OMB Number: 4040-0004
Expiration Date: 8/31/2016

Application for Federal Assistance SF-424

* 1. Type of Submission:	* 2. Type of Application:	* If Revision, select appropriate letter(s):
☐ Preapplication	☒ New	
☒ Application	☐ Continuation	* Other (Specify):
☐ Changed/Corrected Application	☐ Revision	

* 3. Date Received:	4. Applicant Identifier:
	Terrill Thomas 0686-2016 NOAA

5a. Federal Entity Identifier:	5b. Federal Award Identifier:
	NA11NOS0120029

State Use Only:

6. Date Received by State:	7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:	THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, SAN DIEGO

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
95-6006-144	1751045950000

d. Address:

* Street1:	9500 GILMAN DRIVE
Street2:	
* City:	LA JOLLA
County/Parish:	
* State:	CA: California
Province:	
* Country:	USA: UNITED STATES
* Zip / Postal Code:	92093-0210

e. Organizational Unit:

Department Name:	Division Name:
Marine Physical Laboratory	Scripps Inst of Oceanography

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:		* First Name:	William
Middle Name:	Thomas		
* Last Name:	Park III		
Suffix:			

Title:	CONTRACT AND GRANT OFFICER

Organizational Affiliation:
SCRIPPS INSTITUTION OF OCEANOGRAPHY

* Telephone Number:	858-822-1350	Fax Number:	858-534-9642

* Email:	wparkiii@ucsd.edu

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

H: Public/State Controlled Institution of Higher Education

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Commerce

11. Catalog of Federal Domestic Assistance Number:

11.012

CFDA Title:

Integrated Ocean Observing System

*** 12. Funding Opportunity Number:**

N/A

* Title:

SCCOOS Wave Buoy: San Pedro Channel (Near Breakwater)

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

SOUTHERN CALIFORNIA COASTAL OCEAN OBSERVING SYSTEM

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: CA-052 * b. Program/Project: CA-052

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 07/01/2015 * b. End Date: 05/31/2016

18. Estimated Funding ($):

* a. Federal	88,000.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	88,000.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

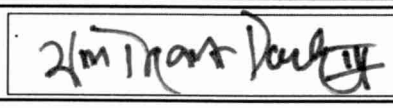
Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	
* First Name:	WILLIAM
Middle Name:	THOMAS
* Last Name:	PARK III
Suffix:	
* Title:	CONTRACT AND GRANT OFFICER
* Telephone Number:	858-822-1350
Fax Number:	858-534-9642
* Email:	wparkiii@ucsd.edu
* Signature of Authorized Representative:	
* Date Signed:	7/1/2015

UCSD #0686-2016

UCSD/SIO
Statement of Work
PI: Eric Terrill
Co-PI: Julie Thomas
Project Period: 7/1/2015 – 5/31/2016

SCCOOS Wave Buoy
San Pedro Channel (near Breakwater)

On behalf of the Coastal Data Information Program (CDIP), and as a supplement to the Southern California Coastal Ocean Observing System (SCCOOS) award NA11NOS0120029, this proposal is to request funds to the Integrated Ocean Observing System (IOOS) for a wave buoy and all necessary components to deploy offshore the Port of Long Beach, CA. The Port is faced with addressing issues with Under Keel Clearance as larger crude oil carriers are ready to enter Long Beach. Right now, these carriers are offloading the oil offshore onto smaller vessels in order to safely transit the channel. To accommodate these vessels, the Port is deepening the channel and, in collaboration with the National Oceanic Atmospheric Administration (NOAA), developing a nearshore wave prediction model.

CDIP will be providing an additional wave buoy to help with the validation and verification of the NOAA developed wave model. There are certain wave conditions where energetic waves and long period swells are present that are the most difficult for transiting. During this time, the larger vessels start to pitch, causing a 1200 foot tanker to lose 11 feet of draft for every degree of pitch. The validation of the model, particularly close to the breakwater, is thus, critical during these adverse conditions.

This buoy will remain at the location for at least one year to provide the necessary wave spectra for validation. These data will be handled with the standard CDIP processing including quality control and dissemination to the National Data Buoy Center for transmission to the National Weather Service office. Additionally, the data will be available on both the CDIP and SCCOOS website. CDIP will work with the local National Weather Service office in Oxnard, CA to assure that the data format is compatible with their system.

