

**UCSD PROPOSAL FOR SERVICES**  
The Regents of the University of California  
University of California, San Diego

UCSD# **20124840**

<b>Principal Investigator:</b>		<b>Co-Principal Investigator:</b>
Last Name	<b>Terrill</b>	<b>Thomas</b>
First Name	<b>Eric</b>	<b>Julie</b>
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Agency Name	<b>Orange County Sanitation District</b>	If applicable, include the following information:
Contact Name	<b>George L. Robertson/Senior Scientist</b>	Award #
Contact Phone	<b>Tel: (714) 693-7468</b>	PA/RFA/RFP, etc #
Street Address	<b>P.O. Box 8127</b>	Other required agency information, such as DUNS Number, etc.
City, State, Zip	<b>Fountain Valley CA 92728-8127</b>	<b>DUNS#: 17-610-4695 TIN#: 95-6006-144</b>
Proposal Title	<b>Orange County Sanitation District (OCSO) Outfall Diversion: Synthesis Report and Technical Review</b>	
Project Begin Date	<b>09/01/12</b>	Project End Date <b>08/31/13</b> Total Costs Requested <b>\$82,667</b>

Principal Investigator

  
Principal Investigator Signature: **Eric Terrill**

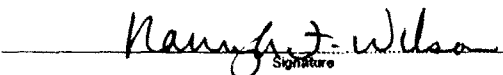
**6/18/2012**

Date

Co-Principal Investigator

Co-Principal Investigator Signature

Date

  
Signature

**8/8/12**

Date

**Nancy Wilson/Director of OCGA, Scripps Institution of Oceanography, UCSD**

Print or Type Name and Title

**Please send award documents as indicated below:**

☐ For General Campus and SIO Proposals

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University of California-San Diego  
Office of Contract and Grant Administration  
9500 Gilman Drive, Dept 0934  
La Jolla, California 92093-0934  
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University of California-San Diego  
Office of Contract and Grant Administration  
9500 Gilman Drive, Dept 0210  
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Phone # 858-534-4570  
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**Mailing Address: (U.S. Mail)**

**Office of Contract and Grant Administration  
Scripps Institution of Oceanography, UCSD  
9500 Gilman Drive  
La Jolla CA 92093-0210**

# Orange County Sanitation District (OCSD) Outfall Diversion – Synthesis Report and Technical Review



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## Background

The Orange County Sanitation District (OCSD) discharges its treated effluent from a 120-inch ocean outfall that terminates in 200 feet of water, approximately 4.5 miles offshore Newport Beach and Huntington Beach. The discharged plume typically stays well below the ocean surface and away from recreational (water contact) use areas. The District has a secondary, 78-inch outfall located in about 60 feet of water, 1 mile off the coast. From this discharge point, it is expected that the discharged effluent will rise to the water surface and into recreational use areas. OCSD's 2004 discharge permit allowed discharges through the 78-inch outfall only under emergency conditions. Avoidance of its use has been a key objective of plant construction and maintenance projects and OCSD developed detailed contingency plans for each one. In May 2007, the Southern California Coastal Observing System (SCCOOS) provided requested data and product support during planned ocean outfall repairs as a part of a monitoring contingency plan. These repairs took place in the early morning during low flows, and OCSD diverted and stored incoming and treated wastewater within the delivery and treatment systems during the one-day repair. SCCOOS provided local views of modeled surf zone waves and currents, near real-time meteorological observations, and surface currents for use by OCSD and the Orange County Health Care Agency.

