

**CALIFORNIA COASTAL COMMISSION**

45 FREMONT STREET, SUITE 2000  
SAN FRANCISCO, CA 94105-2219  
VOICE (415) 904-5200  
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**CALIFORNIA COASTAL COMMISSION****2017 SEA GRANT FELLOWSHIP OPPORTUNITY  
CLIMATE CHANGE EMPHASIS****1. Host location and contact information**

California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105

**2. Point of Contact for California Sea Grant, Prospective Fellows, and Finalists**

Susan Hansch, Chief Deputy Director  
[shansch@coastal.ca.gov](mailto:shansch@coastal.ca.gov)  
(415) 904-5244

**3. Fellowship Supervisors**

Susan Hansch, Chief Deputy Director  
Michelle Jespersion, Federal Programs Manager

**4. Overview**

The California Coastal Commission implements the California Coastal Act of 1976 and has regulatory authority over development along the coast in balance with the protection of coastal resources, environmentally sensitive habitats, and public access. This work is carried out through land use planning and permitting. The Commission is an independent, quasi-judicial state agency whose authority is defined as the coastal zone, a 1.5 million-acre area stretching 1,270 miles along the state's mainland coastline from Oregon to Mexico, and around nine offshore islands (333 miles of island shoreline). The Commission also has the responsibility to work with local governments to establish Local Coastal Programs (LCPs) which, when certified by the Commission, becomes the land use plan basis for coastal permitting at the local level. Furthermore, the Commission has the purview and planning responsibility to assess and address issues of statewide importance such as sea level rise and coastal erosion and the implications of these on Coastal Act resources. Both sea level rise and coastal erosion are likely to be exacerbated by climate change.

**Position Description:**

The Sea Grant Fellow will be exposed to and work on a broad range of coastal and ocean issues that are part of the Coastal Commission's regulatory and Local Coastal Program planning work throughout the coastal zone. He/she will have a unique opportunity to assist executive, management and policy level staff in the headquarters and district offices of the California Coastal Commission on a variety of coastal and ocean resource protection issues with a special emphasis on climate change and sea level rise adaptation planning. The Fellow will also have the opportunity to interface directly with senior government officials and leaders in resource management policy throughout California. Fellow work products, potentially including presentations and collaborative work on reports with the Coastal Commission and with other state agencies, especially the Resources Agency and the Ocean Protection Council (OPC), will be highly visible. The Sea Grant Fellow may work with the OPC to help coordinate/staff efforts to improve interagency collaboration on California's marine protected areas, climate change and other issues to be determined.

More specifically, a Sea Grant Fellow with the Coastal Commission will support the executive and senior policy and technical staff in its broad state-wide climate change policy work such as implementation of Safeguarding California, participating in multi-agency meetings, serving as a communication conduit between the Commission and various Resources Agency/OPC sponsored workgroups, drafting Commission recommendations for state-wide planning documents, and assisting the Commission in developing or enhancing projects including those that are done in cooperation with other state partners. The role of the fellow may include support on large-scale team projects and also likely several smaller independent projects which the fellow will develop and manage.

Projects/activities that the fellow will be expected to work on would include:

- 1) Assisting in review of climate-related documents such vulnerability assessments, adaptation plans and other technical reports in support of land use plan development for Local Coastal Programs and regulatory work on coastal development permits;
- 2) Supporting outreach and education efforts to local governments, other state agencies, stakeholders and the public about climate and sea-level rise planning information, products and tools. This work could include assisting with updates to the Commission's website and with planning outreach events such as webinars and workshops;
- 3) Assisting Interagency Coordination and Collaboration. As described above, the fellow would support Commission staff efforts done in coordination with other state agencies to implement, track and report on climate adaptation and other sea level rise planning efforts.
- 4) Supporting implementation of key climate change related action items of the Commission's 2013-2018 Strategic Plan; and
- 5) Supporting various climate-related special projects including carrying out discreet tasks to complete those special projects.

Given the wide range of projects and initiatives undertaken by the Coastal Commission along the entire California coast, a successful Sea Grant Fellow at the Coastal Commission must be willing to take on and deliver products for a broad range of projects. While there will be an expected emphasis on climate change related projects for most assignments, there will be opportunity for the fellow to dig more deeply into topics of particular interest and assignments can be customized to match the unique skills of the selected fellow. The selected Sea Grant Fellow must be able to work well under minimal supervision and guidance. Possessing an entrepreneurial spirit, strong personal initiative and an ability to work well in a collaborative style with others would be a great plus.

The Coastal Commission senior management has broad experience and success in hosting fellows and giving them a wide breadth of experience in coastal management issues. The Coastal Commission has a team of staff members focusing on climate change issues. This fellowship offers an excellent opportunity for team work and peer collaboration for a Sea Grant Fellow. ***The Commission has two fellow proposals; however, it is likely that only one 2017 proposal will be funded.***

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TDD (415) 597-5885

**CALIFORNIA COASTAL COMMISSION****2017 SEA GRANT FELLOWSHIP OPPORTUNITY  
COASTAL ENGINEER OR NEARSHORE OCEANOGRAPHER****1. Host location and contact information**

California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105

**2. Fellowship Supervisor and Point of Contact for California Sea Grant, Prospective Fellows, and Finalists**

Susan Hansch, Chief Deputy Director  
[shansch@coastal.ca.gov](mailto:shansch@coastal.ca.gov)  
(415) 904-5244

Lesley Ewing, Sr. Coastal Engineer  
[lewing@coastal.ca.gov](mailto:lewing@coastal.ca.gov)  
(415) 904-5291

**3. Overview**

The California Coastal Commission implements the California Coastal Act of 1976 and has regulatory authority over development along the coast in balance with the protection of coastal resources, environmentally sensitive habitats, and public access. This work is carried out through land use planning and permitting. The Commission is an independent, quasi-judicial state agency whose authority is defined as the coastal zone, a 1.5 million-acre area stretching 1,270 miles along the state's mainland coastline from Oregon to Mexico, and around nine offshore islands (333 miles of island shoreline). The Commission also has the responsibility to work with local governments to establish Local Coastal Programs (LCPs) which, when certified by the Commission, becomes the land use plan basis for coastal permitting at the local level. Furthermore, the Commission has the purview and planning responsibility to assess and address issues of state-wide importance such as sea level rise and coastal erosion and the implications of these on Coastal Act resources. Both sea level rise and coastal erosion are likely to be exacerbated by climate change.

**Position Description**

The Sea Grant Fellow will be involved in a broad range of the Coastal Commission's regulatory and LCP planning work throughout the coastal zone. He/she will have an opportunity to assist executive, management, and policy staff in the Commission offices with the technical and engineering aspects of a variety of coastal and ocean issues. Working closely with Coastal Commission's Chief Deputy Director, Senior Coastal Engineer, technical staff and other senior staff, the Sea Grant Fellow will have the opportunity to work at the leading edge of natural resources and coastal and ocean management and climate change adaptation. The Fellow will have the opportunity to interact directly with senior technical staff and leaders in resource management policy throughout California. Fellow work products, potentially including presentations and collaborative work on reports with the Coastal Commission and with other state agencies, will be highly visible.

A Sea Grant Fellow with special expertise in coastal engineering and/or coastal processes with the Coastal Commission will support the executive and senior policy and technical staff in specific areas such as participating in multi-agency meetings, reviewing, commenting on and drafting comments on

the technical components of regulatory, enforcement and planning documents, and assisting the Commission in developing or enhancing projects including those that are done in cooperation with partners. The role of the Fellow may include support on one or more of the above mentioned large-scale projects and he/she will also likely have several smaller projects that will be theirs to develop and manage.

Key focus areas could include addressing concerns related to: increased flooding, wave attack and erosion that could result from rising sea level and climate change; shoreline protection and effective options for soft protection; beach nourishment; living shorelines and adaptive protection options; tsunami risk and options for protection and response; sediment management; and, other coastal hazards.

Potential tasks associated with the analysis and development of projects include: review of site plans, grading plans, erosion and wave up-rush studies, slope stability and other engineering, geology, and technical reports; communicating with local planners, project applicants, technical consultants and others; review, analysis and summary technical reports; coordinating with stakeholders, partners, or technical consultants; organizing and/or participating in meetings and workshops; participating in site visits; problem solving; and maintaining broad project or program support.

Specific project and program duties will be developed collaboratively with the Fellow and with Coastal Commission staff members currently working on these issues. Potential project opportunities at this time address a mix of policy and technical needs. The Fellow would also have the opportunity to participate in numerous intra-agency and inter-agency working groups including the following:

- Coastal Sediment Management Work Group
- Tsunami Policy Work Group
- Sea Level Rise Mapping Partners and FEMA Resilience Alignment Meetings
- Beach Erosion and Coastal Hazards Working Group
- San Dieguito Lagoon Coastal Processes Technical Panel
- Coast and Ocean Climate Adaptation Work Group

A successful Sea Grant Fellow at the Coastal Commission must be willing to take on and deliver a broad range of projects. The Sea Grant Fellow must be able to identify and analyze an array of technical issues associated with Commission regulatory and planning efforts and communicate information clearly in both writing memos and reports, as well as through oral and visual presentations. The Sea Grant Fellow must be able to work well under minimal supervision or guidance. Assignments will be customized to match the unique skills of the selected Fellow. However, since there are few academic programs that provide all the necessary skills for this Coastal Engineering/ Coastal Processes position, the Fellow must also know when they are working outside their sphere of understanding and be willing to ask for help or direction early in the work effort. An undergraduate degree in civil or environmental engineering or engineering geology, and a masters or Ph.D. in coastal, environmental or ocean engineering; environmental or engineering geology; physical oceanography; or related disciplines is desirable.

The Coastal Commission's senior management has broad experience and success in hosting Fellows and giving them a wide breadth of experience in coastal management issues. ***The Commission has two fellowship proposals; however, it is likely that only one 2017 proposal will be funded.***



## CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

### 2017 Sea Grant Fellowship Opportunity

#### 1. Host location and contact information

Aquaculture Program  
CA Department of Fish & Wildlife  
830 S Street, Sacramento CA 95811

#### 2. Supervisor & Point of Contact for CA Sea Grant, prospective fellows, and finalists

Randy Lovell  
State Aquaculture Coordinator  
(address above)  
916-445-2008  
[randy.lovell@wildlife.ca.gov](mailto:randy.lovell@wildlife.ca.gov)

#### 3. Position Description

Aquaculture is the fastest-growing sector in global food-production, and now accounts for over half of the world's supply of seafood. Over 90% of the US demand for seafood is met by imports. California's aquaculture industry, which values its economic impact at some \$170M+, is still at a very modest level of output, and is noted for its niche character and diversity: in where it's done, in what is produced, and its response to the many market demands or applications for its products (which go far beyond seafood alone). The opportunity to expand aquaculture in California is immense, but the challenge of matching the state's many complex interests and resources to the promise of aquaculture's future opportunities demands a thoughtful and creative approach.