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. IOOS	11.012	$	$	$ 88,000.00	$	$ 88,000.00
2. UCSD/SIO						0.00
3.						0.00
4.						0.00
5. Totals		$ 0.00	$ 0.00	$ 88,000.00	$ 0.00	$ 88,000.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total
	(1)	(2)	(3)	(4)	(5)
a. Personnel	$ 18,230.00	$	$	$	$ 18,230.00
b. Fringe Benefits	0.00				0.00
c. Travel	152.00				152.00
d. Equipment	58,069.00				58,069.00
e. Supplies	765.00				765.00
f. Contractual	0.00				0.00
g. Construction	0.00				0.00
h. Other	163.00				163.00
i. Total Direct Charges *(sum of 6a-6h)*	77,379.00	0.00	0.00	0.00	77,379.00
j. Indirect Charges	10,621.00				10,621.00
k. TOTALS *(sum of 6i and 6j)*	$ 88,000.00	$ 0.00	$ 0.00	$ 0.00	$ 88,000.00
7. Program Income	$	$	$ 0.00	$	$ 0.00

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Prescribed by OMB Circular A-102

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SECTION C - NON-FEDERAL RESOURCES				
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8. IOOS	$	$	$	$ 0.00
9. UCSD/SIO				0.00
10.				0.00
11.				0.00
12. TOTAL *(sum of lines 8-11)*	$ 0.00	$ 0.00	$ 0.00	$ 0.00

SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	**1st Quarter**	**2nd Quarter**	**3rd Quarter**	**4th Quarter**
13. Federal	$ 88,000.00	$ 22,000.00	$ 22,000.00	$ 22,000.00	$ 22,000.00
14. Non-Federal	0.00				
15. TOTAL *(sum of lines 13 and 14)*	$ 88,000.00	$ 22,000.00	$ 22,000.00	$ 22,000.00	$ 22,000.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT				
(a) Grant Program	FUTURE FUNDING PERIODS (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16. IOOS	$	$	$	$
17. UCSD/SIO				
18.				
19.				
20. TOTAL *(sum of lines 16-19)*	$ 0.00	$ 0.00	$ 0.00	$ 0.00

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges: $77,379	22. Indirect Charges: IDC @ 55%: $10,621
23. Remarks: MTDC @ 55% (UCSD/SIO)	

UNIVERSITY OF CALIFORNIA, SAN DIEGO **UCSD #0686-2016**

DETAILED BUDGET REQUEST FOR THE PERIOD FROM 7/1/15-5/31/16 **SCCOOS Wave Buoy - San Pedro Channel**

A/B. SALARIES & EMPLOYEE BENEFITS: Name and Payroll Title	* Monthly Salary Recharge Rate	Actual F/T Equivalent Person-Months Dedicated to Project	Total Salaries and Emp. Benefits Requested
Thomas, Julianna Manager	$20,597	0.45	$9,269
Gray, Andrew Senior Development Engineer	$11,962	0.45	$5,383
Aguilar, Victor Sr. Marine Mechanician	$8,944	0.40	$3,578

*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 $18,230

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

DOMESTIC	Air Fare	No. days	Per diem	Ground Transportation	Baggage Fee	no.trips	Total
Field Work/Maintenance							
San Diego, CA - Long Beach, CA	$0	1	$0	$76	$0	1	$76
Technical Meeting							
San Diego, CA - Long Beach, CA	$0	1	$0	$76	$0	1	$76

TOTAL TRAVEL $152

D. EQUIPMENT:

Environmental Monitoring System (Fabrication):

1 MKIII Wave Buoy (Wave Measurement)	$49,030
Mooring Components	$7,039
Shipping from Holland to San Diego, CA - OW	$2,000
TOTAL EQUIPMENT	$58,069

E. PROJECT SPECIFIC SUPPLIES AND MATERIALS:

Buoy Paint	$615
Vessel fuel	$150

H. OTHER:

Project Specific supplies, materials, and other expenses:	
Communications, Mailing/FedEx, Network Costs, Faxing, Copying & Telephones in support of research	$163
TOTAL SUPPLIES, MATERIALS & OTHER	$928