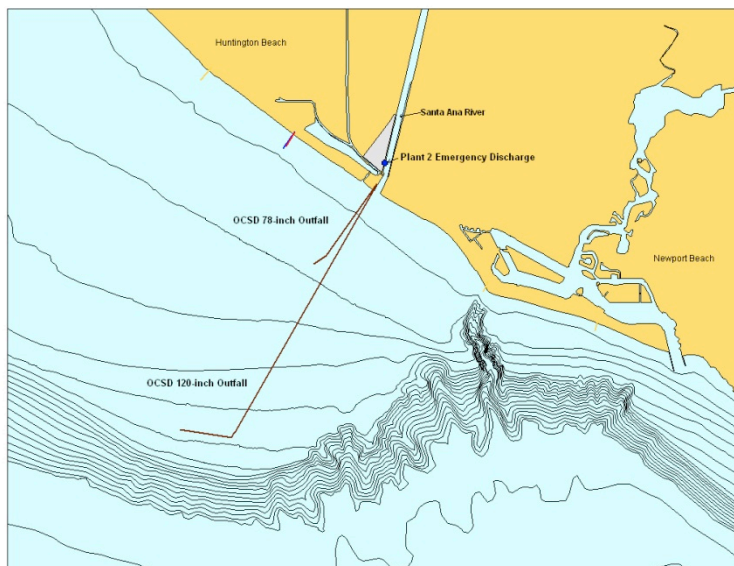


Figure 1. Geography of the OCSD Diversion

Under a new permit, slated to be issued in June 2012, OCSD will be allowed to use the 78-inch outfall for non-emergency plant operations. In September 2012, OCSD will divert flow from the 120-inch outfall to the 78-inch outfall as part of a project to inspect, assess, and rehabilitate the Outfall Land Section and Ocean Outfall Booster Pump Station Piping. OCSD has requested a report from SCCOOS and CeNCOOS synthesizing the results of the diversion's modeling and monitoring activities and a technical review of those activities and results highlighting successes, failures, and lessons learned.

## Statement of work

### Task I: Synthesis Report

SCCOOS will compile a synthesis report of the diversion project drawing on reports from the various groups performing effluent, shoreline, and offshore sampling, as well as nearshore and

offshore modeling. CeNCOOS will provide editorial and technical review of the synthesis report.

Components of the report will include

- An overview of the project, including historical perspective and project description
- List of participants and their affiliations
- Description of the monitoring, including a map of geographic location of the instrumentation, available metadata of the instrument specifications, sample rate and resolution of data collection, data analysis techniques, and quality control performed
- Description of the modeling efforts including model descriptions with forcing functions and validation
- Summary of the online visualization and data dissemination
- A summary of the findings from all the supplemental measurement and modeling components, as well as from the routine measurement programs

The supplemental monitoring and modeling efforts will include, but may not be limited to:

- 1.) 19 conductivity-temperature-depth (CTD) field stations located along the 10 m contour from Bolsa Chica to Crystal Cove State Beaches
- 2.) 48 offshore CTD and discrete water sampling stations
- 3.) 10 Microstar surface drifters deployed at the 78-inch outfall prior to the start of surveys
- 4.) 17 Fecal Indicator Bacteria (FIB) shoreline stations sampled at locations from Bolsa Chica to Crystal Cove State Beaches
- 5.) 2 glider tracks that will run continuously along the coastline from San Pedro shelf south to Crystal Cove State Beach measuring temperature, conductivity, chlorophyll fluorescence, CDOM, phycoerythrin fluorescence and backscatter (absorption wavelengths 550, 650, and 880 nm)
- 6.) If the onset of an algal bloom is detected, 5 “event surveys” will be triggered. These will consist of profiles of CTD, bio-optical (transmissivity, chlorophyll, and colored-dissolved organic matter (CDOM)) and discrete samples of phytoplankton, chlorophyll-a, nutrients, and phytoplankton toxins.
- 7.) Harmful Algal Bloom data collection at the existing SCCOOS Newport and Huntington Pier stations
- 8.) Offshore modeling of temperature, density, and currents using the Regional Ocean Modeling System (ROMS) Model

A more complete description of the efforts outlined above may be found in the Ocean Modeling and Receiving Waters Monitoring Work Plan available from OCSF. Data that are normally collected, including HF radar-derived surface currents, will also be included in the synthesis. Through a collaboration with the ECOHAB project, “*A Regional Comparison of Upwelling and Coastal Land Use Patterns on the Development of Harmful Algae Bloom Hotspots Along the California Coast*”, additional glider and ship-based sampling may be performed.

The synthesis report will provide the foundation for further technical review as to the effectiveness and efficiency of the overall plan.

## Task II: Technical Review Report

SCCOOS and CeNCOOS will jointly perform a technical review of the project and prepare a “lessons learned” report. The project as a whole will be evaluated throughout the various stages of planning, data collection, modeling, product development, reporting, and conclusions in order to identify the most useful and cost-effective methods to predict and mitigate environmental issues related to the diversion. SCCOOS and CeNCOOS representatives will present the technical review at OCSD offices. The report will provide the foundation for further determining best practices in ocean modeling and monitoring in support of future diversions to the 78-inch outfall.