In conjunction with the CA Fish & Game Commission, the CA Department of Fish & Wildlife administers, regulates, and supports aquaculture activities throughout the state in both fresh- and marine waters, starting with Fish & Game Code §1700 (f), which declares that it is "...the policy of the state to encourage the conservation, maintenance, and utilization of the living resources of the ocean and other waters under the jurisdiction and influence of the state for the benefit of all the citizens of the state and to promote ... the development of commercial aquaculture."

In fulfillment of his statutorily-described duties (F&G Code §15100), the State Aquaculture Coordinator:

- a) promotes understanding of aquaculture among public agencies and the general public,
- b) proposes methods of reducing the negative impact of public regulation at all levels of government on the aquaculture industry,
- c) provides information on all aspects of regulatory compliance to the various sectors of the aquaculture industry, and
- d) provides such advice to aquaculturists on project siting and facility design that may be needed to comply with regulatory requirements.

A Sea Grant fellow within the CDFW Aquaculture Program will assist the Coordinator in fulfilling these duties, employing a range of creative input and administrative contributions, from policy level to direct interaction with producers and other constituents. A variety of projects and activities are in motion within the California aquaculture industry that call for an expanded team approach among the Aquaculture Program and CDFW's many regional and functional organizational units, in addition to the many federal, state, and local agencies with whom the Program and industry interact.

A sample of the Aquaculture Program's current issues and projects, and the fellow's ideal complementing skills includes:

- **The California Aquaculture Permit Guide and Virtual Permit Counter** – an interactive online guidance tool to help constituents and agency personnel navigate the aquaculture permitting process will be undergoing revision and updating from its previous printed form; contributions from the fellow may come in many forms depending on skillsets.
- **Marine Aquaculture Programmatic Environmental Impact Report** - review and coordination of agency and public comments, and the further refinement of the management and regulatory framework for marine aquaculture activities in intertidal, near-shore, and offshore environments.
- **Aquaculture Development Committee** – the multi-agency/academic/industry body employed to help provide vision and guidance to the development (or the obstacles to the development) of commercial aquaculture in California. Participation in and assistance in organizing meetings and documentation of its proceedings will be an important activity and mechanism to learn about current aquaculture activities and the molding of visions for its future development.
- **Aquaculture Program Communications & Outreach (AquacultureMatters.ca.gov)** – online tools (including website, blog, and social media) are in the process of upgrades. Communicating information that is of importance to industry constituents, state and federal agencies, legislative, and many other targeted audiences will need effective execution under close collaboration and management with other program team members.
- **California Shellfish Initiative** – a collaborative effort to expand shellfish culture resources (both commercial and native restoration activities) in the state, taking into account the many stakeholder interests involved. A broad, statewide discussion that started in mid-2013 will evolve into localized, regional planning and policy efforts continuing into the future. Communication, collaboration, and planning skills are key to the Initiative's success.
- **Humboldt Bay Pre-Permitting Project** – wherein additional shellfish leases are being considered under an innovative, umbrella or pre-permitting effort. Interagency and public coordination through the CEQA review and planning provide a showcase of the challenges of this effort.
- **Ventura Shellfish Enterprise** – following a similar model (as Humboldt) of pre-permitting lease areas for sublease to individual shellfish growers, the Ventura Port District will be assembling lease and permit applications, and environmental impact analyses, in cooperation with this office and other partnering entities, as it seeks approvals to establish a cooperative base for mussel farming, landing, and marketing. Skills in interagency and grower coordination will be strengthened through this experience.
- **Sacramento Perch Applied Genetics** – collaborative work with other Department fisheries managers, private aquaculturists, and genetics researchers aimed at restoring Sacramento Perch (a species of special concern in CA). Opportunity to contribute to proactive conservation effort that will build on foundation of genetics work starting now.

Activities may include: site visits; participation in meetings and discussions on policy and planning; expanding program communications to agencies and constituents; developing and revising guidance documents and informational leaflets; assisting, commenting, and planning within the CEQA process; assisting with the planning, administration, and expansion of state water bottom leases; and assistance with spatial data sharing, planning, and the integration of GIS tools & techniques for managing aquaculture activities within existing and newly-developing statewide database resources.

Successful candidates must be able to work independently, but in a coordinated, engaged, and communicative fashion with the Department and its counterparts in other agencies and the industry. The work is focused heavy on communication, interaction, and policy, with little emphasis on direct scientific research. However, the ability and desire to conduct bibliographic, legal, and administrative research is a vital contribution to the Program's efforts. Superior listening and writing skills, and a desire to interact with constituents across a broad spectrum of experience will make the fellowship more rewarding for everyone.



**CALIFORNIA STATE LANDS COMMISSION**  
**2017 State Fellowship Opportunity #2**  
**Executive Office Fellow**

**1. Host location and contact information**

California State Lands Commission  
100 Howe Avenue, Suite 100-South,  
Sacramento, CA 95825

**2. Fellowship Supervisor**

Executive Office, in coordination with staff of other Divisions within the Commission

**3. Point of Contact:**

Colin Connor  
Assistant Executive Officer  
[Colin.connor@slc.ca.gov](mailto:Colin.connor@slc.ca.gov)  
916-574-1800

**4. Agency Background:**

The [California State Lands Commission](#) (Commission) is an independent and dynamic state agency that works on the cutting edge of integrating science into policy decisions. The State Lands Commission has jurisdiction over all State-owned filled and unfilled tidelands, submerged lands and beds of navigable waterways. The State acquired ownership of all such lands within its boundaries upon its admission to the United States in 1850. The State holds these lands for the benefit of all its people for the public trust purposes of water related commerce, navigation, fisheries, water oriented recreation, and open space. These "sovereign lands" include the beds of California's natural and navigable rivers, lakes, and streams, as well as the State's tide and submerged lands along the State's 1,100+ miles of coastline and offshore islands, from approximately the mean high tide line to three nautical miles offshore.

Part of the Commission's trust responsibility includes reviewing and approving or denying lease applications for uses or activities on sovereign lands (e.g., marine renewable energy projects, marine oil terminals, shoreline protective structures, commercial marinas, private recreational docks and piers, etc.) and enhancing public access to the ocean and waterways. Valid public trust uses occasionally conflict with each other; the Commission works to manage those conflicts and ensure that the principles of the Public Trust Doctrine are safeguarded. In this way, the Commission, along with its sister state agencies, decides on appropriate uses for California's ocean and proactively plans for future issues and conflicts.

The three-person Commission is comprised of two Constitutional Officers, the Lieutenant Governor and the State Controller, and the Governor-appointed Director of Finance. This Fellow will be supervised primarily by Executive Office staff and will coordinate closely with staff in other divisions in the Commission that will play a key role in the development of policies and practices relating to offshore renewable energy in state and federal waters off California. These Divisions include the Mineral Resources Management Division, Land Management Division, Division of Environmental Planning and Development, and the Legal Division.



**Position Description:**

This Sea Grant Fellow will have the opportunity to work on investigatory projects throughout the fellowship year involving complex and challenging marine and coastal issues related to:

- Offshore wind energy;
- Coastal engineering;
- Tidal and wave energy;
- Environmental impacts of offshore energy;
- Natural oil and gas seeps;
- Legacy oil wells and other coastal hazards.

The State of California has committed to a goal of 50% renewable energy by 2030. Meeting this goal will likely require the emergence of offshore renewable energy sources, including wind, tidal, and wave energy. The Commission will be instrumental in the development of these resources and technologies as the leasing authority for California's tide and submerged lands. The Commission wants to ensure that the state's energy goals are met, while protecting Public Trust resources and values, and limiting adverse environmental impacts. The Fellow will have the opportunity to contribute to the development of the Commission's renewable energy future, as well as explore how offshore renewable energy relates to other important resource management issues, including climate change and sea-level rise.

Project work is likely to include:

- Developing a comprehensive analysis of offshore renewable energy options, including wind, wave, tidal, and solar;
- Developing a feasibility analysis of using existing oil, gas, and electric infrastructure for offshore renewable energy;
- Contributing to the proposed joint offshore energy task force for California convened by the Bureau of Ocean Energy Management;
- Participating in stakeholder outreach efforts related to offshore energy development;
- Researching and reviewing proposed offshore energy projects and leases;
- Reviewing recent offshore oil seep-related and legacy oil well studies and articles;
- Coordinating with staff from other agencies and entities, such as the Ocean Protection Council, Ocean Science Trust, California Energy Commission, Bureau of Ocean Energy Management, California Coastal Commission, California Department of Fish and Wildlife, etc.; and
- Developing reports and presentations for Commission management, staff, and Commissioners about offshore renewable energy.

The Fellow will coordinate with his or her Supervisor to select projects that align with the Fellow's interests and skills, and meet the needs of the Commission. The Fellow will be welcome to participate in conferences, as well as interagency meetings, and collaborative projects with other Fellows as opportunities arise. Among other meetings and events, our 2012-16 Sea Grant Fellows drafted and presented reports to State Lands Commissioners; attended Commission meetings, legislative hearings, and relevant coastal and marine conferences; and represented the Commission in collaborative working groups.

**Desirable Qualifications:**

- Ability to work both independently and with diverse interdisciplinary teams that require

clear communication;

- Ability to apply and develop expertise in natural resources and coastal management issues;
- Ability to translate science into layman's terms;
- Ability to work toward consensus positions with governmental, private, and public interest groups;
- Background in Chemistry, Engineering, Energy Policy, or other related disciplines; and
- An interest in natural resource laws, rules, and regulations.



**CALIFORNIA STATE LANDS COMMISSION  
2017 State Fellowship Opportunity #1  
Science Policy and Tribal Liaison Fellow**

**1. Host location and contact information**

California State Lands Commission  
100 Howe Avenue, Suite 100-South,  
Sacramento, CA 95825

**2. Fellowship Supervisor & Point of Contact:**

Jennifer Deleon  
Science Policy Advisor and Tribal Liaison  
[Jennifer.deleon@slc.ca.gov](mailto:Jennifer.deleon@slc.ca.gov)  
(916) 574-0748

**3. Agency Background:**

The [California State Lands Commission](#) (Commission) is an independent and dynamic state agency that works on the cutting edge of integrating science into policy decisions. The State Lands Commission has jurisdiction over all State-owned filled and unfilled tidelands, submerged lands and beds of navigable waterways. The State acquired ownership of all such lands within its boundaries upon its admission to the United States in 1850. The State holds these lands for the benefit of all its people for the public trust purposes of water related commerce, navigation, fisheries, water oriented recreation, and open space. These "sovereign lands" include the beds of California's natural and navigable rivers, lakes, and streams, as well as the State's tide and submerged lands along the State's 1,100+ miles of coastline and offshore islands, from approximately the mean high tide line to three nautical miles offshore.

