AQUARIUM
OF THE PACIFIC
A non-profit institution

June 1, 2015

Julie Thomas, Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

I am writing in support of the SCCOOS proposal for continued funding from NOAA. It is very clear that the entire IOOS system—the backbone and the regional programs—is a critically important addition to the nation's ocean infrastructure. In some areas, such as Southern California, the regional ocean observing system takes on special importance because of the intensity of societal pressures on the ocean, the multiplicity of uses, and economic and public health implications of those uses, and the complex oceanographic processes on a variety of spatial and temporal scales.

The Southern California Bight is surrounded by a population of more than 20 million people—more than the population of the entire State of New York. It is home to the Nation's two largest ports, through which enter more than one-third of all imports to the U.S. It receives more than 1.3 bgd of partially treated wastewater. It is a major recreational outlet for millions of people with some of the nations, and the worlds, most beautiful and popular beaches. It has the potential to be home to a significant offshore aquaculture industry, and the availability of critical oceanographic data will be important in determining whether, or not, this happens. It soon will become the next segment of the California coast for establishment of a series of Marine Protected Areas. The list goes on, and one thing is clear and that is that we need diverse and high quality oceanographic data to generate the kinds of information that are needed to manage this enormously valuable resource for maximum benefit to society while protecting the natural ecosystem.

The next phase in the evolution of SCCOOS, and indeed of all of the regional systems, will be to forge more and stronger partnerships with a diverse set of potential end-users of the data and to work with them to develop an array of informational products. These informational products must be tailored to meet the needs and opportunities of the end users and be delivered on schedules that are sensitive to their needs. SCCOOS is well positioned to grow its customer base and meet the need for tailored and timely products. We also need to make the public more aware of the importance of SCCOOS and other components of IOOS so they will be supportive of the public investments that are needed to sustain this important network.

The Aquarium of the Pacific is the only large aquarium in all of Southern California with an attendance that now exceeds 1.5 million visitors per year, and that has grown in each of the past thirteen years. We are very interested in strengthening our partnership with SCCOOS to make the public more aware of the power and the promise of ocean observing. We also are very interested in working with SCCOOS to convene groups of potential stakeholders to help shape the portfolio of informational products to serve a variety of end-user needs.

In summary, I, and the Aquarium of the Pacific, are very supportive of SCCOOS efforts and applaud the progress SCCOOS has made in building regional observing capabilities for Southern California. We urge NOAA to support SCCOOS's proposal to continue development of this valuable and needed regional observing system.

Sincerely,

Jerry R. Schubel
President and CEO

100 Aquarium Way, Long Beach, CA 90802
Telephone 562 590 3100 Facsimile 562 590 3109
www.aquariumofpacific.org

BIRCH AQUARIUM
at Scripps Institution of Oceanography
UC San Diego

June 30, 2015

Dr. Julie Thomas
Scripps Institution of Oceanography
University of California San Diego
9500 Gilman Drive La Jolla CA 92093

Dear Julie:

I am delighted to write this letter in support of your proposal, *Southern California Regional Coastal Ocean Observing System*. As the SIO Director of Scripps Educational Alliances and a Program Scientist at the Birch Aquarium at Scripps (BAS), I am pleased to use the resources and partnerships of both organizations to support education and outreach for your ocean observatory program and to promote the use of SCCOOS data and resources by science educators and students throughout California and the nation. We are currently working with the San Diego County Office of Education, the San Diego Unified School District and several other state-wide initiatives to include earth and ocean science data in a wide variety of education and outreach programs and materials designed to help teachers implement Next Generation Science Standards (NGSS). The ability to engage students in using observatory data is one of the goals of our efforts and the participation of SCCOOS staff, including programmers is essential. This effort is in fact a natural extension of the long-term SCCOOS education and outreach effort conducted in collaboration with the Ocean Institute and will allow us to capitalize on those continuing efforts to reach students first locally and then throughout the nation.

We appreciate the breadth of SCCOOS engagement throughout Southern California, including:

- Birch Aquarium Interactive Display and Exhibit, La Jolla
- Southern California Marine Exchange Visitors Display, San Pedro
- Ocean Institute Science Exhibit and Curriculum, Dana Point
- Cabrillo Aquarium Exhibit, Dana Point
- Channel Islands Marine Sanctuary, Channel Islands
- California Surf Museum Exhibit, Oceanside
- Educational Tours including the Ocean Science Bowl, Scripps, La Jolla
- Workshops and Marine Symposiums, throughout Southern California

Scripps Educational Alliances and the Birch Aquarium at Scripps offer you their full and unqualified support for this innovative proposal. We look forward to hearing that your project has been funded.

Sincerely,

Cheryl Peach
Director, Scripps Educational Alliances
Scripps Institution of Oceanography

Mailing Address: 9500 Gilman Drive #0207, La Jolla, CA 92093-0207 · Location Address: 2300 Expedition Way, La Jolla, CA 92037
Phone: 858.534.FISH · Fax: 858.534.7114 · Website: aquarium.ucsd.edu

United States Department of the Interior
BUREAU OF OCEAN ENERGY MANAGEMENT
Pacific OCS Region
760 Paseo Camarillo, Suite 102
Camarillo, CA 93010-6064

JUN 3 0 2015

Julie Thomas
Executive Director
SCCOOS
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

David Anderson
Program Director
CeNCOOS
7700 Sandholdt Road
Moss Landing, CA 95039

Dear Ms. Thomas and Mr. Anderson,

On behalf of the Bureau of Ocean Energy Management (BOEM) in the Pacific Region, I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) and the Central and Northern California Ocean Observing System (CeNCOOS).

BOEM, in the Pacific Region, has responsibilities for leasing and plans for energy development on the outer continental shelf (OCS) in Washington, Oregon, California and Hawaii. As part of the leasing and plans processes BOEM conducts environmental analysis to meet the requirements of the National Environmental Policy Act (NEPA) and consultations for the Endangered Species Act (ESA) and Essential Fish Habitat (EFH). Subject matters experts within BOEM utilize data provided by SCCOOS and CeNCOOS for these environmental analyses for the OCS off of California. It is essential that BOEM continues to have access to Ocean Observing data for our ongoing operations.

We value the efforts made by the California regional associations (SCCOOS and CeNCOOS), and also the efforts made by their partners from universities and other institutions that comprise the observing system. These additional contributions by others extend the reach and impact of the IOOS investment.