The program as planned includes extensive measurements to monitor not just the location of the plume and the location and concentrations of bacteria, but also nutrient levels and changes in phytoplankton speciation and density. Additional measurements are also to be made in support of offshore modeling to predict the fate of the plume. The technical review report will include discussion of:

- The use of near real-time data from the gliders and other sources to guide adaptations to the shoreline and shipboard microbiology sampling
- The role of gliders as compared to boats or ships as measurement platforms
- The utility of deploying assets to collect data for assimilation into the ROMS model
- The success, or problems associated with, launching “event surveys” triggered by phytoplankton bloom conditions
- The role of HF radar in monitoring and predicting plume location, and value added by the surface drifters
- The role of data and information management and communications in keeping all parties informed, and any problems encountered therein
- The efficacy and success of utilizing regional assets and of developing collaboration with existing synergistic partnerships to further mutual project goals

In addition to identifying successes and problems encountered with the monitoring and modeling for this outfall diversion, recommendations will be made to correct any problems identified, and suggestions to fill any identified gaps in the monitoring and modeling elements will be given. Also, any components of the plan used in this diversion that appear to have been superfluous, or turned out not to be feasible, will be identified. The Report will include recommendations for revisions to the modeling and monitoring plan for use in future diversions.

### Schedule:

**Task I - Synthesis Report: Jan 31, 2013, or 90 days after data/metadata availability.**

**Task II – Draft Technical Report: Mar 31, 2013, comments from OCSD April 1 - April 20.**

**Task II - Final Technical Report: Jun 30, 2013**

**UCSD/SIO**

**Budget Justification**

**NOAA IOOS Proposal**

**PI: Eric Terrill**

**Period of Performance: September 1, 2012 – August 31, 2013**

**Task Title: Orange County Sanitation District (OCSD) Outfall Diversion –  
Synthesis Report and Technical Review**

*Salaries:*

This budget component represents costs associated with synthesizing a report (Task I) and performing technical analysis (Task II) of the Orange County Sanitation District (OCSD) planned outfall diversion. In tasks I and II, Coastal Observing Research and Development Center (CORDC) Director, Eric Terrill, is budgeted for overall program management. CORDC Operations Manager, Lisa Hazard, will perform coordination between participants and funding agency. Post-Doctoral Scholar, Peter Rogowski, will perform the majority of data fusion, analysis, and reporting.

*Supplies and Other Direct Costs:*

In tasks I and II, Costs have been included which are project specific costs related to communications, and computer software maintenance and consortium costs related to the use of laboratory computers supporting hardware and software development. These costs are allocated based on direct effort reported by staff in support of the proposed project. Funds are also requested for laboratory supplies that are necessary for the maintenance of SCCOOS servers, i.e., tools for mounting hardware for web servers/computers, dust spray, chem wipes, labels, and other computer-related maintenance items. Costs have been included for image processing for the technical report in task II. A Multiple Campus Award to University of California, Davis is budgeted for collaboration on the technical review of the OCSD diversion synthesis report in order to provide guidance of sampling effectiveness.

*Travel:*

In tasks I and II, travel costs are included for meetings in Los Angeles to a final review and discuss results with OCSD staff. This project has multiple collaborators internal and external to UCSD. External collaborators include the Monterey Bay Aquarium Research Institute (MBARI) and University of California, Davis. Due to the number of collaborators, the meeting may be scheduled very early in the mornings to ensure the full review can be completed in two days.

Orange County Sanitation District (OCSD) Outfall Diversion: Synthesis Report and Technical Review  
PROJECT PERIOD: September 1, 2012 through August 31, 2013