Part of the Commission's trust responsibility includes reviewing and approving or denying lease applications for uses or activities on sovereign lands (e.g., marine renewable energy projects, marine oil terminals, shoreline protective structures, commercial marinas, private recreational docks and piers, etc.) and enhancing public access to the ocean and waterways. Valid public trust uses occasionally conflict with each other; the Commission works to manage those conflicts and ensure that the principles of the Public Trust Doctrine are safeguarded. In this way, the Commission, along with its sister state agencies, decides on appropriate uses for California's ocean and proactively plans for future issues and conflicts.

The three-person Commission is comprised of two Constitutional Officers, the State Controller and the Lieutenant Governor, and the Governor-appointed Director of Finance. This Fellow will be supervised by the Science Policy Advisor and Tribal Liaison, within the Commission's Executive Office. The Science Policy Advisor and Tribal Liaison consults with Commission staff on many issues at the science/policy interface, including adaptation to climate change and sea-level rise; management of California's marine protected areas; development of offshore renewable energy; and the preservation of cultural and tribal resources. This work includes extensive coordination with the Commission's other divisions, including Environmental Planning and Management, Legal, External Affairs, Mineral Resources Management, Marine Environmental Protection, and Land Management.

## **Position Description:**

The Science Policy Advisor and Tribal Liaison's Sea Grant Fellow will have the opportunity to work on complex and challenging marine and coastal issues. Accordingly, the Fellow will likely have a variety of short-term and long-term projects throughout the fellowship year. The Fellow will also be welcome to participate in conferences, interagency meetings, and collaborative projects with other Fellows as opportunities arise. Previous Commission Sea Grant Fellows worked on and participated in the following projects and activities:

- Developed and implemented a sea-level rise and climate change education and training program for Commission staff;
- Participated in the State Coastal Leadership Group on Sea-Level Rise and the California Collaborative on Coastal Resilience's Humboldt Pilot Project;
- Assisted with the update of the Commission's lease application to address sea-level rise and developed a webpage to help applicants account for it;
- Attended training to explore and assess the latest coastal and marine spatial planning tools and techniques for potential utility to the Commission;
- Attended Commission meetings, legislative hearings, and relevant coastal and marine conferences;
- Organized, moderated, and presented a sea-level rise panel at the Prevention First Conference, hosted by the Commission; and
- Volunteered for the Thank You Ocean campaign.

Specific project and program duties will be developed collaboratively among the Fellow, Science Policy Advisor and Tribal Liaison, and Executive Office, and will be based on the Commission's needs that arise during the fellowship, as well as the Fellow's interests. The Fellow will likely continue or collaborate on the current (2016) Sea Grant Fellows' projects related to climate change and sea-level rise. This will include developing an ongoing climate change and sea-level rise training program for Commission staff, integrating the best available science into the Commission's decision-making processes, and collaborating with other state, federal, local, and tribal entities. As part of the climate change and sea-level rise program, the Fellow will have the opportunity to develop web- and GIS-based tools to aid Commission staff and the public in analyzing the impacts of sea-level rise on public trust resources and values. In addition to these long-term projects, the Fellow will interact with Commission staff from multiple divisions that encompass a wide variety of coastal and marine resource topics. Examples of topics that our staff works on include:

- Navigable inland waters
- Marine and terrestrial renewable energy
- Aquatic invasive species
- Offshore oil development and terminals
- Marine spatial planning
- Granted lands
- Underwater infrastructure.
- Cultural and tribal resources

## **Desirable Qualifications:**

- Ability to work both independently and with diverse interdisciplinary teams that require clear communication;
- Ability to apply and develop expertise in natural resources and coastal management issues;

- Ability to translate science into layman's terms;
- Familiarity and/or experience with GIS and web-development;
- Ability to work toward consensus positions with governmental, private, and public interest groups;
- An interest or experience in using social media to educate, engage, and communicate with a wide array of audiences; and
- An interest in CEQA and other natural resource laws, rules, and regulations (e.g., National Environmental Policy Act (NEPA), California Coastal Act, California Ocean Protection Act, Federal and State Endangered Species Acts, etc.).

**Commissioners**  
**Eric Sklar**, President  
Saint Helena  
**Jacque Hostler-Carmesin**, Vice President  
McKinleyville  
**Anthony C. Williams**, Member  
Huntington Beach  
**Russell E. Burns**, Member  
Napa  
**Peter S. Silva**, Member  
Chula Vista

STATE OF CALIFORNIA  
Edmund G. Brown Jr., Governor

**Valerie Termini, Executive Director**  
1416 Ninth Street, Room 1320  
Sacramento, CA 95814  
(916) 653-4899  
www.fgc.ca.gov

## Fish and Game Commission



*Wildlife Heritage and Conservation*  
*Since 1870*

### California Sea Grant State Fellowship Opportunity

- 1. Host Location/Contact:** California Fish and Game Commission  
1416 Ninth Street, Suite 1320  
Sacramento, CA 95814
- 2. Names of Supervisor:** Valerie Termini, Executive Director
- 3. Point of Contact:** Susan Ashcraft, Acting Deputy Executive Director  
916.653.1803  
Susan.Ashcraft@fgc.ca.gov

#### 4. Position Description

The [California Fish and Game Commission](#) (Commission) was the first wildlife conservation agency in the United States, pre-dating even the U.S. Commission of Fish and Fisheries. The Commission has hundreds of authorities, some general in nature and some very specific through statutes that comprise the Fish and Game Code, Public Resources Code, and Government Code.

In general, the Commission has jurisdiction over nearly every living thing in California except people, agriculture, and domestic animals. Specifically, the Commission is formally vested with authority to regulate the take, possession and conservation of birds, mammals, fish, amphibians, and reptiles from the Oregon border to the Mexican border, and, from the Nevada border to three miles out into the Pacific Ocean. The Commission also addresses fish, wildlife and conservation issues on a broad scale, through such subjects as climate change, marine plastics pollution, sustainable fishing communities, predator management, tribal nation engagement, fisheries bycatch, and marine protected areas.

The California State Legislature has deemed that the scope and responsibilities of the Commission have significantly expanded over the years as the size and diversity of California's population has increased, and as the scientific knowledge of the habitat conservation and ecosystem-based management needs of fish and wildlife has expanded. The appointed Commissioners are expected to make complex public policy and biological decisions on behalf of the people of California, with a small staff that works to ensure the Commissioners have the necessary information for making those decisions. Examples of the Commission's statutory authorities include:

- formulating general policies for the conduct of the California Department of Fish and Wildlife;
- determining when, where, and using what methods hunters and fisherman can take animals and fish;
- addressing non-native species importation, possession, and sale;
- listing and delisting threatened and endangered species under the California Endangered Species Act;
- establishing and regulating uses of protected lands and waters such as wildlife areas, ecological reserves and marine protected areas;
- regulating the possession and care of restricted species, such as eagles, owls, bobcats, bears, and freshwater sharks; and
- aquaculture and kelp harvest leasing.

The Commission conducts its business at six meetings a year, which are strategically located throughout the State to encourage public outreach and participation. In addition, the Commission currently has three committees that each meets three times per year: The Marine Resources Committee, Wildlife Resources Committee, and Tribal Committee. Each committee is chaired or co-chaired by no more than two Commissioners. The goal of these committees is to allow for greater in-depth presentations and discussions on fish and wildlife issues and regulatory proposals. The committee meetings are less formal in nature than Commission meetings and provide for additional access to the Commissioners.

There is sometimes confusion about the distinction between the Commission and the California Department of Fish and Wildlife. In the most basic terms, the Commission establishes policies and regulations while the department is guided by the Commission's policies, charged with implementing and enforcing regulations set by the Commission, and provides biological data and expertise to inform the Commission's decision-making process.

The California Sea Grant fellow will have the opportunity to serve as staff on a wide variety of issues before the Commission, including many of those listed above, depending on the fellow's areas of interest, educational goals, initiative, communication and analytical skills, and professional goals. The types of functions the fellow might support include:

- assisting the executive director in developing policies and/or strategic approaches to items that may be controversial in nature;
- working on committee agendas and topics directly with the marine and wildlife advisors;
- organizing and/or leading related meetings and workshops;
- enhancing transparency by outreaching and communicating with stakeholders and partners, and working to maintain broad project or program support;
- drafting and reviewing staff summaries for Commission and committee meetings; and
- helping improve the Commission website and develop social media outreach.

Placement with the Commission will help the fellow better understand how fish and wildlife statutes, regulations and policies are established and implemented in California, and will also provide a front seat to political, administrative, and stakeholder participation processes.



## 2017 California Sea Grant State Fellowship Opportunity Planning Division

### **1. Host Location and Contact Information**

Planning Division, Delta Stewardship Council  
980 Ninth Street, Suite 1500  
Sacramento, CA

### **2. Fellowship supervisor**

Anthony Navasero, Senior Engineer

### **3. Point of contact for California Sea Grant, prospective fellows, and finalists**

Nir Oksenberg, Science Communications  
980 Ninth Street, Suite 1500  
Sacramento, CA  
(916) 445-0715  
[Nir.oksenberg@deltacouncil.ca.gov](mailto:Nir.oksenberg@deltacouncil.ca.gov)

### **4. Overview**

California's Delta is the largest estuary on the West Coast and is the hub of the state's major water supply systems. The Delta Stewardship Council, a state agency established by the 2009 Delta Reform Act, is charged with achieving the coequal goals of water supply reliability for California and ecosystem restoration in the Delta in a manner that protects the unique values of the Delta as an evolving place. The Council's Planning Division provides integration of environmental, engineering, and land use planning expertise to support and coordinate implementation of the Delta Plan, a comprehensive, long-term management plan for the Delta based on the best available science. The Delta Plan is implemented through cooperation among affected agencies and is also enforceable through the Council's regulatory authority, which requires state and local actions that significantly affect the coequal goals to be consistent with the Delta Plan. A Sea Grant fellow with the Council's Planning Division will have the unique opportunity to work at the interface of policy, planning and science on some of California's most challenging and important natural resource management issues.

### **Position Description**

Initially, the Sea Grant fellow will meet with the Supervisor and other Planning Division staff as appropriate to develop a mentoring plan for the year. This plan will be based on the interests and background of the Sea Grant fellow and is intended to maximize the Sea Grant fellow's opportunities.