Given BOEM's responsibilities along the west coast of the United Sates, there is a clear, continuing need to operate, maintain and improve the regional observing systems. We would like to see CeNCOOS & SCCOOS expand and have the capacity to increase instrumentation and provide more information and products. We strongly endorse the need for fully developed Regional Associations that benefit our health, wildlife, economy and oceans through a focus on ecosystems and climate, coastal hazards, water quality, and marine operations.

Sincerely,

Susan F. Zaleski
Biological Oceanographer
BOEM, Pacific Region

Sea Grant California
CALIFORNIA SEA GRANT COLLEGE PROGRAM
UNIVERSITY OF CALIFORNIA

2 June 2015

Julie Thomas
Executive Director, SCCOOS
La Jolla, CA 92093-0214

David Anderson
Program Director, CeNCOOS
Moss Landing, CA 95039

Dear Ms. Thomas and Mr. Anderson,

On behalf of the California Sea Grant (CASG) Program I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) and the Central and Northern California Ocean Observing System (CeNCOOS).

CASG is a state-based program that supports research and outreach to encourage more sustainable interaction of coastal California residents with nearshore and estuarine ecosystems and habitats. We aim to make local coastal communities more resilient in an environmentally sustainable way. The research we support, and the programs of outreach we develop and implement as part of our extension program, are aided greatly by data collected and made available by the California IOOS programs. For example, local community stakeholders need better information on coastal storms, king tides, beach erosion and other hazards in order to plan for changing environmental forcing. In addition, the quality and sustainability of our seafood is affected by algal blooms, including harmful (toxic) blooms, that seem tied to local nutrient inputs and coastal ocean properties. IOOS data is key to researchers and stakeholders developing and testing models to better understand these important phenomena.

We value the efforts made by the California regional associations (SCCOOS and CeNCOOS), and also the efforts made by their partners from universities and other institutions that comprise the observing system. These additional contributions by others extend the reach and impact of the IOOS investment.

There is a clear, continuing need to operate, maintain and improve the regional observing systems. We would like to see CeNCOOS & SCCOOS expand and have the capacity to increase instrumentation and provide more information and products. We strongly endorse the need for fully developed Regional Associations that benefit our health, wildlife, economy and oceans through a focus on ecosystems and climate, coastal hazards, water quality, and marine operations. CASG looks forward to a continued, long-term partnership with California's ocean observing systems.

Sincerely,

James E. Eckman, Director

Dr. James E. Eckman, Director, 9500 Gilman Drive - 0232, Scripps Institution of Oceanography, La Jolla, CA 92093-0232
phone: 858-534-4440 • FAX: 858-534-2231 • email: jeckman@ucsd.edu

July 29, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:
On behalf of the Carlsbad Aquafarm, I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego.

The Carlsbad Aquafarm is Southern California's only shellfish farm, sustainably growing shellfish since 1954. The farm is committed to producing seafood in a manner that conserves ocean resources.

Key to our future is our current work on developing a hatchery that breeds shellfish that are resilient to the growing challenge of ocean acidification. Shortages of shellfish seed brought about in part by ocean acidification have highlighted the need for a hatchery. Today over 50% of US shellfish growers' seed requirements are left unmet. This shortage represents a loss of millions in farm-gate sales and the loss of countless jobs in the industry

Our hatchery will help address this challenge through the development of high-performing shellfish larvae and seed to supply regional, national and global aquaculture markets. Our mission is to help secure a stable and sustainable supply of shellfish in the face of changing global climate and ocean conditions.

Carlsbad Aquafarm seeks to address the emerging issues of seafood security brought about in part by the changing ocean environment by engaging the leading seafood and shellfish companies, federal agencies, and university researchers in collaborative efforts to mitigate the impact of ocean acidification on vulnerable shellfish larvae.

Our work with the Southern California Coastal Ocean Observing System at the Scripps Institution of Oceanography is exemplary of this approach. SCOOS data is of great value for our team in evaluating the effects of changing ocean chemistry on shellfish throughout their entire life cycle.

CARLSBAD AQUAFARM
4600 Carlsbad Blvd
Carlsbad, CA 92008
760.438.2444
info@carlsbadaquafarm.com

NOAA's National Shellfish Initiative goal of increasing populations of shellfish in our nation's coastal waters through sustainable commercial production and restoration activities can only be achieved through a highly collaborative endeavors, such as SCOOS, that marshals the expertise of Scripps researchers to capture and distribute easy-to-access information on the ocean chemistry which is vital for the future of US shellfish industry.

The Ocean Observing System's collaborative work with local, state and federal agencies, seafood industry leaders, policy makers, scientists and the public to provide useful data, user-friendly models and products that focus on marine operations, coastal hazards, climate change, ecosystem dynamics, fisheries and water quality is of great value to our company, and to others who wish to build a stronger, vibrant domestic seafood industry.

Sincerely,

Thomas Grimm
CEO and President
Carlsbad Aquafarm

CARLSBAD AQUAFARM
4600 Carlsbad Blvd
Carlsbad, CA 92008
760.438.2444
info@carlsbadaquafarm.com

CATALINA EXPRESS

July 17, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of Catalina Express, I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego in partnership with the US Army Corps of Engineers and California Department of Parks and Recreation funded Coastal Data Information Program (CDIP).

Catalina Express is a passenger ferry service that operates daily departures from San Pedro, Long Beach and Dana Point to Catalina Island. Catalina Express utilizes the information provided by the Southern California stations, specifically the San Pedro Channel stations and the Dana Point station, on a daily basis as the stations have proven to be very reliable. During times of inclement weather, the data is crucial to our organization in making operational decisions.

The Ocean Observing System's work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me if you have any questions.

Sincerely,

Tom Rutter
Vice President, Operations

Reservations:
562-485-3300
800-995-4386

400 Oceangate, Suite 300
Long Beach, CA 90802
www.CatalinaExpress.com

Administration:
562-485-3200 Ext 1000
Fax 562-485-3201

April 30, 2015

Dear Brandon,

Catalina Sea Ranch is the developer of the first offshore aquaculture facility in federally regulated waters of the United States. It has a pioneering permit issued by the U.S. Army Corps of Engineers, and unanimously approved by the California Coastal Commission, for developing 100-acres of ocean space about 6 miles offshore Huntington Beach, California.

I am writing about a bill that Representative Don Young (R-AK) will be introducing to reauthorize the Integrate Coastal Ocean Observing System (ICOOS) Act of 2009. I hope Representative Knight will agree to be a co-sponsor of the bill.