UCSD # 20124840

		YEAR 1 (TASK 1)		YEAR 1 (TASK 2)		TOTAL	
		Mos	Salary	Mos	Salary	Mos	Salary
<b>A/B. Salaries &amp; Benefits</b>							
E. Terrill/CORDC Director	MPL	0.10	2,269	0.15	3,403	0.25	5,672
P. Rogowski/PGR		0.25	1,519	1.00	6,076	1.25	7,595
J. Hazard/Programmer/Analyst IV - Superv		0.12	2,087	0.20	3,478	0.32	5,565
<b>Thomas, Julianna/Prog. Analyst IV</b>	<b>IGPP</b>	<b>0.70</b>	<b>11,376</b>	<b>0.24</b>	<b>3,900</b>	<b>0.94</b>	<b>15,276</b>
<b>Danielle Williams Admin Analyst</b>	<b>IGPP</b>	<b>0.54</b>	<b>2,888</b>	<b>0.38</b>	<b>2,033</b>	<b>0.92</b>	<b>4,921</b>
<b>Total Salaries &amp; Benefits</b>			20,139		18,890		39,029
<b>E. Travel</b>							
<b>Domestic</b>							
RT SD/LA							
Ground Transportation	MPL		142		142		284
Per Diem	MPL		250		250		500
<b>Ground Transportation</b>	<b>IGPP</b>		<b>142</b>		<b>142</b>		<b>284</b>
<b>Per Diem</b>	<b>IGPP</b>		<b>250</b>		<b>250</b>		<b>500</b>
<b>Total Domestic Travel</b>			784		784		1,568
<b>Total Travel</b>			784		784		1,568
<b>G. Other Direct Costs</b>							
<b>Materials and Supplies</b>							
MPL Supplies & Other Expenses			915		3,291		4,206
MPL Lab Support Services			1,293		2,851		4,144
<b>IGPP Supplies &amp; Other Expenses</b>	<b>IGPP</b>		<b>183</b>		<b>126</b>		<b>309</b>
<b>Supplies Total</b>			2,391		6,268		8,659
<b>Multiple Campus Award (to UC DAVIS)</b>	<b>MPL</b>		-		<b>16,667</b>		<b>16,667</b>
<b>Total Other Direct Costs</b>			-		16,667		16,667
<b>H. Total Direct Costs</b>			23,314		42,609		65,923
<b>I. Indirect Costs</b>							
MTDC - MPL Rate (18.0%) base		(Base)	8,475	(Base)	19,491	(Base)	27,966
<b>MTDC - IGPP Rate (55.0%) base</b>			<b>14,839</b>		<b>6,451</b>		<b>21,290</b>
<b>Total Indirect Costs</b>			9,687		7,057		16,744
<b>Total Direct and Indirect Costs</b>			33,001		49,666		82,667

RECAP TOTAL YRS 1 (Task 1-2)	Direct	Indirect	Total
Total MPL	44,633	5,034	49,667
<b>Total IGPP</b>	<b>21,290</b>	<b>11,710</b>	<b>33,000</b>
	65,923	16,744	82,667

## Orange County Sanitation District (OCSD) Outfall Diversion: Synthesis Report and Technical Review

Year 1: 09/01/12 through 08/31/2013 (TASK 1)

<b>SALARIES &amp; BENEFITS</b>	<b>FY Rates Beginning</b>	<b>Monthly Recharge Rate</b>	<b>No. Mos. Effective</b>	<b>% Salary or Effort</b>	<b>Total Person Mos</b>	<b>Subtotal</b>	<b>TOTAL</b>
E. Terrill	7/12	22,686	0.10	100%		2,269	
CORDC Director	7/13	25,521			0.10	-	2,269
P. Rogowski	7/12	6,076	0.25	100%		1,519	
Postgraduate Researcher	7/13	6,380			0.25	-	1,519
J. Hazard	7/12	17,390	0.12	100%		2,087	
Programmer/Analyst IV - Superv	7/13	20,542			0.12	-	2,087

Total person months 0.47

**SALARIES AND BENEFITS TOTAL 5,875****LABORATORY SUPPORT SERVICES**

\*\*22% of Total Labor less Overtime

**1,293****PROJECT SPECIFIC SUPPLIES, MATERIALS, & OTHER EXPENSES:**

Project Specific Communications, Mailing/FedEx, and Network Costs		100
Project Specific Laboratory Supplies		371
Project Specific Computer Software & OS Maintenance & Consortium Costs		
1 mos. @	\$ 444 /month	444

**SUPPLIES & OTHER EXPENSES TOTAL 915****TRAVEL**

<i>Domestic</i>	<i>Airfare/Baggage</i>	<i>Car/RF Per Diem</i>	<i>No. of Days/Bags</i>	<i>No. of Trips</i>	<i>Total</i>
Project Review					
RT SD/LA	\$ -			-	\$ -
Rental Car/Ground Transportation		\$ 71	2	1	\$ 142
Per Diem		\$ 125	2	1	\$ 250
					<b>TRAVEL TOTAL 392</b>

**TOTAL DIRECT COSTS 8,475****INDIRECT COSTS** (less equipment, tuition remission, subcontract cost in excess of \$25K)

<i>Tuition:</i>	0	<i>Base</i>	<i>OH Rate</i>	
<i>Equipment:</i>	0	8,475	18.0%	1,526
<i>Excluded from Indirect</i>	0			
<i>IDC on Subcontract(s):</i>				
<i>Subaward1</i>	0	0.0%		0