I. TOTAL DIRECT COSTS $77,379

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

Rate: On-Campus	55.0%	
*Base:	$19,310	
*Base is total direct cost less equipment and subcontract.	INDIRECT COST	$10,621

K. TOTAL DIRECT & INDIRECT COSTS **$88,000**

UCSD #0686-2016

UCDS/SIO
Budget Justification
PI: Eric Terrill
Co-PI: Julie Thomas
Title: SCCOOS Wave Buoy
Project Period: 7/1/15 - 5/31/16

A/B. Salaries & Benefits:
Funds are requested for Julie Thomas to oversee the CDIP team for deployment of wave buoy. Funds are also requested for Andrew Gray, Senior Development Engineer, and Victor Aguilar, Marine Mechanician, to prepare and deploy the buoy.

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.

C. Travel:
Funds are requested for a truck rental to transport and deploy the wave buoy at the Port of Long Beach, CA. One additional trip will occur during the year to check on the maintenance of the buoy and attend a technical meeting with the Port officials regarding the wave data. Costs are estimated and subject to change based on the size of the truck needed at the time of rental.

D. Equipment:
Funds are requested for the fabrication of an Environmental Wave Monitoring System. This includes the purchase of one Datawell buoy that measures waves. This buoy also has the cunifer, bio-fouling resistant haul which extends the battery life. The remaining items for the fabrication will be the mooring, floats, and associated hardware necessary for the mooring system. This is a purchase versus lease because the wave buoy needs to be modified and, therefore, cannot be purchased off the shelf with the specification necessary to provide the wave spectra validation. This system will be deployed under water and cannot afford to be offline for long periods of time. In a lease situation, users could not ensure a responsive technician and it would require extended maintenance. Shipping costs are also included for the mooring components and buoy from Holland where the buoy is manufactured.

H. Other/Supplies:
Funds are requested for adding the bio-fouling bottom paint to the buoy. Truck/vessel fuel costs are requested during field experiment trips. Costs have been included which are project specific costs related to communications. 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.

QUOTATIONS

MkIII Wave Buoy

Datawell BV
oceanographic instruments

Administration and R&D
Zomerluststraat 4
2012 LM Haarlem
The Netherlands
☎ +31 23 531 4159
🖷 +31 23 531 1986

Sales and Service
Voltastraat 3
1704 RP Heerhugowaard
The Netherlands
☎ +31 72 534 5298
🖷 +31 72 572 6406

Quotation

University of California
UC San Diego Disbursements
9500 Gilman Drive, MC 0955
LA JOLLA CA 92093-0955
UNITED STATES

Date : 20-05-15
Quotation number : 34061
Your reference : E-mail V. Kellis dt. 190515

Qty	Part no.	Description	Price/Unit EUR	Disc. %	Amount EUR
2	10082	DWR-MkIII 0.9m AISI316	36.570,00	7,00 %	68.020,20
		Without chaincoupling			
2	10177	COMM. OPTION: HF	365,00	7,00 %	678,90
2	10173	COMM. OPTION: IRIDIUM	6.575,00	7,00 %	12.229,50
2	10272B	POWER SWITCH 3-port hatchcover	275,00	7,00 %	511,50
2	10266A	ITB FOR DWR-9	310,00	7,00 %	576,60
6	10068	BATTERY RC20B NON-HAZARDOUS	76,00	7,00 %	424,08
5	10091	HATCHCOVER DWR-MkIII	7.215,00	7,00 %	33.549,75
5	10119	COMM. OPTION: HF HATCHC.	175,00	7,00 %	813,75
5	10173	COMM. OPTION: IRIDIUM	6.575,00	7,00 %	30.573,75
3	10188B	SOLAR POWER SYSTEM FOR DWR-9	4.795,00	7,00 %	13.378,05
2	10272B	POWER SWITCH 3-port hatchcover	275,00	7,00 %	511,50
7	10128	TRANSMITTER PCB DWR/DWR-G/WR-SG	175,00	7,00 %	1.139,25
		Tuned to 29.900 MHz (4ea)			
		Tuned to 29.750 MHz (3ea)			
2	10089	BUOY FINDER	4.565,00	7,00 %	8.490,90
100	10029	SHACKLE 12mm AISI316	44,00	7,00 %	4.092,00
5	10042	RUBBER CORD 35mm/30m	2.080,00	7,00 %	9.672,00
5	10134	PP ROPE 12mm LENGTH 1000m	1.375,00	7,00 %	6.393,75
5	10135	PP ROPE 12mm LENGTH 500m	690,00	7,00 %	3.208,50
1	10174	COST OF AIRFREIGHT TO SAN DIEGO	3.505,00		3.505,00
					+
			Total		**197.768,98**

$44,095 EU

5/21/15
US $49,030

$3,505 x 1.119 = $3,922 / 2 = $1,961
Rounded to $2,000 to account for possible change in the EURO rate.