Working closely with Planning Division staff, the Sea Grant fellow will have the opportunity to interact with California policy makers, national and international scientific experts and gain exposure to how policies and plans are developed and implemented in the Bay-Delta and Suisun Marsh. The Planning Division is working on several efforts



focused on, 1) developing a Delta Plan amendment regarding Delta conveyance, system storage, and the operations of both, 2) developing a Delta Plan amendment regarding ecosystem restoration, 3) supporting efforts to integrate flood management and habitat restoration into multi-benefit projects, 4) evaluating efforts to enhance recreation and tourism that are compatible with the cultural heritage of the Delta, and 5) promoting land use decisions that enhance economic vitality while reducing flood risk and preserving agriculture and open space.

Potential tasks and responsibilities related to the Planning Division's efforts include: evaluating public benefits of proposed water storage and conveyance projects; accelerating permitting of habitat restoration projects; engaging and coordinating with multiple agencies and stakeholders; assisting with regulatory coordination workshops; and producing communication materials for policymakers, managers, and the public.

### ***Potential Projects***

Specific projects will be identified with the fellow based on their expertise and interests. The fellow's work will support functions of the Planning Division. Potential projects include:

- ◆ Evaluating major water supply, ecosystem restoration and flood protection projects
- ◆ Researching statewide water conservation and groundwater management efforts
- ◆ Developing and implementing performance measures for the Delta Plan
- ◆ Gathering and developing GIS data for visualization tools to facilitate stakeholder participation in habitat restoration and flood management planning



Delta Science Program  
Delta Stewardship Council

## 2017 California Sea Grant State Fellowship Opportunity Adaptive Management & Independent Science Board

### 1. Host Location and Contact Information

Delta Science Program, Delta Stewardship Council  
980 Ninth Street, Suite 1500  
Sacramento, CA

### 2. Fellowship supervisor

Lauren Hastings, Adaptive Management Science Advisor  
[lauren.hastings@deltacouncil.ca.gov](mailto:lauren.hastings@deltacouncil.ca.gov)  
(916) 445-5026)

### 3. Point of contact for California Sea Grant, prospective fellows, and finalists

Nir Oksenberg, Science Communications  
980 Ninth Street, Suite 1500  
Sacramento, CA  
(916) 445-0715

### 4. Introduction

California's Sacramento-San Joaquin Delta is the largest estuary on the West Coast and is the hub of the state's major water supply systems. It is inextricably linked to statewide issues that affect its ability to function in a healthy, sustainable way. In November 2009, the California Legislature enacted the Delta Reform Act, one of several bills related to water supply reliability, ecosystem health, and the Delta, and created the [Delta Stewardship Council](#). The mission of the Delta Stewardship Council is to achieve the coequal goals of providing a more reliable water supply for California and protecting, restoring and enhancing the Delta ecosystem (including Suisun Marsh).

The Act also established the Delta Science Program (DSP), Lead Scientist, and Delta Independent Science Board (Delta ISB). The Delta Science Program's mission is to provide the best possible scientific information for water and environmental decision-making in the Bay-Delta system, and was established to develop scientific information and synthesis for the state of scientific knowledge on issues critical for managing the Bay-Delta system. That body of knowledge must be unbiased, relevant, authoritative, integrated across state and federal agencies, and communicated to Bay-Delta decision-makers, agency managers, stakeholders, the scientific community, and the public. The Lead Scientist is responsible for leading, overseeing, and guiding the Science Program and is guided by.

The Delta ISB is comprised of nationally and internationally renowned scientists with backgrounds in ecology, biology, biogeochemistry, geology, and economics and is mandated

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*"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."*

– CA Water Code §85054

to provide oversight of the scientific research, monitoring, and assessment programs that support adaptive management of the Delta, including Suisun Marsh, through periodic reviews of each program. It also advises the Delta Stewardship Council when requested (science/policy interface).

### **Position Description**

The Fellow will work under the direction of the DSP Adaptive Management and Independent Science Board (AMISB) Unit to develop innovative ways of assessing Delta Science programs that support agency efforts to understand the implications of actions taken to achieve the coequal goals. As an initial step, the Fellow will meet with the AMISB Unit Manager, Lead Scientist, Chair and Co-chair of the Delta ISB to develop a mentoring plan for the year. This plan is intended to maximize the Fellow's opportunities and will be based on the needs of the AMISB Unit, the Delta ISB, and the interests and background of the Fellow. Among the opportunities for the Fellow is assisting with development of restoration adaptive management resources and engaging in restoration adaptive management activities, as well as assisting with the Delta ISB's legislatively mandated reviews.

The AMISB Unit works with staff from state, federal and local government agencies, public agencies, and stakeholders and provides advice and assistance on adaptive management for restoration projects. This includes advice on conceptual models, regional monitoring, relevant research and integration of information into restoration projects. Additionally, the AMISB Unit will be working with partners to develop adaptive management frameworks and landscape-level conceptual models.

In addition to its advisory role, the AMISB Unit currently provides support for an interagency adaptive management technical team that is developing an ecosystem restoration adaptive management program for California EcoRestore (<http://resources.ca.gov/ecorestore/>, [http://resources.ca.gov/docs/ecorestore/ECO\\_FS\\_Overview.pdf](http://resources.ca.gov/docs/ecorestore/ECO_FS_Overview.pdf)), the initiative to coordinate and advance at least 30,000 acres of critical habitat restoration in the Delta over the next four years. The technical team, the Interagency Adaptive Management Integration Team (IAMIT), is made up of agency scientists and technical management staff and works in conjunction with the EcoRestore Steering Committee of agency leaders and resource managers that will address developing and funding an overall Delta restoration adaptive management program. The initial task of the IAMIT is to develop a white paper with recommendations for the adaptive management program by the end of 2016, but we anticipate the IAMIT will provide longer term adaptive management support for Delta restoration projects in 2017 and beyond.

Currently, the Delta ISB is reviewing overarching "themes" rather than individual projects and/or programs. As part of the review process, the Delta ISB is evaluating the structure of and coordination among science programs evaluated as part of the overarching theme. A potential result of a review may be the identification of clusters of programs that should be more effectively coordinated to maximize resources and minimize duplication of efforts. Another outcome could be identifying the extent to which programs provide all of the information needed to guide policy decisions.

The initial efforts of the Delta ISB are to structure reviews around scientific issues inherent in the Act's coequal goals of water supply reliability and ecosystem health. The Delta ISB has completed three thematic reviews:

1. Habitat restoration activities and on how adaptive management and climate change are incorporated into these activities (<http://deltacouncil.ca.gov/sites/default/files/documents/files/HABITAT%20RESTORATION%20REVIEW%20FINAL.pdf>);
2. Flows and fishes (<http://www.deltacouncil.ca.gov/science-board/delta-isb-products>); and
3. Restoration adaptive management (<http://deltacouncil.ca.gov/sites/default/files/2016/02/2016-2-19-Adaptive-Management-Report-FINAL.pdf>).

Subsequent reviews will focus on how climate change and adaptive management are being incorporated into programs, water supply reliability, water quality, levees, and Delta as an evolving place.

### **Potential Assignments**

- Programs Supporting Adaptive Management of the Delta - The Fellow will have the opportunity to interface directly and work in close collaboration with DSP AMISB staff and the Board as a whole and with individual members to research governmental and non-governmental agencies and organizations that implement programs related to:
  - Restoration Adaptive Management
  - Adaptive Management
  - Water Supply Reliability
  - Water Quality
  - Levees
  - Delta as an Evolving Place
- Synthesis of Information - Opportunities will exist to synthesize information obtained from research and site visits with governmental and non-governmental staff to assist with the preparation of the Delta ISB's reports to the Delta Stewardship Council. This may also require participating in meetings and coordinating with program staff from other agencies and organizations.
- Delta Science Plan – As required by the Delta Plan, the Delta Science Program prepared a Delta Science Plan in December 2013 (<http://deltacouncil.ca.gov/sites/default/files/documents/files/Delta-Science-Plan-12-30-2013.pdf>). The Delta Science Plan is a framework for conducting science that organizes and integrates Delta science activities and builds an open collaborative science community (One Delta, One Science). The Plan proposed 31 actions intended to strengthen, organize, and communicate science to provide relevant, credible, and legitimate decision-support for policy and management actions. Chapter 3 of the Plan describes the use of adaptive management as a tool to manage complex natural resources programs and projects and Chapter 4 discusses the necessity of building a science infrastructure. The Fellow may be asked to assist in the implementation of one or more tasks identified in the Science Plan.



Delta Science Program  
Delta Stewardship Council

## 2017 California Sea Grant State Fellowship Opportunity Science Plan

### **1. Host Location and Contact Information**

Delta Science Program, Delta Stewardship Council  
980 Ninth Street, Suite 1500  
Sacramento, CA

### **2. Fellowship supervisor**

Lindsay Correa, Sr. Environmental Scientist

### **3. Point of contact for California Sea Grant, prospective fellows, and finalists**

Nir Oksenberg, Science Communications  
980 Ninth Street, Suite 1500  
Sacramento, CA  
(916) 445-0715  
[Nir.oksenberg@deltacouncil.ca.gov](mailto:Nir.oksenberg@deltacouncil.ca.gov)

### **4. Overview**

The mission of the Delta Science Program (DSP) is to provide the best possible unbiased scientific information to inform water and environmental decision making in the Bay-Delta system. The DSP is an honest broker of Bay-Delta science. It connects scientists, managers, policy- and decision-makers and diverse stakeholders. The DSP was established by the 2009 Delta Reform Act to support, synthesize, coordinate and communicate unbiased and authoritative scientific knowledge directly relevant to Bay-Delta decision-making. Housed within the Delta Stewardship Council, the DSP supports the Council's adaptive management of the Delta Plan and use of best available science. The DSP provides forums for increasing mutual understanding, collaboration, learning, identifying common interests, and managing scientific conflicts. The DSP facilitates the development, sharing and use of best available science and adaptive management in the Bay-Delta and works collaboratively with Bay-Delta stakeholders and agencies at multiple organizational levels and across disciplines. A Sea Grant State Fellow with the DSP will have the unique opportunity to work at the interface of science and policy on some of California's most challenging natural resource management issues.

### **Position Description**

Initially, the Sea Grant fellow will meet with the Supervisor, Lead Scientist, and other DSP staff as appropriate to develop a mentoring plan for the year. This plan will be based on the interests and background of the Sea Grant fellow and is intended to maximize the Sea Grant fellow's opportunities.

Working closely with DSP staff and the Lead Scientist, the Sea Grant fellow will have the opportunity to interact with California policy makers, nationally and internationally recognized scientific experts, and gain exposure to how science is conducted, reviewed and used to inform management and policy in the Bay-Delta and Suisun Marsh. The DSP is working on several efforts focused on, 1) coordinating Bay-Delta science, 2) applying principles of adaptive management for ecosystem restoration and water management decisions in the Bay-Delta and Suisun Marsh, 3) synthesizing scientific information, 4) facilitating independent scientific peer

review, and 5) communicating scientific information to policy and decision-makers, scientists and the public.