**TOTAL INDIRECT COST 1,526****TOTAL AMOUNT REQUESTED 10,001**

**Orange County Sanitation District (OCSD) Outfall Diversion: Synthesis Report and Technical Review**

**Year 1: 09/01/12 through 08/31/2013 (TASK 2)**

<b>SALARIES &amp; BENEFITS</b>	<b>FY Rates Beginning</b>	<b>Monthly Recharge Rate</b>	<b>No. Mos. Effective</b>	<b>% Salary or Effort</b>	<b>Total Person Mos</b>	<b>Subtotal</b>	<b>TOTAL</b>
E. Terrill	7/12	22,686	0.15	100%		3,403	
CORDC Director	7/13	25,521			0.15	-	3,403
P. Rogowski	7/12	6,076	1.00	100%		6,076	
Postgraduate Researcher	7/13	6,380			1.00	-	6,076
J. Hazard	7/12	17,390	0.20	100%		3,478	
Programmer/Analyst IV - Superv	7/13	20,542			0.20	-	3,478
Total person months					1.35		
<b>SALARIES AND BENEFITS TOTAL</b>							<b>12,957</b>

**LABORATORY SUPPORT SERVICES**

\*\*22% of Total Labor less Overtime

**2,851**

**PROJECT SPECIFIC SUPPLIES, MATERIALS, & OTHER EXPENSES:**

Project Specific Communications, Mailing/FedEx, and Network Costs	200
Project Specific Laboratory Supplies	1,853
Project Specific Computer Software & OS Maintenance & Consortium Costs	
2 mos. @ \$ 444 /month	888
Data Processing Supplies (Image Proc. & Photo)	350

**SUPPLIES & OTHER EXPENSES TOTAL 3,291**

Multiple Campus Award (UC Davis)

16,667

**MCA TOTAL**

**16,667**

**TRAVEL**

*Domestic*

Project Review

RT SD/LA

<i>Airfare/Baggage</i>	<i>Car/RF Per Diem</i>	<i>No. of Days/Bags</i>	<i>No. of Trips</i>	<i>Total</i>
\$ -			-	\$ -
	\$ 71	2	1	\$ 142
	\$ 125	2	1	\$ 250

**TRAVEL TOTAL 392**

**TOTAL DIRECT COSTS 36,158**

**INDIRECT COSTS** (less equipment, tuition remission, subcontract cost in excess of \$25K)

<i>Tuition:</i>	0	Base	OH Rate	
<i>Equipment:</i>	0	19,491	18.0%	3,508
<i>Excluded from Indirect</i>	0			

*IDC on Subcontract(s):*

Multiple Campus Award (UC Davis)	16,667	0.0%	0
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**TOTAL INDIRECT COST 3,508**

**TOTAL AMOUNT REQUESTED 39,666**

**UNIVERSITY OF CALIFORNIA, SAN DIEGO**  
 DETAILED BUDGET REQUEST FOR THE PERIOD FROM 09/01/12 - 08/31/13

**UCSD #2012-4840**  
**Orange County Sanitation District**  
**Task I - Report Synthesis**

SALARIES & EMPLOYEE BENEFITS:	* Monthly Salary Recharge Rate	Actual F/T Equivalent Person-Months Dedicated to Project	Total Salaries and Emp. Benefits Requested
Name and Payroll Title			
<b>Thomas, Julianna</b> Prog. Analyst IV	\$16,251	0.70	\$11,376
<b>Danielle Williams</b> Admin Analyst	\$5,349	0.54	\$2,888
*Salary recharge rate is calculated for actual productive time only (except for non-faculty academic sick leave, which is charged as direct). The rates include components for employee benefits, provisions for applicable merit increases and range adjustments in accordance with University policy. Staff overtime or remote location allowance may be required in order to meet project objectives, and separate rates are used in those cases.			
TOTAL SALARIES & EMPLOYEE BENEFITS			<u>\$14,264</u>

EQUIPMENT: (ITEMIZE)  
 None

\$0  
 TOTAL EQUIPMENT \$0

PROJECT SPECIFIC SUPPLIES, MATERIALS & OTHER: (ITEMIZE)

Computer Software and Printer Supplies	\$59
Computer Support	\$0
Project Specific supplies, materials, and other expenses: Including communications, conference/exhibit fees, etc.	\$124
TOTAL SUPPLIES, MATERIALS & OTHER	
	<u>\$183</u>

TRAVEL: (DESTINATION & PURPOSE-ITEMIZE TRANSPORTATION, PER DIEM & MISC.)