The ICOOS Act provides the foundation for the U.S. Integrated Ocean Observing System (IOOS) – an innovative partnership between 17 federal agencies and 11 regional coastal observing system dedicated to addressing the need for timely and accurate data and information about our oceans, coasts and Great Lakes. IOOS is user-driven, science-based and policy neutral.

IOOS data will provide support for Catalina Sea Ranch's sustainable shellfish operations for reducing our nation's $11 billion seafood deficit. It will also assist our company taking a leadership position for providing research and technologies for national food security. As the $135 billion global aquaculture market expands, scientific data will become essential for securing regulatory permits. IOOS resources will be critical for our Marine Big Data™ venture which allows taking the environmental pulse of an area of the ocean to understand short and long-term trends, anticipate problems and devise mitigation measures for immediate corrective actions. This will lead to sound regulations based on solid science for advancing sustainable offshore aquaculture and responsible marine spatial planning.

Reauthorization will ensure this program continues to collect data and disseminate information on critical issues such as flooding, safe navigation, search and rescue, fisheries, water quality and sustainable aquaculture. One of the hallmarks of the IOOS program is the data standards and protocols that allow for the seamless access to data. Because of IOOS data management, over 50% of the marine data used by the National Weather Service comes from non-federal regional sources.

The ICOOS Act formally recognizes the national network of Regional Associations that complement and enhance the federal observing systems. This recognition and the extension of torte liability to certified RAs is critical for our ability to provide users with the best and most timely information possible. Reauthorization of the ICOOS Act will ensure the continuity of this innovative program.
Sincerely,

Philip Cruver, CEO

Catalina Sea Ranch
820 S. Seaside Avenue, Terminal Island, California 90731
www.catalinasearanch.com

City of Encinitas

May 28, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of the City of Encinitas, I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego. The City of Encinitas is a coastal community along 6.2 miles of coastline in Northern San Diego County. San Diego County has the 5th largest population in the nation and is heavily impacted with urban development. The infrastructure along the shoreline includes: Coast Highway, North Coast Rail Corridor, Interstate I-5, sewer pump stations, utility and gas lines.

The Ocean Observing system is a key component to understanding the impacts due to different wave climates and changing ocean water temperatures. The data is very useful for documenting these large atmospheric and oceanographic fluctuations and how this impacts our local beaches. Over 3 million people per year visit the City of Encinitas coastline which averages approximately 42 million dollars per year to local businesses. The shoreline is a critical infrastructure as well as recreational feature that protects Coast Highway 101 while providing multiple habitat protection and enhances the recreational experience. The SCCOOS data is useful to predict changes over time by utilizing real time data that is easily assessable to the public. The data is utilized by researchers, lifeguards and coastal managers especially to help predict the impacts due to sea level rise and El Nino's.

As a science-based decision support system, the Ocean Observing System's work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS focuses on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me if you have any questions.

Sincerely,

Katherine Weldon

Katherine Weldon
Coastal Program Manager

CITY OF LOS ANGELES
CALIFORNIA

1149 SOUTH BROADWAY, 9TH FLOOR
LOS ANGELES, CA 90015
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WWW.LACITYSAN.ORG

June 9, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

LETTER OF SUPPORT FOR THE SOUTHERN CALIFORNIA COASTAL OCEAN OBSERVING SYSTEM (SCCOOS)

On behalf of the City of Los Angeles, LA Sanitation's Environmental Monitoring Division (EMD), I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego. SCCOOS provides critically needed coastal and ocean observations and generates extremely valuable products for environmental managers, regulators, and nongovernmental agencies (e.g., environmental groups). The City conducts extensive monitoring in the coastal ocean of Southern California, primarily in Santa Monica Bay. A significant portion of this effort involves tracking the Hyperion Treatment Plant's effluent plume as it is discharged from the 5-Mile Outfall pipe into the Bay and estimating bacterial concentrations at ankle depth in the surfzone due to the potential for pathogens to adversely impact public health. The effluent plume has the potential for traveling considerable distances and depositing organic particles, metals, and organic pollutants into the sediment within the Bay. Storm drains are the major source of bacteria and other pollutants to these waters, and they mostly discharge into the surfzone affected by local marine conditions.

Southern California beaches and near-shore waters are world famous, and nearly 80 million people engage in water contact recreational activities at Los Angeles and Orange County beaches every year. This is not only an important component of the Southern California life style, but also an important economic engine for the region. Unfortunately, it has been estimated that between 627,800 and 1,479,200 "excess" cases of gastrointestinal illness occur at these beaches each year, with estimated healthcare costs of $21 million to $414 million annually (Given et al. 2006); therefore, ensuring good, safe water quality along our coast is an extremely high priority. In addition, the deposition of pollutants and their subsequent accumulation have adverse impacts on the benthic macrofaunal and demersal fish and invertebrate communities. Some of the seafood, e.g., white croakers, have been issued fish advisory notices and may not be safe for consumption. Both Los Angeles County and the City of Los Angeles are very interested in the near-shore current data and SCCOOS's surfzone model to help shed light on the dispersion of legacy pollutants, i.e., DDT and PCBs that were discharged from the Los Angeles County Sanitation Districts' (LACSD) outfall at White Point and onto the Palos Verdes shelf.

JACOBSEN PILOT SERVICE, INC.
LOS ANGELES AND LONG BEACH HARBORS

PILOT SERVICE
U.S. FEDERAL LICENSED PILOTS

OFFICE (562) 435-5435 • PILOT STATION (562) 432-0664 • FAX (310) 835-2485
P.O. BOX 32248
LONG BEACH, CALIFORNIA 90832-2248

June 15, 2015

Julie Thomas
Program Manager
Coastal Data Information Program
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of Jacobsen Pilot Service, Inc., Pilots for the Port of Long Beach California, I completely endorse the valuable data and services provided by the Southern California Coastal Data Information Program (SCCOOS) and the leveraged US Army Corps funded program Coastal Data Information Program (CDIP) at the Scripps Institution of Oceanography

Our Pilots have been using this valuable information for many years now. We navigate some of the largest VLCC Super Tankers that come into American waters and it's critical for us to monitor the swells closely so we can reduce the chance that the vessel will pitch or roll to a point of touching bottom. Also, during storm conditions we use the offshore wave data to predict the wave patterns at our Pilot Boarding area.