Potential tasks and responsibilities related to the DSP's efforts include: implementing elements of the [Delta Science Plan](#); developing science communication products for the Delta Stewardship Council; working with interdisciplinary teams on science synthesis and communication; engaging and coordinating with multiple agencies and stakeholders; assisting with scientific peer reviews and workshops; contributing to the development of a Delta Science Action Agenda that integrates science activities across multiple agencies and programs; producing written and verbal science communication materials for policymakers, managers, and the public.

### ***Potential Projects***

Specific projects will be identified with the fellow based on their expertise and interests. The fellow's work will support functions of the DSP. Potential projects include:

- ◆ Documenting how science is being used in Delta ecosystem restoration and water management decisions
- ◆ Developing and implementing performance measures for the [Delta Science Plan](#)
- ◆ Working with interagency groups developing models and decision support tools
- ◆ Synthesizing information on stressor impacts on the Bay-Delta ecosystem
- ◆ Developing science communication products for a wide range of audiences
- ◆ Contributing to the development of a Delta Science Action Agenda



Delta Science Program  
Delta Stewardship Council

*A California State Agency*

## 2017 California Sea Grant State Fellowship Water Supply and Science Communications

### **1. Host Location and Contact Information**

Delta Science Program, Delta Stewardship Council  
980 Ninth Street, Suite 1500  
Sacramento, CA

### **2. Fellowship Supervisor, Point of contact for California Sea Grant, prospective fellows, and finalists**

Nir Oksenberg, Science Communications  
980 Ninth Street, Suite 1500  
Sacramento, CA  
(916) 445-0715  
[Nir.oksenberg@deltacouncil.ca.gov](mailto:Nir.oksenberg@deltacouncil.ca.gov)

### **3. Introduction**

California's Sacramento-San Joaquin Delta is the largest estuary on the West Coast and is the hub of the state's major water supply systems. It is inextricably linked to statewide issues that affect its ability to function in a healthy, sustainable way. In November 2009, the California Legislature enacted the Delta Reform Act, one of several bills related to water supply reliability, ecosystem health, and the Delta, and created the [Delta Stewardship Council](#). The mission of the Delta Stewardship Council is to achieve the coequal goals of providing a more reliable water supply for California and protecting, restoring and enhancing the Delta ecosystem (including Suisun Marsh).

The Act also established the Delta Science Program (DSP), Lead Scientist, and Delta Independent Science Board (Delta ISB). Under the guidance of the Delta Lead Scientist, a Delta Science Plan (Plan) was completed in December 2013 (<http://deltacouncil.ca.gov/sites/default/files/documents/files/Delta-Science-Plan-12-30-2013.pdf>). The Plan proposed 31 actions intended to strengthen, organize, and communicate science to provide relevant, credible, and legitimate decision-support for policy and management actions. Chapter 3 of the Plan describes the use of adaptive management as a tool to manage complex natural resources programs and projects and Chapter 4 discusses the necessity of building a science infrastructure. Also see Appendix C of the Delta Plan ([http://deltacouncil.ca.gov/sites/default/files/documents/files/AppC\\_Adaptive%20Management\\_2013.pdf](http://deltacouncil.ca.gov/sites/default/files/documents/files/AppC_Adaptive%20Management_2013.pdf)) for further discussions on adaptive management and best available science.

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*"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."*

– CA Water Code §85054

## **Position Description**

The Fellow will work under the direction of the program manager for the Delta Science Program's Water Supply Adaptive Management and Communications Unit and initially, will meet with the program manager, Lead Scientist, and other Science Program staff as appropriate to develop a mentoring plan for the year. This plan will be based on the interests and specialties of the Sea Grant Fellow and is intended to maximize the Sea Grant Fellow's experience.

The Water Supply Adaptive Management and Communications Unit has two primary tasks: 1) develop a Water Supply Adaptive Management Framework to address water management actions, and 2) improve science communications to more effectively inform policy and management decisions, build the Delta science community, and inform the public about the Bay-Delta system. Based on the Fellow's interests, the Fellow will have the option of working only on the Water Supply Adaptive Management Framework, only on Communication tasks, or a blend of tasks related to the primary tasks.

## **Water Supply Adaptive Management Framework**

Currently, two staff scientists in the unit are working on developing a framework that will address how adaptive management can be integrated into water management in California. This adaptive water management framework will complement the ecosystem restoration framework that is being developed concurrently in another unit. Development of the framework requires research as well as outreach to other federal and State agencies and affected stakeholders.

## **Potential Assignments**

The Fellow will collaborate with the staff to develop the water supply adaptive management framework and will help to propagate the knowledge and information gained through the process to policy and decision makers, managers, and the public. The fellow would contribute to the development of the framework reflecting his/her work. Specific topics would include but are not limited to:

- Water supply challenges facing California, and specifically the Sacramento-San Joaquin Delta
- Research on the relationships between water management and ecosystem impacts
- Case studies on water supply adaptive management and how they can be applied (adopted) to California and the Delta
- Studies on social, political and economic challenges and opportunities in applying the adaptive management to water supply issues

## **Communications**

Currently, one staff scientist is working in the Science Communications Unit who would collaborate with the fellow on communication related project. One of the goals of the Communications Unit is to translate complex scientific information into a form readily understood by the non-scientist. This is done through monthly Brown Bag seminars, quarterly science synthesis symposia in conjunction with UC Davis, and the Bi-annual Bay Delta Science Conference, to mention a few.



## Potential Assignments

- Develop 3-5 Brown Bag seminars centered on a specific theme of importance to management of the Bay-Delta system; synthesize the information and present at a Delta Stewardship Council meeting.
- Synthesize research results from the 2013 Delta Science Fellows solicitation in a format accessible to the non-scientist and present at a Delta Stewardship Council meeting
- Contribute short essays and/or videos to the Council's online blog.
- Assist in dissemination of Science Program efforts through social media
- Assist in dissemination of Science Program efforts through creating "fact-sheet" type products to be shared at Delta Science Conferences, our website, and other mechanisms.
- Research and synthesize all of the Bay-Delta-related science communication efforts. Write a report on the "state of Bay-Delta science communication"
- Research and synthesize all of the Bay-Delta-related social science efforts. Write a report synthesizing and communicating the importance of social sciences within the Bay-Delta.



## CA Ocean Protection Council Two 2017 Sea Grant Fellowship Opportunities

### 1. Host location

Ocean Protection Council  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

### 2. Fellowship Supervisor

Deborah Halberstadt  
Executive Director, OPC  
(916) 657-0198  
[Deborah.halberstadt@resources.ca.gov](mailto:Deborah.halberstadt@resources.ca.gov)

### 3. Points of contact for prospective fellows and finalists

Abe Doherty, Climate Change Policy Advisor  
(916) 653-0540  
[abe.doherty@resources.ca.gov](mailto:abe.doherty@resources.ca.gov)

Cyndi Dawson, Marine Protected Area Policy Advisor  
(916) 653-5656  
[cyndi.dawson@resources.ca.gov](mailto:cyndi.dawson@resources.ca.gov)

Jenn Phillips, Ocean Acidification Program Manager  
(916) 651-0237  
[Jennifer.phillips@resources.ca.gov](mailto:Jennifer.phillips@resources.ca.gov)

### 4. Position description

Across California's coastal and bay regions, groups and individuals are coming together to safeguard what we love about our shorelines, bays and ocean from the impacts from climate change and to slow down climate change as quickly as possible. The CA Ocean Protection Council (OPC) was created by state law, the California Ocean Protection Act of 2004, to protect ocean health and we view all of our actions through the lens of climate change. Under changing ocean and coastal conditions that threaten communities, ecosystems and our economy, we have an urgent need to catalyze innovative and bold action to protect ocean and coastal health. The OPC is engaging with partners in building a shared vision for ocean and coastal health, as well as what it means to be successful in ensuring ocean and coastal health given climate change:

- *How do we know if our management actions are resulting in a healthy ocean and coast?*
- *What are concrete actions that agencies and researchers can take to reduce the impacts of climate change?*
- *How can we make our fisheries climate ready?*
- *How will we know if we are successful with adapting to sea-level rise?*
- *How can we use Marine Protected Areas (MPAs) as living laboratories to understand changing ocean conditions and to offer refuges from stressors?*

Building a shared vision for ocean and coastal health is about strengthening institutional partnerships to span boundaries and leverage resources. In California, we are doing this through initiatives such as the State Coastal Leadership on Sea-level Rise, the Pacific Coast Collaborative, the MPA Collaboratives and the MPA Statewide Leadership Team and the emerging West Coast Ocean Partnership. Unifying around a vision of ocean and coastal health and collective action on climate change is important as we are challenged by complex issues and limited capacity. By bringing groups together, we can identify which agency should take the lead, or whose mandate is

best reflected in cross-cutting issues; what scientific information can support decision-making and how our network of MPAs can serve as a tool in service of ocean and coastal health under the challenge of climate change.

To learn more about current initiatives, see a recent summary from the [OPC's Executive Director](#) and a [meeting agenda](#).

A fellow with the OPC may work on the following emerging themes:

1. Understanding changing ocean and coastal processes (science and policy formulation).
2. Sea level rise and how the state works on the things it directly controls and provides assistance to tribal and local governments (green and grey infrastructure).
3. Protecting our assets, both human and ecosystem, by understanding and reducing controllable stressors (vulnerability assessments and pollution prevention and habitat protections).
4. Doing our work in partnership (refining the application of strategies and engagement of social networks moving toward co-management with other government structures and communities).

The OPC staff is currently involved in developing and managing various large-scale projects and developing innovative policy solutions on marine resource issues, including:

***Supporting the functions of the Council.*** All OPC staff support the functions of the 7-member council, including agenda setting, policy recommendations, and project development. Potential tasks associated with managing projects include: frequent communication with project stakeholders, partners, or grantees; presenting staff recommendations to the council; drafting and amending contracts and grant agreements; managing project-related invoices; organizing, and/or leading related meetings and workshops; participating in site visits; ensuring outcomes of projects are communicated to the public, relevant agencies, and institutions; seeking out additional funding sources or matching funds; encouraging transparency by working with stakeholders; and working to maintain broad project or program support. **Both fellows would support all the functions, above.**  
<http://www.opc.ca.gov/>

***Sea-level Rise (SLR).*** The incumbent Sea Grant fellow may help manage various Local Coastal Program grants that the OPC has funded to support sea level rise planning and adaptation work in coastal cities and counties. The fellow may also assist in convening the Coastal and Ocean Climate Action Team (CO-CAT) and/or the State Coastal Leadership Group on SLR (SCLG), both composed of many ocean and coastal state agencies to provide input on updates to state guidance documents and processes. OPC is the sector lead for the Oceans and Coastal Resources and Ecosystems Sector Plan for Safeguarding California, and the fellow may be involved in updates to this document. The OPC is also engaged in implementing legislative mandates in AB 2516, regarding the development of an innovative sea level rise planning database for the State.