DOMESTIC	Air Fare	No. days	Per diem	Ground/ Car Rental	Baggage Fee	no.trips	Total
Meeting - LA (Mileage @ 0.555 cents per mile at 140 miles/round			\$250	\$142		1	\$392
TOTAL TRAVEL							<u>\$392</u>

TOTAL DIRECT COSTS \$14,839

INDIRECT COSTS: (based on modified total direct costs & negotiated rate with cognizant audit agency DHHS):

Rate: On-Campus	55.0%
*Base:	\$14,839
*Base is total direct cost less equipment and subcontract.	
INDIRECT COST	
	<u>\$8,161</u>

**TOTAL DIRECT & INDIRECT COSTS** **\$23,000**

**UNIVERSITY OF CALIFORNIA, SAN DIEGO**  
 DETAILED BUDGET REQUEST FOR THE PERIOD FROM 09/01/12 - 08/31/13

**UCSD #2012-4840**  
**Orange County Sanitation District**  
**Task II - Technical Review**

SALARIES & EMPLOYEE BENEFITS:	* Monthly Salary Recharge Rate	Actual F/T Equivalent Person-Months Dedicated to Project	Total Salaries and Emp. Benefits Requested
Name and Payroll Title			

<b>Thomas, Julianna</b> Prog. Analyst IV	\$16,251	0.24	\$3,900
<b>Danielle Williams</b> Admin Analyst	\$5,349	0.38	\$2,033

\*Salary recharge rate is calculated for actual productive time only (except for non-faculty academic sick leave, which is charged as direct). The rates include components for employee benefits, provisions for applicable merit increases and range adjustments in accordance with University policy. Staff overtime or remote location allowance may be required in order to meet project objectives, and separate rates are used in those cases.

TOTAL SALARIES & EMPLOYEE BENEFITS \$5,933

EQUIPMENT: (ITEMIZE)  
 None

\$0

TOTAL EQUIPMENT \$0

PROJECT SPECIFIC SUPPLIES, MATERIALS & OTHER: (ITEMIZE)

Computer Software and Printer Supplies	\$64
Computer Support	\$0
Project Specific supplies, materials, and other expenses: Including communications, conference/exhibit fees, etc.	\$62

TOTAL SUPPLIES, MATERIALS & OTHER \$126

TRAVEL: (DESTINATION & PURPOSE-ITEMIZE TRANSPORTATION, PER DIEM & MISC.)

DOMESTIC	Air Fare	No. days	Per diem	Ground/ Car Rental	Baggage Fee	no.trips	Total
Meeting - LA (Mileage @ 0.555 cents per mile at 140 miles/rou			\$250	\$142		1	\$392
TOTAL TRAVEL							<u>\$392</u>

TOTAL DIRECT COSTS \$6,451

INDIRECT COSTS: (based on modified total direct costs & negotiated rate with cognizant audit agency DHHS):

Rate: On-Campus 55.0%  
 \*Base: \$6,451

\*Base is total direct cost less equipment and subcontract.

INDIRECT COST \$3,549

**TOTAL DIRECT & INDIRECT COSTS \$10,000**

### ***SALARIES AND BENEFITS***

Labor costs are calculated on an individual basis and recharged on a direct hours worked basis. Included in each individual's rate are the costs for their individual benefit costs such as health, dental, vision, and life insurance, retirement, workman's compensation, unemployment, holiday, vacation, etc. Also included as a separate charge in the labor category are costs for overtime and remote location allowance for direct time spent at sea or in field experiments. These costs are determined by staff classification and/or union agreement and are calculated based on premium overtime hours (hours in excess of 40/week for non-exempt employees) or number of days deployed multiplied by a salary differential (for exempt employees) for each employee.

### ***LABORATORY SUPPORT SERVICES\****

Laboratory Support Services is a combined rate, currently 22%, which includes support for Laboratory Supplies and Expense and Laboratory Administrative Salaries and Benefits. These costs are detailed below.

Laboratory Supplies and Expense provides for the equitable assignment of those costs which, although allowable as direct charges to a contract or grant, are difficult or impractical to apportion by other means. Examples include charges for janitorial services, administrative telephones, payments in accordance with the terms of the tenancy agreement with the Space and Naval Warfare Systems Center for guard and fire protection services, buildings and ground maintenance, and fees for utility usage. These costs are prorated to individual projects in accordance with the salary related costs incurred by the project.