We are in the middle of an exciting project now that uses SCCOOS/CDIP wave data and modeling tools as input into a program called Pro-Tides. This project is a partnership between SCCOOS/CDIP, Port of Long Beach, State of California (OSPR), Tesoro Oil Company, the Marine Exchange, and our piloting company. The goal is to assure that our under keel clearance along the entire route into the port is safe at any given swell condition. Pro-Tides is successfully being used in ports like Rotterdam and Amsterdam to keep their ship movements safe.

SCCOOS and CDIP high-resolution directional wave data and models for the coastal US are accessed regularly by thousands of military personnel, lifeguards, coastal engineers, boaters, fishermen, harbormasters, bar pilots, marine transporters, divers, and surfers. SCCOOS/CDIP also characterizes waves for regional coastlines, seeks to understand and predict the response of beaches to waves, and develops and validates regional sediment management models. Without these publicly available data, life and property would be at risk. In addition, SCCOOS/CDIP enhances and expands the efforts of the Integrated Ocean Observing System (IOOS) around the country.

Sustained funding for SCCOOS/CDIP will be crucial to ensure the maintenance of its at-sea equipment and the continuity of its data sets. Please feel free to contact me if I may be of assistance.

Sincerely,

Captain Thomas A. Jacobsen
President

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Phone: 310.519.3134
24-Hr. 310.832.6411
FAX: 310.241.0300
info@mxsocal.org
www.mxsocal.org

A non-profit organization providing vessel traffic and maritime information service for Southern California

12 June 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of the Marine Exchange of Southern California and Vessel Traffic Service of Los Angeles and Long Beach, I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, U.C. San Diego, in partnership with the U.S. Army Corps of Engineers funded Coastal Data Information Program (CDIP).

The Marine Exchange, in partnership with federal, U.S. Coast Guard, state, and local port partners, is a private, non-profit firm that provides maritime information and vessel traffic management services for the maritime community in the waters of Southern California and the ports of Los Angeles and Long Beach. Our firm continually works to anticipate and fully meet the maritime information and vessel traffic requirements necessary to promote a safe, secure, efficient, reliable, and environmentally sound maritime transportation system.

Approximately 26,000 commercial vessels participate in the VTS per year and there are approximately 45 movements of some of the largest vessels in the world per day. Daily, there are dozens of movements of smaller, local vessels such as ferries, crew boats to and from anchored ships and offshore oil platforms, tugs and barges, whale watch and charter fishing boats, and school ships. Hundreds of pleasure vessels transit these waters every day of the year.

The ports of Los Angeles and Long Beach are the #1 and #2 container ports in the country, and together are 9th in the world, with more than 14 million containers imported per year. California only has a 5 day supply of oil, and keeping the tankers moving in and out of the ports and the offshore terminal in El Segundo is critical to preventing fuel shortages for all Californians.

The port complex usually operates and vessels move 24 hours a day, 7 days a week, and 365 days a year. The critical environmental information provided by the SCCOOS/CDIP enables these operations, or provides information that vessel operators and harbor pilots need to determine that it's too rough to conduct operations, and they must be suspended.

Example uses of SCCOOS/CDIP buoy information by my firm and our partners include:

1. TUGS & BARGES: Local tugs with freight barges use buoy readings before making the transit from Los Angeles and Long Beach to Catalina Island to determine if they

can safely make the transit and move their cargo in marginal weather. This keeps food and supplies flowing to and from Catalina Island safely and undamaged.

2. FERRIES: Ferries to and from Catalina from Los Angeles, Long Beach, Dana Point, and Newport use buoy information to help determine safe vessel speed for the safety of their vessels, crews, and passengers. This keeps tourism alive on Catalina.

3. HARBOR PILOTS: The SCCOOS/CDIP notifies the harbor pilots when there is a large, long-period southerly swell running, which can prevent the safe movement of supertankers into Long Beach. This keeps oil flowing to California.

4. UNDER KEEL CLEARANCE PROJECT: To improve use by the Harbor Pilots, the Port of Long Beach, California Office of Spill Prevention and Response, Tesoro and Pier 121 users, and the Jacobsen (Long Beach) Pilot Service partnered to increase the safety and efficiency of supertankers entering the Port of Long Beach. Software has been developed which will calculate the under keel clearance of a vessel based on weather forecasts, actual buoy sea/swell observations, and the ship's characteristics. The project is in the development phase, and critical to its success is extremely accurate wave buoy information, which the SCCOOS/CDIP provides.

5. OFFSHORE OIL TERMINAL IN EL SEGUNDO: Buoy information helps determine if it is too rough for the tankers and tugs to conduct oil offload operations safely at this facility. A significant fraction of the jet fuel used by Los Angeles International Airport is refined at this terminal.

6. COAST GUARD: We brief the Coast Guard with buoy information every morning. This enables them to conduct their missions more effectively and safely.

As a science-based decision support system, the Ocean Observing System's work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists, and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS/CDIP focuses on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me if you have any questions.

Sincerely,

J. Kipling Louttit
Captain, U.S. Coast Guard, Retired
Executive Director
Marine Exchange of Southern California and
Vessel Traffic Service of Los Angeles and Long Beach

July 20, 2015

Jordan Stout / Glen Watabayashi
NOAA | Office of Response and Restoration
Emergency Response Division

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing Systems
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, Cal 92093-0214

Dear Ms. Thomas,

On behalf of NOAA's Emergency Response Division (ERD), we enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego.

Within NOAA's Officer of Response & Restoration, ERD provides scientific support to the US Coast Guard during marine spills of oil and hazardous materials to affect time-critical decisions. A key element of that support relates to contaminant fate & transport and specifically trajectory forecasting. Our staff, including oceanographers and local Scientific Support Coordinator, has worked with SCCOOS and the larger IOOS community for many years to efficiently access physical oceanographic and other data for incorporation into our response modeling efforts. In addition, the SCCOOS' existing networks of established data sources and technical expertise in the fields of surface currents (HF radar), nearshore and subsurface transport, water quality, wave monitoring, telemetry buoys, and un-manned aerial systems have also been instrumental in strengthening our spill response efforts.

The Integrated Ocean Observing Systems work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that focus on marine operations, coastal hazards, climate variability and change, and ecosystems, fisheries and water quality. On local, regional and national scales, IOOS organizations' partnerships with our office and others strengthen the overall resiliency of coastal communities.