***Pacific Coast Collaborative.*** The incumbent Sea Grant fellow will be involved with the Pacific Coast Collaborative Subcommittee on Ocean Acidification, which is a subset of the larger Pacific Coast Collaborative (PCC). The PCC represents a collaboration among the Governors of Washington, Oregon, California and the Premier of British Columbia to address critical climate and energy issues that affect the health of communities, natural resources and economies along the West Coast. The PCC Subcommittee on Ocean Acidification is leading on implementing the policy recommendations from the West Coast Ocean Acidification and Hypoxia Science Panel's (Panel) executive summary, which was released in April 2016 and funded by the OPC. The fellow will assist the Ocean Acidification Program Manager in OPC's work to implement and advance the Panel recommendations and actions in California.

**Resources Agency Sea Grant Advisory Panel (RASGAP).** The Resources Agency Sea Grant Advisory Panel (RASGAP) is in charge of evaluating proposals for ocean and coastal research by California's two Sea Grant programs. **One fellow with the OPC will be responsible for all aspects of the RASGAP project including managing the membership of RASGAP, leading meeting logistics, review of pre-proposals and proposals, and participation in technical review panels held in San Diego.**

**Legislative Reporting & Bill Analyses.** The OPC does not take a stance on any legislation as a state agency; however, the OPC keeps track of relevant bills that may impact the OPC throughout the year. **One fellow with the OPC will be responsible for tracking legislative bills that are relevant to the OPC and updating the tracking list weekly. Both fellows may have the opportunity to contribute to agency bill analyses when requested if an OPC-relevant bill is moving forward in the legislature.**

**Marine Protected Areas (MPAs).** The incumbent Sea Grant fellow will help manage an on-going effort among several state agencies and outside partners to collaborate more effectively on the long-term management of MPAs created under the auspices of the Marine Life Protection Act through the work of the [MPA Statewide Leadership Team](#).

**Sustainable Fisheries.** The incumbent Sea Grant Fellow will work with a host of partners inside and outside government to assist with the ongoing integration and implementation of the broad ecosystem health goals of the Marine Life Management Act and Marine Life Protection Act. The OPC supports science-based approaches to inform fisheries management, and works with partners to advance improved governance of California fisheries.

**Thank You Ocean.** The Thank You Ocean campaign is a joint partnership between the State of California and the National Oceanic Atmospheric Administration (NOAA) Office of National Marine Sanctuaries to raise awareness about the importance of the ocean and to engage the public in stewardship. The campaign's website focuses on four specific threats to the ocean and uses social media tools to engage the public in the campaign. Specific activities may include development or review of campaign materials (such as podcasts, web content, and social media), overall project management, and fundraising. **Both fellows with the OPC will be involved in the Thank You Ocean campaign.** <http://www.thankyouocean.org/>

For the past two years, the OPC has hosted two fellows, one of which has been focused on climate impacts and changing ocean conditions, primarily working on ocean acidification and hypoxia (OAH) and sea level rise (SLR), and a fellow focused entirely on the MPA Management Program which includes work in outreach and education, research and monitoring, enforcement and compliance and policy and permitting. With the continued maturity of the MPA Management Program OPC anticipates the MPA focused fellow for 2017 would also be working on fisheries related projects that work to further integrate and leverage work in sustainable fisheries management with MPA management. The other fellow for 2017 would have a focus on Climate Impacts which include a wide range of topics including but not limited to SLR, OA and Harmful Algal Blooms.

**Skills or attributes we seek include:**

- Excellent verbal and written communication skills.
- Ability to lead groups of people, often with divergent views on how to move forward on a particular issue.
- Ability to translate complex scientific information for use by government decision-makers.
- Ability to work well independently under minimal supervision or guidance.
- An entrepreneurial spirit and strong personal initiative.

## California Ocean Science Trust 2017 Sea Grant Fellowship Opportunity

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### I. Host Location and Contact Information:

California Ocean Science Trust  
Thomas Maloney, Executive Director  
2201 Broadway, Suite 101  
Oakland, CA 94612  
Phone: (510) 251-8320

### II. Fellowship Supervisor(s)

Thomas Maloney, Executive Director  
Emily Knight, Senior Program Manager

### III. Points of Contact for California Sea Grant Prospective Fellows and Finalists

Emily Knight, Senior Program Manager – Position Inquiries –  
[Emily.Knight@oceansciencetrust.org](mailto:Emily.Knight@oceansciencetrust.org); (831) 521-9305

## Synopsis for a California Ocean Science Trust Sea Grant Fellow

[California Ocean Science Trust](#) is a boundary organization. We work across traditional boundaries between government, science, and communities to build trust and understanding in ocean and coastal science. Our organization is novel. We are an independent non-profit, but linked directly to the State in that we were established pursuant to the California Ocean Resources Stewardship Act of 2000. Through our innovative approaches, we empower broad participation in policy and management decisions with useful, reliable science.

Our [projects](#) span the gamut of topics, from ocean acidification and sea-level rise, to advancing science in fisheries management, to monitoring marine protected areas (MPAs). Our work is guided by the priorities of California, which through the California Ocean Protection Council (OPC), is committed to healthy, resilient, and productive ocean and coastal ecosystems. We work closely with the OPC to ensure state actions on ocean and coastal issues are informed by the best available science.

### Our Approach

In taking on new projects, we see ourselves as process experts – employing a variety of tools such as interviews, focus groups, and expert judgment among others – to understand the institutions involved, different ways of looking at the issues, and the range of relevant science. We then actively shape projects to bring different communities together around the science so that participants can see a role for themselves and engage constructively. Furthermore, all of Ocean Science Trust’s projects are interrelated – continually contributing to and drawing from each other.

### Sea Grant Fellow Opportunities

The Ocean Science Trust Sea Grant Fellow will gain diverse educational and career experience. Our Fellows engage in a variety of projects, based on a balance between our organizational needs and the Fellow’s background and interests. The Fellow will work closely with the senior program manager, but will collaborate to varying degrees with the full [Ocean Science Trust team](#). Ocean Science Trust is a collaborative, team-oriented atmosphere, welcoming the ideas and contributions of all staff to shaping projects and our organization as a whole.

The Sea Grant Fellow will be treated as a full member of our team, and have the opportunity to contribute to, and possibly lead, any range of projects. Through these activities, the Fellow will have numerous opportunities to interact with high-level scientists, managers, policymakers, and other partners in the NGO and stakeholder communities, as well participate in meetings and workshops.

### Programmatic Focus for 2017 Fellowship: Fisheries

We have a need for capacity in our fisheries program. Over the past several years, Ocean Science Trust has worked closely with the OPC, CA Department of Fish and Wildlife, and the Fish and Game Commission to forge new pathways for science in decision-making. This work has led to a range of projects where we have worked with funders and others to align resources with state priorities,

stewarded teams scientists in tailoring their ideas and work to better align with fisheries managers' needs, and designed and implemented scientific review processes that would be credible and legitimate in the eyes of decision-makers and stakeholders alike.

Looking ahead, we are continuing to advance this work, but through the framing of climate change. Our aim is to not just produce isolated pieces of information, but pursue projects that will help the State calibrate fisheries management through the lens of changing ocean conditions; evaluate what that means along ecological, economic, and social dimensions; and identify stronger, more flexible management options. It is also worth noting that our fisheries program is young. Finally, we are still articulating Ocean Science Trust's value proposition in this exciting field, and the Fellow would be a full member helping to determine the direction of our fisheries program.

### **Additional Programmatic Opportunities**

The Fellow will also have the opportunity to work across programs at Ocean Science Trust. As noted, our work is inter-related, and the fisheries program intersects with:

- **Working with the Ocean Protection Council Science Advisory Team (SAT):** Ocean Science Trust coordinates all activities of the SAT, a team of 26 interdisciplinary scientists from California and beyond that provide scientific and technical advice to the State, and act as a conduit to the broader scientific community on behalf of decision-makers.
- **Promoting Resilience and Adaptive Capacity:** We are strengthening our work to support the State with the science needed to adapt to a changing climate. Integral to this will be the SAT, particularly as we work with the OPC to explore the potential to raise the profile of ocean ecosystems in the State's final 4<sup>th</sup> Climate Assessment.
- **Implementing the Findings of the [West Coast Ocean Acidification & Hypoxia Science Panel \(the Panel\)](#):** With the release of the Panel's "*Major Findings, Recommendations, and Actions*" in April of 2016, a major focus is working with decision-makers at the state, regional and federal levels to integrate the Panel's findings into management and policy across management jurisdictions.

Past Ocean Science Trust Sea Grant Fellows have had the opportunity to participate in a wide range of topics depending on their expertise and interests, and have often assumed leadership roles. We also greatly value professional development at Ocean Science Trust, and will mentor the Fellow by drafting and pursuing professional goals, offering assistance in resume building, and ensuring the Fellow is provided networking opportunities.



**STATE COASTAL CONSERVANCY  
Two 2017 State Fellowship Opportunities  
South Coast Fellow & Climate Ready Fellow**

**1. Host location and contact information**

State Coastal Conservancy  
1330 Broadway, Floor 13  
Oakland, CA 94612-2530

**2. Fellowship Supervisor(s)**

South Coast Fellowship - Megan Cooper, Joan Cardellino  
Climate Ready Fellowship - Mary Small

**3. Point of contact for CSG and prospective fellows and finalists:**

Mary Small  
Deputy Executive Officer  
510-286-4182, [mary.small@scc.ca.gov](mailto:mary.small@scc.ca.gov)

**4. Position description(s)**

General Overview: Established in 1976, the State Coastal Conservancy (SCC) is a non-regulatory agency that works to protect and improve natural lands and waterways, help people get to and enjoy the outdoors, and sustain local economies along the length of California's coast and around San Francisco Bay. The SCC works in partnership with local governments, other public agencies, nonprofit organizations, and private landowners. Much of the Conservancy's work involves collaborating with scientists and other professionals to deliver on-the-ground coastal resource protection and restoration.

The Conservancy's broad mandate allows it to undertake planning, projects, and initiatives such as the following:

- Protect and improve the quality and resiliency of coastal wetlands, streams, watersheds, and near-shore ocean waters;
- Help people get to and along the coast and bay shores by building trails and stairways and by acquiring land and easements. The Conservancy also assists in the creation of low-cost accommodations along the coast, including campgrounds and hostels;
- Help to solve complex land-use problems;
- Protect coastal lands, including agricultural lands and working landscapes;
- Address the potential impacts of climate change on resources within its jurisdiction, and undertake projects that address extreme weather events, sea level rise, storm surge, beach



and bluff erosion, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources.