Laboratory Administrative Salaries and Benefits provide for equitable assignment of laboratory administrative personnel working in support of contracts and grants. Although allowable as a direct charge, it is difficult or impractical to apportion by other means. These costs are prorated to individual projects in accordance with the salary costs incurred by the project. The University indirect cost rate has been reduced to compensate for the direct charging of laboratory contract and grant administration.

### ***PROJECT SPECIFIC COSTS***

Project specific costs that include telephone equipment, tolls, voice and data communication charges, (these charges are distributed based on effort reported), photocopying, faxing, postage, and laboratory supplies are requested. Supply and expense items, categorized as project specific, and computer and networking services (these charges are distributed based on effort reported) are for expenses that specifically benefit this project, and are reasonable and necessary for the performance of this project.

### ***INDIRECT COSTS***

The date of the most recent indirect cost agreement was 5/12/10. The cognizant agency for the University is the Department of Health and Human Services. The contact is Janet Turner located at 50 United Nations Plaza, Suite 347, San Francisco, CA 94102-4918.

### ***FACILITIES***

The proposed rate is predicated on the use of off-campus Government owned facilities. These are located at the Space and Naval Warfare System Center, San Diego, California. These facilities are made available through agreements between the University of California, San Diego, and the Department of Navy.

### ***EQUIPMENT***

The equipment listed in this proposal is critical for our completion of the tasking under this proposal. The University, as a non-profit educational institution, hereby expresses its financial inability to acquire from its own resources any equipment required in the performance of the work hereby proposed. There is no financing available from private funding for a Government research project.

***TRAVEL***

Travel costs are based on quoted airfares from travel websites such as expedia.com. Per diem rates are a composite of the meal and hotel allowance of the US State Department's published rates (<http://www.policyworks.gov/org/main/mt/homepage/mt/perdiem/travel.shtml>) including state sales tax. Travel costs have been escalated 4% per year.

***PROJECT PRINCIPALS***

Scripps Institution of Oceanography partially supports the salaries of Professors, Associate Professors, Assistant Professors, Researchers and Associate Researchers.

**UCSD/SIO**  
**Budget Justification**  
**OCSD Proposal**  
**Co-PI: Julie Thomas, IGPP**

*Salaries:*

Salary funds are requested for Julianna Thomas who will serve as a co-Principal Investigator, assuring the proper documentation has been obtained from the participating agencies and academic institutions. She will oversee the report development and publication. Danielle Williams will serve in a coordinating role with the participants. She will compile the final reports and prepare it for distribution.

Salary recharge rates are calculated for actual productive time only (except for non-faculty academic sick leave, which is charged as direct). The rates include components for employee benefits, provisions for applicable merit increases and range adjustments in accordance with University policy, except postdoc rates which do not include components for downtime, so those rates are calculated for all working hours. Staff overtime or remote location allowance may be required in order to meet project objectives, and separate rates are used in those cases.

*Supplies and Other Direct Costs:*

Funds are requested for computer software and printer supplies that will cover the basic expenses for report development and publication.

Project specific costs that include research telephones, tolls, voice and data communication charges, photocopying, faxing and postage are requested. Supply and expense items, categorized as project specific, and computer and networking services are for expenses that specifically benefit this project and are reasonable and necessary for the performance of this project.

*Travel:*

Travel is budgeted for personal vehicle mileage for Julie Thomas to travel to planning and review meetings, typically held in LA, CA.

**Proposal to:**

University of California, San Diego  
9500 Gilman Drive, M/C 0214  
La Jolla, CA 92093-0214

**Submitting Organization:**

The Regents of the University of California  
Office of Research, Sponsored Programs  
1850 Research Park Drive, Suite 300  
University of California  
Davis, California 95618

**Title of Proposed Research:**

Orange County Sanitation District (OCSD) Outfall Diversion: Synthesis Report & Technical

**Total Amount Requested:**

\$ 16,667

**Proposed Duration:**

1 Year

**Desired Starting Date:**

9/01/2012

**Principal Investigator:**

John L. Largier

**Department:**

Bodega Marine Laboratory

**Phone Number:**

707-875-1930

**Checks Made Payable to:**

The Regents of the University of California


**Send Checks to:**

Cashier's Office  
University of California Davis  
PO BOX 989062  
West Sacramento, California 95798-9062

**Send Award Notice to:**

Office of Research  
Sponsored Programs  
1850 Research Park Drive  
University of California  
Davis, California 95618  
(530) 754-7700 / FAX (530) 754-8229  
vcresearch@ucdavis.edu


