final Report will be completed by September 2010.

Organization Sponsoring Project (tax I.D. #) 95-264605

Name of Project Manager: Mr. Ken Schiff Phone (714)- 755-3202

Designated Project Trustee: Southern California Coastal Water Research Project SCCWRP

Description of Project Trustee capability or commitments to ensure that the project will be completed: SCCWRP has been conducting ocean monitoring studies for 35 years. The San Diego RWQCB executive officers serve on the SCCWRP Board of Commissioners ensuring timely completion of the study.

Statement of Project Trustee ability/authority to receive and disburse funds:

SCCWRP has the ability to receive and disburse funds. SCCWRP currently holds several contracts with the RWQCB.

#### DETAILED PROJECT INFORMATION

1. PROPOSAL DESCRIPTION: Perform offshore water quality monitoring in the SCB to establish the relative nutrient contributions of four major sources: upwelling, POTW discharge, atmospheric deposition, terrestrial coastal runoff. Characterize the spatial and temporal patterns of algal blooms, the effects of the blooms with an emphasis on *Pseudo-nitzschia* and domoic acid. The monitoring will further characterize the specific water quality conditions associated with the blooms. This project would include additional water quality monitoring for nutrients that may contribute to harmful algal blooms. The SEP funds from South Orange County Wastewater Authority will be used to collect ship based biological, chemical and physical measurements and to analyze samples and data. The specific measurements that will be collected include CTD profiles (temperature,

salinity, dissolved oxygen, turbidity and chlorophyll fluorescence), chlorophyll a, nutrients (including nitrate, nitrite, phosphate, silicate, urea, particulate nitrogen, total dissolved phosphorus, total nitrogen, total phosphorus), domoic acid and Pseudo-nitzschia cell counts. While measurements will be taken throughout the Southern California Bight, the SEP funds will be used to collect data from the South Orange/North San Diego County area.

2. PROBLEM STATEMENT: Pseudo-nitzschia is a marine algae capable of producing the toxin domoic acid which can cause marine mammal, bird, and fish mortality. Due to the public health implications release of domoic acid and other algal produced toxins the California Department of Public Health monitors toxins levels in shellfish and closes both commercial and recreational harvesting when specific toxin levels are exceeded. Bioaccumulation of algal toxins through the food chain has been linked the marine mammal, bird, and marine animal mortality.

3. HOW WILL THE PROJECT BENEFIT WATER QUALITY AND BENEFICIAL USES?

The results of this project will contribute to evaluating regulatory decisions regarding nutrient discharge to coastal oceans and public health decisions during bloom events.

4. HOW WILL THE SUCCESS OF THIS PROJECT BE MEASURED?

Ultimately water quality managers would like to understand and reduce the manmade conditions which cause or contribute to harmful algal blooms.

5. DETAILED WORK PLAN

*Please See the Attached Detailed Work Plan for More Information:*

*I certify that the information provided in this application is an accurate and complete report of the costs, scope of work and expectations of this proposed project I am submitting to the SDRWQCB.*

SIGNATURE  Date 10/20/08