Specific Scope of Work: The SCC is applying to host two fellow to help carry out our work.

### **South Coast Fellow**

One fellow will be placed in the SCC's South Coast Program to help support the Southern California Wetlands Recovery Project (WRP), a broad-based partnership of 18 state and federal agencies working in concert with scientists, local governments, and environmental organizations. In the coming year, the WRP will undertake the following actions, which the fellow will work to support:

- Participate in a large science collaborative process to update the WRP's *Regional Strategy*, a science-based regional plan to identify quantifiable restoration objectives. The Regional Strategy will incorporate historical ecology, contemporary wetland assessments, and climate change into a framework that will guide conservation goals.
- Continue to develop an in-lieu fee program, including preparation of site-specific mitigation plans.
- Coordinate and provide staff support for meetings of the various branches of the WRP including the Board of Governors annual meeting, Science Advisory Panel regional meetings (two to three per year), Wetlands Managers Group monthly meetings, and County Task Force meetings as needed.
- Assist in the development of the Headwaters to Ocean (H2O) Conference, an annual professional conference that draws together scientists, resource managers, public stakeholders and decision-makers around the topic of coastal management.
- Increase the WRP's public visibility by managing social media and web outreach.

The fellow will have the opportunity to work with leading wetland scientists, practitioners, and managers. Tasks may include helping to determine management and science needs, facilitating movement of a very diverse group toward those goals, reviewing and writing technical papers, participating in meetings, conducting site visits, undertaking GIS work, and managing contracts and budgets.

Although helping to staff the work of the WRP will be the fellow's primary task, s/he will likely also take on other SCC projects such as public access (e.g., trail and open space planning and construction), urban waterfronts (e.g., projects that bring together public access, economic, and fisheries elements), habitat restoration, or climate change adaptation (e.g., "living shorelines" projects that use nature-based solutions to address erosion and provide/maintain habitat). Tasks may include project development, project and contract management, presentations to the SCC Board and others, and leadership in communications (e.g., website, social media). The SCC is committed to fostering and developing the fellow's professional goals as much as possible, and will tailor the suite of tasks accordingly.

### **Climate Ready Fellow**

SB 1066 (Lieu, 2013) gave the SCC explicit authority to work with its partners on projects to address the effects of climate change on coastal and to work to reduce greenhouse gas emissions.

The Coastal Conservancy created its “Climate Ready Program” in 2013 to focus its work to protect important coastal resources and habitats from the current and future impacts of climate change. The SCC is collaborating with local partners and other agencies to reduce greenhouse gas emissions and prepare communities along the coast and within the San Francisco Bay for climate change.

Supervised by the SCC’s Deputy Director, the Climate Ready fellow will assist the agency in implementing its Climate Ready program. Specifically, the fellow will:

- Develop and/or manage pilot studies or projects selected from for funding under the SCC’s Climate Ready Grant Program. Depending on the fellow’s start date, this may involve preparing one or more staff recommendations for SCC board approval, preparing the grant agreement(s), working with grantee(s) to finalize work plans and project budgets, and overseeing completion of work tasks;
- Work collaboratively with agency staff to assist in reviewing completed projects, compiling lessons learned and developing information to share with other partners, through publication, webinars and at conferences.
- Participate and support interagency coordination related to climate adaption work along the coast.
- Support communication about the science and management issues related to climate change via the SCC’s website, planning and educational forums, conferences, and other means;
- Provide technical, scientific and administrative support to the work of climate change committees or collaborative that the SCC is involved with, such as the Bay Area Ecosystem Climate Change Consortium, the Climate Action Team, and the Alliance for Regional Collaborative for Climate Adaptation.

Tasks will be varied and may include working with wetland scientists, ecologists and other practitioners to prioritize science and management needs, and to conceptualize projects that will result in lessons learned for the broader community; reviewing technical papers and plans, and developing skills to provide reviews; convening, participating in, and leading meetings; interacting with policy makers, planning and technical practitioners focused on climate change adaptation; preparing a staff recommendation for SCC Board consideration; managing contracts and budgets; and seeking additional grant funding for pilot projects.



## STATE WATER RESOURCES CONTROL BOARD 2017 Sea Grant Fellowship Opportunity

### 1. Host location and contact information

State Water Resources Control Board, CA-EPA building, Division of Water Quality 15<sup>th</sup> Floor, 1001 I Street, Sacramento, CA 95814.

### 2. Fellowship supervisor & Point of Contact for Prospective Fellows and Finalists

Rik L. Rasmussen  
Environmental Program Manager  
Water Quality Standards and Assessment Section  
[Rik.Rasmussen@waterboards.ca.gov](mailto:Rik.Rasmussen@waterboards.ca.gov)

### 3. Position Description

The State Water Resources Control Board was created by Legislature in 1967. Our mission is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

<http://www.waterboards.ca.gov/>. The Ocean Unit is under the Surface Water Branch of the Division of Water Quality [http://www.waterboards.ca.gov/about\\_us/org\\_charts/display.php](http://www.waterboards.ca.gov/about_us/org_charts/display.php)

Under the general direction of the manager of the Water Quality Standards and Assessment Section, the Sea Grant Fellow (Fellow) will perform complex analysis involved in the development and implementation of State policies and plans for the protection of ocean, coastal, and inland surface waters. In performing these duties, the Fellow shall interact with interested agency staff, stakeholders and the general public in a courteous and helpful manner. The Fellow is responsible for the quantity, quality, and timeliness of work assigned.

The Water Quality Standards and Assessment Section is very dynamic with various activities and projects under the Division of Water Quality. These could include developing amendments to the California Ocean Plan related to nutrients and blue-green algae, implementation of special protections for Areas of Special Biological Significance (ASBS), implementing the Once-through Cooling Policy (OTC), implementing the desalination and trash Ocean Plan amendments, protecting and monitoring beach water quality. In addition the section is involved with significant public outreach programs including working with California Native American Tribal members on the development of Water Quality Standards.

The California Ocean Plan is the water quality control plan for near-coastal ocean waters, and includes water quality standards and programs of implementation to protect water quality

[http://www.waterboards.ca.gov/water\\_issues/programs/ocean/docs/cop2012.pdf](http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2012.pdf)

The Inland Surface Waters, Enclosed Bays and Estuaries Plan is being reestablished to house the many plan amendments underway to protect California's Surface Waters. The Plans and Policy amendments under development can be found here:

[http://waterboards.ca.gov/plans\\_policies/#development](http://waterboards.ca.gov/plans_policies/#development)

The Ocean Unit also works on other statewide plans and policies. These include setting sediment quality objectives for enclosed bays, estuaries and inland waters

[http://www.waterboards.ca.gov/water\\_issues/programs/bptcp/sediment.shtml](http://www.waterboards.ca.gov/water_issues/programs/bptcp/sediment.shtml) and implementation of California's Once-Through Cooling Policy. The Once-Through Cooling Policy addresses the impacts on marine and estuarine life of cooling water intakes at electrical power generating facilities, implementing section 316 (b) of the Clean Water Act.

In working on Ocean Plan amendments and other water quality plans and policies the Fellow's duties may involve all phases of the public planning process, including participation in scientific studies, California Environmental Quality Act (CEQA) scoping, discussion with interested parties to identify possible alternatives for action, preparation of environmental documentation, public hearings, response to public comments, recommendations to the Board, and preparation of the administrative record for any changes that the Board adopts.

The Fellow also will perform other duties, as assigned, to support the Water Quality Standards and Assessment Section and Division of Water Quality.



**STATE WATER RESOURCES CONTROL BOARD**  
2017 Sea Grant Fellowship Opportunity  
Surface Water Ambient Monitoring Program (SWAMP)

**1. Host location and contact information**

State Water Resources Control Board  
CA-EPA building, Division of Water Quality  
15<sup>th</sup> Floor, 1001 I Street  
Sacramento, CA 95814.

**2. Fellowship Supervisor & Point of Contact for Prospective Fellows and Finalists**

Lori Webber, Senior Environmental Scientist  
(916) 341-5556  
[lori.webber@waterboards.ca.gov](mailto:lori.webber@waterboards.ca.gov)

**3. Position Description**

The State Water Resources Control Board was created by Legislature in 1967. Our mission is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

<http://www.waterboards.ca.gov/>.

Under the general direction of the of the Surface Water Ambient Monitoring Program (SWAMP) Unit senior, the Sea Grant Fellow (Fellow) will perform complex analysis and interpretation of coastal monitoring program data collected by SWAMP and partner agencies to inform water quality managers and the public. The SWAMP Unit is part of the State Water Board's Office of Information Management and Analysis.

SWAMP's [Coastal Fish Survey](#) evaluates contaminant concentrations in sport fish sampled at popular fishing spots along California's coast. The survey was first conducted in 2009 and 2010 and the next survey is scheduled to begin in 2017. SWAMP also actively participates in the [National Coastal Condition Assessment](#) (NCCA). The most recent NCCA occurred during the 2015 field season and the data are currently being compiled and analyzed by the USEPA and state partners.

The Fellow will be the SWAMP Unit's main point of contact for marine studies and will be involved in multiple phases of the SWAMP, NCCA and other coastal monitoring programs (including monitoring required by Water Board permits and other regulatory actions). Duties will include participating in monitoring study design, field sampling and logistics, meeting organization and notetaking, coordinating with partner programs, data analysis and interpretation, data visualization and communication, adding content to the [My Water Quality Portals](#), and presentation of findings to both technical and lay audiences. The Fellow will also perform other duties, as assigned, to support the SWAMP Unit and the Office of Information Management and Analysis. In performing these duties, the Fellow will interact with interested agency staff, stakeholders and the general public in a courteous and helpful manner. The Fellow is responsible for the quantity, quality, and timeliness of work assigned.

Skills or attributes we seek include:

- Ability to perform complex scientific analysis and communicate findings to technical staff, managers and the general public.
- Strong interest in the mechanics of utilizing science to inform public policy.
- Ability to lead groups of people, often with divergent views on how to move forward on a particular issue.
- Excellent verbal and written communication skills.
- A problem solver with strong personal initiative and the ability to work well under minimal supervision.



GAVIN NEWSOM  
LIEUTENANT GOVERNOR

## Sea Grant Fellowship Opportunity Office of Lt. Governor Newsom

### 1. Host Location

Office of Lt. Governor Newsom  
California State Capitol, Rm  
1114 Sacramento, CA 95814

### 2. Fellowship Supervisor & Point of Contact for Prospective Fellows and Finalists

Rhys Williams  
Chief of Staff  
[Rhys.Williams@ltg.ca.gov](mailto:Rhys.Williams@ltg.ca.gov)

### 3. Fellowship Overview

The Lieutenant Governor serves on, and rotates with the State Controller, as chair of the three-member State Lands Commission, which oversees the control and leasing of millions of acres of state-owned land, including offshore oil resources, as well as use and permitting for all navigable waterways in California. The Commission also manages state land-use planning and revenues, and related interstate issues. During alternate years, when the Lieutenant Governor serves as Chairperson of the State Lands Commission, he also serves as a member of the California Ocean Protection Council.