**Approvals:**

 6-22-12  
\_\_\_\_\_  
Principal Investigator Date

 6/22/12  
\_\_\_\_\_  
Department Chair Date

\_\_\_\_\_  
Dean, College/School Date  
(if required)

\_\_\_\_\_  
Other Endorsement Date  
(optional)

 6-26-12  
\_\_\_\_\_  
Official Signing for Organization Date  
Erlita Oliver  
Contracts and Grants Analyst, Sponsored Programs

**Statement of Work**  
*Review of OCSD<sup>1</sup> Outfall Diversion*

BML<sup>2</sup> will collaborate with CeNCOOS<sup>3</sup> head office in two tasks:

- Perform editorial and technical review of a report summarizing environmental data collected during the diversion. This Synthesis Report will be prepared by SCCOOS<sup>4</sup>.
- Work with SCCOOS to prepare a Technical Review Report, which will include a “lessons learned” report. The project will be evaluated throughout the various stages in order to identify the most useful and cost-effective methods to predict and mitigate environmental issues related to the diversion. The Report will include recommendations for revisions to the plan for use in future diversions. The Technical Review Report will be presented at OCSD offices.

**Budget Justification**  
*Review of OCSD Outfall Diversion*

Funds are requested to cover travel expenses to attend a meeting at OCSD offices in Orange County and to cover salary and benefits for Largier who will spend 0.5 month on the report tasks. He will be assisted in this work by Matt Robart.

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<sup>1</sup> OCSD = Orange County Sanitation District

<sup>2</sup> BML = Bodega Marine Laboratory (UC Davis)

<sup>3</sup> CeNCOOS = Central and Northern California Ocean Observing System

<sup>4</sup> SCCOOS = Southern California Coastal Ocean Observing System

## UNIVERSITY OF CALIFORNIA, DAVIS: BODEGA MARINE LABORATORY

## PROPOSAL TO: UC SAN DIEGO

TITLE: OCSD EDITORIAL/TECHNICAL REVIEW OF SYNTHESIS REPORT

Detailed Budget Request for the Period from SEPTEMBER1, 2012 to AUGUST 31, 2013

YR 1

## SALARIES &amp; EMPLOYEE BENEFITS:

Name and Payroll Title					Monthly Salary	Benefits Rate					Total Salary & Benefits Requested	
LARGIER	0.50	months @	100%	of	\$12,673	=	\$6,337	x	0.303	\$1,920	=	\$8,257
Principal Investigator												
ROBART	0.30	months @	100%	of	\$3,632	=	\$1,090	x	0.442	\$482	=	\$1,572
SRA II												
Name	0.00	months @	100%	of	\$0	=	\$0	x	0.000	\$0	=	\$0
Title												
Name	0.00	months @	100%	of	\$0	=	\$0	x	0.000	\$0	=	\$0
Title												
Name	0.00	months @	100%	of	\$0	=	\$0	x	0.000	\$0	=	\$0
Title												
Name	0.00	months @	100%	of	\$0	=	\$0	x	0.000	\$0	=	\$0
Title												
					Total Salaries		\$7,427	Total Benefits		\$2,402		
TOTAL SALARIES & EMPLOYEE BENEFITS												\$9,829

## SUPPLIES, MATERIALS &amp; OTHER EXPENDABLES: (ITEMIZE)

\$0  
\$0  
\$0  
\$0

TOTAL SUPPLIES, MATERIALS &amp; EXPENDABLES: \$0

## TRAVEL:

Domestic:

International:

One trip to UCSD for meeting with clients

\$994

\$0

TOTAL TRAVEL \$994

## MODIFIED TOTAL DIRECT COSTS:

\$10,823

## EQUIPMENT: (ITEMIZE)

\$0  
\$0  
\$0

Items above include tax and may be substituted with equivalent items

TOTAL EQUIPMENT \$0

## FEE REMISSION

Fees for starting quarter

Graduate Students:

0 students x

quarters @

\$0 per quarter

(University 25% buy-down)

TOTAL FEE REMISSION \$0

## SUBCONTRACT TO :

\$0  
\$0

TOTAL SUBCONTRACT \$0

## OTHER DIRECT COSTS:

\$0

INDIRECT COSTS: (federally negotiated rate based on Modified Total Direct Costs):

Rate: 54.0% of \$10,823 \$5,844  
of first \$25,000 each subcontract = \$0

## TOTAL INDIRECT COSTS:

\$5,844

TOTAL AMOUNT REQUESTED YR 1 \$16,667