NOAA | OFFICE OF RESPONSE AND RESTORATION

Sincerely,

Glen Watabayashi
Technical and Scientific Services Branch Chief

Jordan Stout
California Scientific Support Coordinator

NOAA | Office of Response and Restoration
Emergency Response Division

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service
11440 West Bernardo Court, Suite 230
San Diego, CA 92127-1643

August 4, 2015

RE: letter of support

Julie Thomas, Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of NOAA National Weather Service in San Diego, we enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego.

The NWS in San Diego uses the SCCOOS data website and tools on a regular basis to support operational forecasts. This includes the satellite imagery, high frequency radar mapping of currents, and the water and land weather observations. During outreach efforts we also promote the use of these tools to mariners and those visiting beaches. Recently, developed tools such as the water level Flood Index deliver real-time message alerts to the NWS office, and the drift trajectory mapping provides useful information for our mission of providing life and property saving information to various agencies through spot weather forecasts and traditional watches and warnings.

As a science-based decision support system, the Ocean Observing System's work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS focuses on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me if you have any questions.

Sincerely,

Alexander O Tardy

Alex Tardy, Warning Coordination Meteorologist, NWS San Diego

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE
520 N. Elevar St.
Oxnard, CA 93030

May 28, 2015

Julie Thomas
Program Manager
Coastal Data Information Program
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of NOAA's National Weather Service in Oxnard, CA, I enthusiastically endorse the valuable data and services provided by the Coastal Data Information Program (CDIP) at the Scripps Institution of Oceanography.

Our marine area of responsibility extends from the San Luis Obispo-Monterey County line southward to the Orange-San Diego County line, and outward to 60 nm. Closer to shore, we also provide forecasts and warnings for beaches, harbors, and coastal areas. Our offshore area is heavily used by both commercial and recreational mariners, while along the coast high surf can threaten beachgoers and cause extensive run up and coastal flooding. The complex sea conditions within this area emphasize the importance of quality buoy information and swell forecasts. Information provided by CDIP, including data obtained from Waverider buoys as well as the nowcasts and forecasts of ocean swells, are critical to supporting our forecast and warnings for these areas.

As a science-based decision support system, the Ocean Observing System's work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS focuses on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me if you have any questions.

Sincerely,

Mark Jackson

Mark Jackson
Meteorologist in Charge

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
8901 La Jolla Shores Drive
La Jolla, CA 92037-1508

June 4,2015

Julie Thomas
Executive Director
SCCOOS
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

David Anderson
Program Director
CeNCOOS
7700 Sandholdt Road
Moss Landing, CA 95039

Dear Julie and Dave,

On behalf of NOAA/SWFSC Environmental Research Division (ERD), I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) and the Central and Northern California Ocean Observing System (CeNCOOS).

Working with Dan Rudnick (SCCOOS), ERD implemented an ERDDAP server underneath the IOOS glider DAC. This collaboration greatly improved both machine and user access to IOOS glider data as well as improving the import of data from the points of origin. ERDDAP has proven to be an excellent "middleware" server solution and the IOOS glider DAC implementation is an example of the utility of this software. ERD will continue its close collaboration with the IOOS Glider DAC to ensure data access.

ERD also worked closely with CeNCOOS on the development of CeNCOOS's San Francisco Bay page allowing real time access to observations in the Bay.

ERD is tasked with analyzing environmental data to assist with the multiple NMFS mandates through the Magnuson-Stevens Conservation and Management Reauthorization Act of developing sustainable yields of commercial fisheries and protecting the environment through implementation of the Endangered Species Act, the Marine Mammal Protection Act and international agreements. ERD uses all available data, including IOOS shore station and HFR surface current data, in the analyses they prepare. Two specific assessments are the annual "State of the California Current" report provided to the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program and the California Current Ecosystem Report provided each spring to the Pacific Fishery Management Council as input to their Fishery Ecosystem Plan (FEP). ERD is also assisting the west coast National Marine Sanctuaries as they prepare their condition reports and is participating in the CalEPA review of environmental indices. IOOS data are incorporated in all of these analyses.

Coupled with CoastWatch satellite sea surface temperature (SST) imagery, estimates of coastal upwelling help provide the most important local index of conditions impacting California Current fisheries. In addition to the numerous reports and analyses, ERD has embarked on a review of how the upwelling index is computed and exploring options for increased resolution of the index. IOOS-supported shore stations and especially HFR surface currents are data sets that are being tested as candidates for new computations of the upwelling index. The eight-year record of west coast HFR surface currents is critical for determining whether these data can improve the resolution of the upwelling index; and if successful, future operation of the array will remain critical for determining environmental indices.

Recognition of the benefits of collaboration toward meeting both IOOS and NMFS mandates is further strengthened by across-line participation. Lynn de Witt (ERD) is on the CenCOOS Governing Board, Cisco Werner (the SWFSC Director) was just appointed to the SCCOOS Governance Board and I serve on the CeNCOOS/SCCOOS Joint Science Advisory Council (JSAC). During February 2015, NWFSC and SWFSC underwent a joint NMFS review of the California Current Integrated Ecosystem Assessment (CCIEA) Program. Julie Thomas (SCCOOS) participated in person and Dave Anderson (CeNCOOS) participated remotely; both contributed to the review discussions.

ERD values the efforts made by the California regional associations (SCCOOS and CeNCOOS), and also the efforts made by their partners from universities and other institutions that comprise the observing system. These additional contributions by others extend the reach and impact of the IOOS investment.

There is a clear, continuing need to operate, maintain and improve the regional observing systems. We would like to see CeNCOOS & SCCOOS expand and have the capacity to increase instrumentation and provide more information and products. We strongly endorse the need for fully developed Regional Associations that benefit our health, wildlife, economy and oceans through a focus on ecosystems and climate, coastal hazards, water quality, and marine operations.

Sincerely,

Toby Garfield
ERD Director
NOAA/NMFS/SWFSC
8901 La Jolla Shores Drive
La Jolla, CA 92037

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
8901 La Jolla Shores Drive
La Jolla, CA 92037-1508

31 July 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

With this letter, I wish to convey the value of the data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego. The California Cooperative Oceanic Fisheries Investigations (CalCOFI) seabird surveys, funded by SCCOOS, are an example of the importance of SCOOS. I could go into details with respect to how these data have contributed to valuable insights pertaining to management and conservation. Instead, let me state my support at the very high level. Long term datasets are chronically under-valued, yet they are the cornerstones that secure the potential to address emerging issues, by providing baselines. In my own position I am frequently challenged to maintain such time series. They are the baselines for evaluating impacts of anthropogenic stressors on marine ecosystems and their components. You have my solid support.