44,095 x 1.1119 = $49,029

Historical Exchange Rates

Currency Converter | Historical Exchange Rates | Live Exchange Rates

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Currency I Have: Euro EUR

Currencies I Want: USD

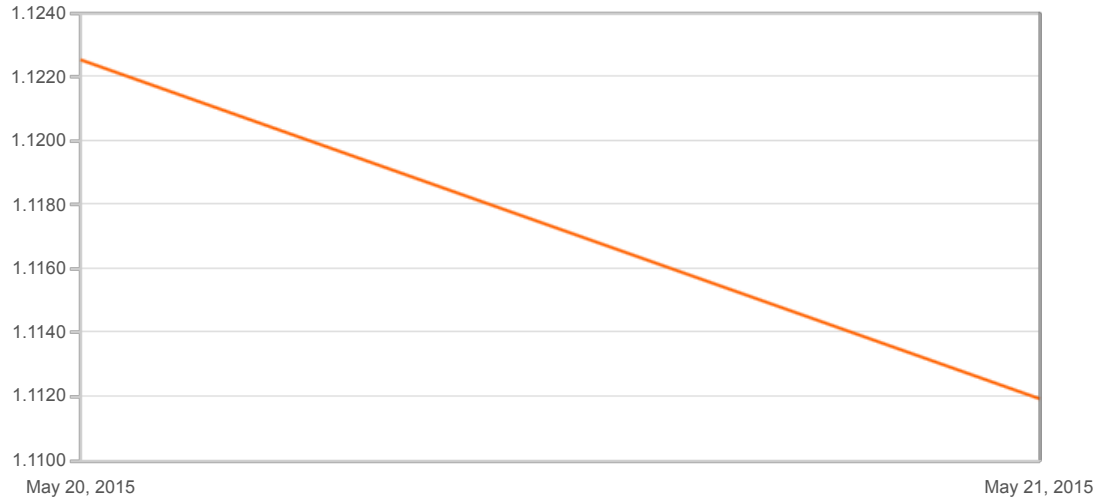
RANGE: Custom May 20, 2015 May 21, 2015 INTERBANK: +/- 1%

PRICE: Midpoint VALUES: Rate FREQUENCY: Daily

Graph Table

Daily **MIDPOINT** rates - **Thursday, May 21, 2015** @ +/- 1%

EUR / USD
1.1119



Historical Currency Rates Comparison

Compare historical foreign exchange rates for up to five currencies against a base currency, as either a currency graph or currency table. OANDA Rates™ are available from January, 1990 for most major currencies.

Compare currencies as a currency chart or currency rate table

- Type currency names, 3-letter ISO currency symbols, or country names to select your currencies. Convert world currencies,

NOAA-SCCOOS Wave Buoy Costs

Anchor Chain - 1200 lbs	$648	1	$648
Aluminum Anode	$10	4	$40
Bungee - 15m	$1,853		$0
Bungee - 30m	$3,075	1	$3,075
Chain galvanized around anchor per ft	$12	3	$36
Float - large	$158	1	$158
Float - small	$24	1	$24
Hose cover for polyprop. 500ft	$12		$0
Mild steel ring	$60	1	$60
Polypro line terminations	$60	6	$360
Polypro Line per 200 m	$353	1	$353
Polypro Line per 500 m	$870	1	$870
Safety shackle	$38	2	$76
Sinkers	$144	2	$288
Stainless Steel Shackles 12mm	$65	5	$325
Stainless Steel ballast chain per foot	$41	6	$246
Swivel 1/2"	$42	1	$42
Misc. small components		1	$432
MOORING TOTAL:			**$7,033**