Sincerely,

Lisa T. Ballance
Director Marine Mammal & Turtle Research Division, SWFSC-NOAA Fisheries
Chief Scientist Eastern Tropical Pacific Research Program, SWFSC-NOAA Fisheries
Adjunct Professor Scripps Institution of Oceanography, University of California San Diego

CALIFORNIA OCEAN PROTECTION COUNCIL

July 31, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas,

I write to express the California Ocean Protection Council (OPC) staff's support for the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego. The Ocean Protection Council was created by state legislation in 2004 to coordinate activities of state agencies to improve the effectiveness of state efforts to protect ocean resources, to establish policies to coordinate the collection and sharing of scientific data related to coast and ocean resources between agencies, and to recommend changes in state and federal law and policy.

We appreciate and strongly support the SCCOOS efforts to work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that focus on four priority areas; 1) ecosystems, fisheries and water quality, 2) climate and climate change, 3) coastal hazards, and 4) marine operations. Each of these areas aligns closely with the OPC goals and objectives as set out in its current five-year strategic plan. In particular, West Coast ocean observing systems, such as SCCOOS, are an integral part to sustaining and expanding a network of ocean acidification observations to inform the decisions of coastal ocean managers and users. Further, we also support SCCOOS and its partners efforts to add additional monitoring sites and provide high-quality data analyses. SCCOO's efforts are also playing a role in helping to develop a comprehensive statewide marine protected area (MPA) monitoring program. The continuation SCCOOS monitoring will be critical in helping the state to leverage existing efforts to create a MPA monitoring program that can increase our understanding of how climate impacts such as changes is the physical and chemical environments may be effecting the performance of MPAs.

1416 Ninth Street, Suite 1311, Sacramento, CA 95814
Website: www.opc.ca.gov
Phone: (916) 653-5656
Email: COPCpublic@resources.ca.gov

OPC staff look forward to continued collaboration with SCOOS on these areas as well as identifying new opportunities and data needs. Please feel free to contact me if you have any questions regarding this letter.

Sincerely,

Catherine Kuhlman,
Executive Director, Ocean Protection Council

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Office of Spill Prevention and Response
1700 K Street, Suite 250
Sacramento, California 95811
Telephone: (916) 445-9338
www.wildlife.ca.gov

EDMUND G. BROWN, JR., Governor
CHARLTON H. BONHAM, Director

June 15, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, Mail Code 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas: Julie

On behalf of the Department of Fish and Wildlife's Office of Spill Prevention and Response (OSPR), I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego.

OSPR has benefited greatly from its partnership with the Integrated Ocean Observing System (IOOS) in their efforts to collect and disseminate timely and reliable oceanographic information. In particular, surface currents from your high-frequency (HF) radar technology have proven extremely useful in oil spill response. In fact, HF radar vectors are now imported into the NOAA Southwest Environmental Response Management Application (ERMA) web-based planning tool, an invaluable utility that we use quite often, most recently during the Santa Barbara oil pipeline spill. Products provided by SCCOOS using real-time surface current speed and direction, such as particle trajectory models, aid OSPR greatly in our responsibility to effectively address human, habitat and wildlife concerns during an oil spill response. The products are user-friendly, compatible with the OSPR system, and easily interpreted.

As a science-based decision support system, the Ocean Observing Systems work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS focuses on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Conserving California's Wildlife Since 1870

In summary, we would like to see SCCOOS expand and have the capacity to provide more information and products. Furthermore, we strongly concur with the need for a fully developed IOOS that builds on existing federal, regional and local partnerships for the benefit of our health, wildlife, economy and oceans.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Thank you for the extremely valuable work that you and your staff perform in helping my team protect California's natural resources.

Sincerely,

Thomas M. Cullen, Jr.
Administrator
Office of Spill Prevention and Response

ORANGE COUNTY SANITATION DISTRICT

We protect public health and the environment by providing effective wastewater collection, treatment, and recycling.

June 16, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
9500 Gilman Drive, MC 0214
La Jolla, CA 92093-0214

David Anderson
Program Director,
Central and Northern California Ocean Observing System
7700 Sandholdt Road
Moss Landing, CA 95039

Serving
Anaheim
Brea
Buena Park
Cypress
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
Yorba Linda
Costa Mesa Sanitary District
Midway City Sanitary District
Irvine Ranch Water District
County of Orange

Subject: Support for California Regional Integrated Ocean Observing Systems

I am writing to express my support for continued and expanded operations of the Southern California Coastal Ocean Observing System (SCCOOS) and the Central and Northern California Ocean Observing System (CeNCOOS). With over 25 years of professional experience in ocean monitoring and research off the Orange County coast, I believe that these two programs have benefited the management of this heavily utilized resource.

Collaborations among the Orange County Sanitation District (OCSD), SCCOOS, and CeNCOOS have gone on for more than a decade. Their participation in OCSD's 2012 discharge diversion was important to the overall success of this major infrastructure rehabilitation work. A new project, looking at ocean acidification and hypoxia in southern California, is underway with the deployment of a telemetry mooring scheduled to this fall; data from this mooring will be freely available on the SCCOOS and CeNCOOS websites.

In addition to our project partnerships, I use a variety of SCCOOS and CeNCOOS data products in my work. These range from well-established products like surface currents (derived from high frequency radar) to the new HAB forecasting model. Both web portals allow me easy access to long-term data sets, physical oceanographic models, satellite imagery, climate, and weather.

The end-user engagement, along with the willingness of these partners to leverage their expertise, leadership, and resources, has helped distinguish California's ocean science community. OCSD looks forward to continued National Oceanographic and Atmospheric Administration's (NOAA) funding to ensure that SCCOOS's and CeNCOOS's efforts to provide relevant monitoring information continues and improves. In closing, I provide my strong support for NOAA's continued funding.

Sincerely,

George V. Robertson
Senior Scientist

SANDAG

401 B Street, Suite 800
San Diego, CA 92101-4231
(619) 699-1900
Fax (619) 699-1905
sandag.org

June 8, 2015 File Number 3200200

Ms. Julie Thomas
Southern California Coastal Ocean Observing System
Executive Director, Scripps Institution of Oceanography
UC San Diego
9500 Gilman Drive, No. 0214
San Diego, CA 92093

Dear Ms. Thomas:

SUBJECT: Implementation of Regional Integrated Ocean Observing Systems: The Southern California Coastal Ocean Observing System

On behalf of the San Diego Association of Governments (SANDAG), I would like to express our support for the Southern California Coastal Ocean Observing System (SCCOOS).

Funding for this program is critically important to California coastal constituents, specifically those in the San Diego region. In 2001, SANDAG managed the Regional Beach Sand Project (RBSP), which placed 2.1 million cubic yards of sand on the region's beaches and followed-up with a second RBSP in 2012. The SANDAG Regional Shoreline Monitoring Program, which was initiated in 1996 and continues today, was essential to the design and evaluation of both sand replenishment projects. SANDAG can utilize SCCOOS data to implement and monitor future efforts to replenish beaches and manage the region's shoreline. Further, the region will continue to make use of improved coastal hazards data products made available by SCCOOS, especially those related to inundation and shoreline change.

If El Niño materializes as projected, energetic sea conditions this winter will challenge coastal management efforts and threaten the safety of coastal residents. Detailed wave, current, and inundation information for our coast will be invaluable. Given the importance of the information SCCOOS provides, additional funding is needed.

I appreciate your attention to this request. If you have any questions, please contact Rob Rundle at (619) 699-6949 or via email at rob.rundle@sandag.org.

Sincerely,

Gary L. Gallegos

GARY L. GALLEGOS
Executive Director

GGA/RRU/asa

SCCWRP
Established 1969

SOUTHERN CALIFORNIA COASTAL WATER RESEARCH PROJECT
A Public Agency for Environmental Research

May 29, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Julie:

The Southern California Coastal Water Research Project Authority (SCCWRP) is pleased to offer this letter of support for your proposal to NOAA that will allow you to continue the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS).

SCCWRP is a leading U.S. environmental research institute that works to develop a scientific foundation for informed water-quality management in Southern California and beyond. Since its founding as a public agency in 1969, SCCWRP has been a champion of sound interdisciplinary approaches to solving complex challenges in water management. In a similar capacity, SCCOOS is actively engaged in identifying needs of Southern California's water-quality management community by providing data, models and products that advance our understanding of the current and future state of our coastal and global environment

SCCWRP supports SCCOOS through my representation on the SCCOOS Board of Governors, collaborations with SCCOOS to support coastal water quality monitoring, and facilitation of communication among scientists and water-quality managers.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. We look forward to working with you in continued partnership.

Sincerely,

Stephen B. Weisberg

Stephen B. Weisberg, Ph.D.
Executive Director

TESORO

July 21, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of Tesoro Refining and Marketing, I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego in partnership with the US Army Corps of Engineers funded Coastal Data Information Program (CDIP).

For more than 45 years, Tesoro has been serving the fuel transportation needs of the western United States. We are a leading independent refiner and marketer of petroleum products, committed to operating responsibly in the communities we serve. Headquartered in San Antonio, Texas, our operations extend across 18 states.

SCCOOS has been a tremendous help with our Precision Navigation system (Protide program). The data received from the wave buoy's you deployed will enable us to substantially cut our lightering offshore and reduce the overall risk of transporting oil on the West Coast. Some other economic and safety benefits include:

- Oil spill risk reduced because the oil will not be handled as many times.
- Lightering to reduce draft eliminates the need for additional vessels to call the port.
- Reduced vessel traffic reduces congestion in the port.
- Reduced risk of collision due to fewer ships in the port.
- Reduced air pollution from ships.
- More efficient use of the port infrastructure with enhanced traffic management.

As a science-based decision support system, the Ocean Observing System's work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS/CDIP focus on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me if you have any questions.

Sincerely,

Captain Robert. B. McCaughey
Manager Marine Operations

THE MARITIME ALLIANCE
Promoting BlueTech and Blue Jobs

The Maritime Alliance
2877 Historic Decatur, Suite 200
San Diego, CA 92106
www.themaritimealliance.org

May 30, 2015

Julie Thomas - Executive Director
Southern California Coastal Ocean Observing System (SCCOOS)
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

On behalf of **The Maritime Alliance (TMA**), I write to express our strong support for the valuable work of the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego.

The Maritime Alliance is a non-profit industry association – organizer of the San Diego maritime technology community (the largest **BlueTech** cluster in the U.S.). It focuses on Economic Development, Ecosystem Development, and National/International Outreach. Our sister organization, **TMA Foundation** is an educational non-profit that focuses on Workforce Development, Research, and Community Outreach. Together they promote sustainable, science-based ocean industries.

The San Diego **BlueTech** cluster includes approximately 200 firms active across a wide array of sectors including biomedicine, defense, desalination & clean water technology, fish farming, marine recreation, maritime robotics, ocean observation and more. With many companies growing at 15-35% per annum, this fast growing economy sector is receiving considerable attention. For example, as part of a first ever **Blue Vision** for the region, San Diego Mayor Faulconer and County Supervisor Greg Cox announced a major initiative that was jointly approved in March 2015 by the City of San Diego and County of San Diego to give San Diego's **Blue Economy** a boost by creating a **BlueTech** incubator and possibly multiple specialized centers of excellence. In April, the Port of San Diego adopted a similar measure.

As part of the national NOAA-led U.S. Integrated Ocean Observing System (IOOS) Program, SCCOOS is the lead federally supported agency gathering "ocean observing" data in southern California. The availability of the reliable, timely ocean data that SCCOOS collects and the analysis it provides are critical as we develop thousands of good-paying **Blue Jobs** in sustainable, science-based ocean industries. In addition, SCCOOS has been an active, important participant in our events and collaborator with **BlueTech** companies interested in testing innovative technologies and systems regionally.

Sustained funding is crucial to promote the program's ocean observing network, for the continuity of the important data products and services these observations enable, and for SCCOOS to have the resources to actively collaborate with the private sector. Please feel free to contact me if you have any questions.

Sincerely,

Michael B. Jones – President
The Maritime Alliance

Tijuana River National Estuarine Research Reserve

"A Wetland of International Importance" *International Ramsar Convention, 2005*

301 Caspian Way
Imperial Beach, CA 91932
Office (619) 575 3613 x.333
jcrooks@trnerr.org

12 June 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas,

On behalf of the Tijuana River National Estuarine Research Reserve, I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego. As a science-based decision support system, SCCOOS works interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS focuses on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Here at the Tijuana River Reserve, the SCCOOS effort is vital in helping us fulfill our mission in several different ways. One of our core programs at the TRNERR is monitoring of water quality, weather, and biotic indicators within the Tijuana River Estuary, conducted as part of the NERR System-Wide Monitoring Program (SWMP). Of course, one of our goals is better understand the role of the outflow of the Tijuana River in the near-shore marine environment, and SCCOOS provides this critical larger context for the information we generate. More broadly, because SCCOOS offers a wealth of other data in an easily accessible format, I often rely on it when I need to provide researchers, decision-makers, and the general public with information on our coastal ocean. I especially appreciate the degree to which SCCOOS has been responsive to the needs and ideas voiced by myself and others.

Sustained funding will be crucial to the maintenance of the program's ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me if you have any questions.

Sincerely,

Dr. Jeffrey Crooks
Research Coordinator & Lead Scientist, Tijuana River National Estuarine Research Reserve

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U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: CG-SAR
Phone: (860) 271-2747
Fax: (860) 271-2773
Email: Arthur.A.Allen@uscg.mil

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

14 July 2015

Dear Ms. Thomas,

The U.S. Coast Guard (USCG) Office of Search and Rescue supports your operation of ocean observing and modeling systems along the California coastline by the Southern California Coastal Ocean Observing System (SCCOOS). As you know, we are committed to working with you and others to develop ways to improve modeling and predictive tools in U.S. waters, especially those that can improve our abilities to predict search and rescue trajectories. In particular, we are interested in seeing the continued delivery of observational data and predictions into the USCG's Search And Rescue Optimal Planning System (SAROPS). SAROPS is now in operational use for search planning at all 49 USCG command centers, including our Sector Command Centers in San Diego and LA/LB. The data and models of the ocean current along the southern California coastline has greatly improved the Coast Guard's ability to optimally plan searches for lost mariners in that region.

The feedback from USCG search planning personnel on SAROPS has been overwhelmingly positive; however there is room for improvement in the areas of: 1) availability of additional surface current products in the EDS; 2) use of SAROPS in nearshore; and 3) higher confidence in all the surface current products. The ocean currents measured and forecasted velocities from the SSCCOOS are available to the Coast Guard EDS for input into SAROPS and has be of enormous benefit to the USCG search and rescue program.

The USCG Search and Rescue program looks forward to your continuing operations of the observational and model systems along the California coast in support of this critical Coast Guard mission.

Sincerely,

Arthur A. Allen
Oceanographer
U.S. Coast Guard Office of Search and Rescue

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 11, 2015

Julie Thomas
Executive Director
Southern California Coastal Ocean Observing System
Scripps Institution of Oceanography
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

Dear Ms. Thomas:

As Marine Debris Program Coordinator for the U.S. Environmental Protection Agency Region 9, I would like to express my enthusiastic support for the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS) at the Scripps Institution of Oceanography, UC San Diego.

In recent years, EPA R9 has experienced an increasing need for accurate and timely ocean surface currents information to support our emergency and removal response work and the work of our Regional marine debris program. Oil spills, even some of those originating inland, can have an immediate and often devastating impact on the marine environment and accurate predictions of surface ocean currents and their influence on the behavior of the oil spills greatly enhances the effectiveness of response actions in the field and on the water. Our understanding of the behavior, distribution, fate and transport of microplastic debris in the Tijuana River Estuary as well as our soon-to-be-launched Offshore Marine Debris Search project both need an underpinning of a sound, real-time surface currents data feed to our geospatial viewers which are integral to managing and tracking our work and responses.

As a science-based decision support system, the Ocean Observing System's work interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists and the general public to provide data, models and products that advance our understanding of the current and future state of our coastal and global environment. SCCOOS focuses on coastal observations and product development to provide information necessary to address issues in climate change, ecosystem preservation and management, coastal water quality, maritime operations, coastal hazards and national security.

Sustained funding will be crucial to the maintenance of this program's valuable ocean observing network and to the continuity of the important data products and services that these observations enable. Please feel free to contact me at 415-972-3029 or at cook.anna-marie@epa.gov if you have any questions.

Sincerely,

Anna-Marie Cook
USEPA R9 Marine Debris Program Coordinator
Superfund Division

WEST COAST GOVERNORS ALLIANCE on OCEAN HEALTH

CALIFORNIA OREGON WASHINGTON

6/10/15

Julie Thomas
Executive Director
SCCOOS
9500 Gilman Drive, 0214
La Jolla, CA 92093-0214

David Anderson
Program Director
CeNCOOS
7700 Sandholdt Road
Moss Landing, CA 95039

Dear Ms. Thomas and Mr. Anderson,

On behalf of the West Coast Ocean Data Portal (WCODP), I enthusiastically endorse the valuable data and services provided by the Southern California Coastal Ocean Observing System (SCCOOS), Central and Northern California Ocean Observing System (CeNCOOS), and the Northwest Association of Networked Ocean Observing Systems (NANOOS).

The WCODP is a project of the West Coast Governors Alliance on Ocean Health (WCGA) and is dedicated to increasing the access and connectivity of ocean and coastal data and people to better inform regional ocean management, policy development, and planning. The WCODP has collaborated closely with the three Regional Associations of IOOS on the West Coast and have benefited greatly from this partnership. As partners, we rely on CeNCOOS, SCCOOS, and NANOOS expertise in connecting oceanographic data to priority ocean health issues identified by the WCGA. In particular, Jennifer Patterson, Emilio Mayorga, and Darren Wright helped mentor a Sea Grant fellow who developed monthly averaged ocean surface current maps for the West Coast that were used to help plan beach cleanups for marine debris. We look forward to expanding this partnership into other priority ocean health issues such as ocean acidification, hypoxia, and coastal hazards.

We value the efforts made by the West Coast regional associations (SCCOOS, CeNCOOS, and NANOOS), and also the efforts made by their partners from universities and other institutions that comprise the observing system. These additional contributions by others extend the reach and impact of the IOOS investment.

There is a clear, continuing need to operate, maintain and improve the regional observing systems. We would like to see CeNCOOS, SCCOOS , and NANOOS expand and have the capacity to increase instrumentation and provide more information and derived products, especially in the ares of OA. We strongly endorse the need for fully developed Regional Associations that benefit our health, wildlife, economy and oceans through a focus on ecosystems and climate, coastal hazards, water quality, and marine operations.

Sincerely,

Andy Lanier,
Oregon Coastal Management Program
WCODP Co-Chair

Dr. Steve Steinberg,
Southern California Coastal Water Research Project, WCODP Co-Chair

WEST COAST OCEAN DATA PORTAL