During his Mayoral term the Lt. Governor implemented the most aggressive local carbon reduction plan in the nation, created the most stringent green building standards, invested in cutting edge renewable programs, and executed the nations first plastic bag ban.

As Lt. Governor he is using his position on the State Lands Commission to address sea level rise, support a statewide ban on plastic bags, and develop a climate adaptation plan for the state. He has also secured federal grants to assess the feasibility of a national wave energy facility through his work with Cal Poly Institute for Advanced Technology, and played a key role in the agreed proposal to retire California's last nuclear plant, which is located on California's coast and dependent on once-through cooling.

The Lt. Governor also helped secure vital statefunding for a statewide whale entanglement program and advanced state policy on drift gillnet fishing - projects that were driven by the office's resident Sea Grant Fellow.

### Position Description

The Sea Grant Fellow will have the opportunity to develop long and short-term policy positions for the office of the Lt. Governor. Working closely with the policy director, the fellow will help staff the various commissions and boards that handle coastal issues, and will assist in current projects under development.

The fellow will also be asked to collaborate with NGOs and other state agencies to create a guiding document for the office of Lt. Governor as the state faces further challenges from sea level rise and climate change. The fellow will have the opportunity to pursue issues they find relevant and develop their own projects.

### **Potential Projects**

- Support in the CalWave Effort- Feasibility of a National Wave Energy Test Facility in California.
- Environmental and statistical modeling of sensitive species based on data collected during PG&E WaveConnect.
- Create a statewide policy that addresses the possible use of drones or other technologies to observe whales or sea mammals.
- Through presentation of various policy proposals to the Lt. Governor, create a policy paper that defines the goals and vision of the office as related to coastal and ocean policy.
- Work with Ocean Protection Council, California State Lands, and California Coastal Commission on sea level rise, climate change, and offshore energy.
- Explore the growth and future of mariculture and aquaculture in the State.
- Other projects may be suggested after consultation with Policy Director.





## NOAA'S CHANNEL ISLANDS NATIONAL MARINE SANCTUARY

### Sea Grant State Fellowship Opportunity #1 Research Department Position

#### 1. Host Location

NOAA's Channel Islands National Marine Sanctuary  
University of California, Santa Barbara  
Ocean Science Education Building 514, MC 6155  
Santa Barbara, California 93106-6155

#### 2. Fellowship Supervisors

Chris Mobley, Sanctuary Superintendent ([chris.mobley@noaa.gov](mailto:chris.mobley@noaa.gov), 805-893-6416)  
Chris Caldow, Research Coordinator ([chris.caldow@noaa.gov](mailto:chris.caldow@noaa.gov), 805-893-6419)

#### 3. Position Description – Research Department Assistant

[Channel Islands National Marine Sanctuary](#) is part of the National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries. It is located approximately 23 miles off the coast of Santa Barbara and encompasses 1,470 square miles of state and federal ocean waters surrounding Anacapa, Santa Cruz, Santa Barbara, Santa Rosa, and San Miguel Islands. The sanctuary waters are a fertile combination of warm and cool currents that result in a highly productive marine ecosystem with diverse habitats, a wide array of fish and invertebrates, 27 species of whales and dolphins, 5 species of pinnipeds, and over 60 species of seabirds. Recognized as an important marine protected area at the local, state, national and international levels, the sanctuary's primary goal under the National Marine Sanctuaries Act is to protect its natural and cultural resources. Essential to meeting that goal is the sanctuary's ability to understand the function, condition and trends of the marine sanctuary, to coordinate scientific study and monitoring of the marine ecosystem, to apply marine science to addressing management needs, and to communicate sanctuary science to a diversity of audiences.

The sanctuary's office is located within the new Ocean Science Education Building on the campus of the University of California, Santa Barbara. This is a strategic office location from which our 15 staff members work to enhance existing university partnerships and seek to develop a host of new collaborative arrangements in science and education. In pursuing science partnerships, the sanctuary brings forth important assets such as two research vessels, the [Shearwater and the Shark Cat](#), and access to [unmanned aerial vehicles](#). Key documents guiding science work at the sanctuary include: 1) the [Conservation Science Action Plan](#) within the sanctuary's [management plan](#); 2) the [2009 sanctuary Condition Report](#); and 3) a [Science Needs Assessment](#) for the sanctuary.

The appointed Sea Grant Fellow will play a key role in helping to sustain a variety of research projects underway within the sanctuary. In 2017, the site will be identifying gaps in our knowledge of the spatial distribution of sanctuary resources and users and developing a plan to fill these gaps. The site will also be wrapping up an update to the 2009 sanctuary Condition Report and evaluating how best to incorporate the findings into the upcoming management plan revision. It is envisioned that the incoming fellow will greatly assist in both of these tasks. In addition, in accordance with experience and skills and under the supervision of the Research Coordinator the Sea Grant Fellow will be asked to assist with several other duties, including:

- Collection of scientific and socioeconomic data relevant to the sanctuary. Collection, processing, analysis, and integration of results into GIS and other databases for use in research and management.
- Contributing to the publication of sanctuary research and monitoring work in peer-reviewed journals, NOAA technical reports, web publications, and other appropriate outlets.
- Contributing to the development of partnerships and pursuing external funding to support research and monitoring programs. This includes assisting in applying for and administering grants, and collaborating with agency, academic, and non-profit researchers to develop and execute research and monitoring programs that address sanctuary research and monitoring priorities.
- Interpreting research and monitoring information to support management decision-making. Integrating research and monitoring results into the sanctuary program areas of resource protection, management, and education/outreach.
- Assisting with the review and development of sanctuary research and salvage permits, including literature review on research methods and potential environmental impacts.
- Assisting the Research Coordinator with planning, coordination and occasional field-based research and monitoring projects related to assessing the sanctuary's status and trends in climate, ocean acidification, trophic interactions, invasive species, endangered species, eelgrass health, ecology, etc. Such work may cover a wide range of disciplines, and involve the use of a variety of field gear/technologies, including: ROVs, UASs, AUVs, CTDs, ADCPs, AIS, transect surveys, buoy maintenance diving, sediment traps, bottom grabs, bongo nets, plankton tows, fish tagging, and fish trawling.
- Working as an effective member of the sanctuary management team through participation in regular meetings, budget planning, and various reporting requirements (superintendent reports, annual operating plans, vessel cruise plans, etc.).

To be successful in this position the Sea Grant Fellow will have demonstrated knowledge, skills, or abilities applicable to many of the above-described duties. Ideal candidates should be self-motivated, creative, innovative, entrepreneurial, and comfortable working with a diverse team in a fast-paced, collaborative environment. Also important is the ability to effectively manage multiple projects, and enthusiasm about marine science, stewardship and conservation. This position also requires superior communication and interpersonal skills as individuals will work directly with sanctuary management and staff, scientists from NOAA, UCSB and other agencies, academic institutions, and NGOs.

Through this federal agency assignment, the Fellow will gain a unique and valuable set of skills and professional experiences applicable to succeeding in a setting where cutting edge science is applied to protected area management, environmental policy development, and public education. Former sanctuary fellows and interns have gone on to become permanent or contract NOAA employees, received the Knauss and Presidential Management Fellowships, or taken research and leadership positions in the private and non-profit sectors.



## NOAA'S CHANNEL ISLANDS NATIONAL MARINE SANCTUARY

### Sea Grant State Fellowship Opportunity #2 Resource Protection Fellowship

#### 1. Host Location

NOAA's Channel Islands National Marine Sanctuary  
University of California, Santa Barbara  
Ocean Science Education Building 514  
Santa Barbara, California 93106

#### 2. Fellowship Supervisors

Chris Mobley, Sanctuary Superintendent; [chris.mobley@noaa.gov](mailto:chris.mobley@noaa.gov), 805-893-6416  
Michael Murray, Deputy Superintendent for Programs; [michael.murray@noaa.gov](mailto:michael.murray@noaa.gov), 805-893-6418  
Sean Hastings, Resource Protection Coordinator; [sean.hastings@noaa.gov](mailto:sean.hastings@noaa.gov), 805-893-6424

#### 3. Position Description

[Channel Islands National Marine Sanctuary](#) (sanctuary) is part of the National Oceanic and Atmospheric Administration's (NOAA) [Office of National Marine Sanctuaries](#). It is located approximately 23 miles off the coast of Santa Barbara and encompasses 1,470 square miles of state and federal ocean waters surrounding Anacapa, Santa Cruz, Santa Barbara, Santa Rosa, and San Miguel Islands. The sanctuary waters are a fertile combination of warm and cool currents that result in a highly productive marine ecosystem with diverse habitats, a wide array of fish and invertebrates, 27 species of whales and dolphins, 5 species of pinnipeds, and over 60 species of seabirds. Recognized as an important marine protected area at the local, state, national and international levels, the sanctuary's primary goal under the National Marine Sanctuaries Act is to protect its natural and cultural resources.

The Sea Grant Fellow will play a key role in a multitude of policy, research and outreach activities, working closely with the sanctuary superintendent, deputy superintendent and resource protection coordinator. The Fellow will research, write and conduct outreach on a wide array of marine resource management issues and will help foster productive relationships with state and federal agencies, academic institutions, and stakeholders. In this position, the Fellow will gain the diverse skills and professional experience necessary to succeed in a natural resource management career. Former sanctuary fellows and interns have become permanent or contract NOAA employees, received the Knauss and Presidential Management Fellowships, or taken research and leadership positions in the private and non-profit sectors.

Working in the capacity of a Resource Protection Specialist, the Fellow will support the following:

**Reducing the threat of ship strikes on endangered whales:** Since 2007, the sanctuary and its [Advisory Council](#) have been working in collaboration with the National Marine Fisheries Service (NMFS), U.S. Coast Guard, and the shipping industry to develop both short and long-term management measures to reduce the ship strike threat to Endangered Species Act listed large whales in the Santa Barbara Channel region. Management recommendations include continued research and monitoring, mariner education and outreach, incentives for changing vessel behavior, and the utilization of marine spatial planning techniques to protect high whale density areas. The Sanctuary Advisory Council hosted a multi-stakeholder collaborative process to explore solutions that address competing human uses (e.g. military activities and

commercial shipping) and impacts to Santa Barbara and the marine environment (e.g. air pollution and whale strikes). Also under consideration are ship lane adjustments, vessel speed reduction zones, and research and education strategies. The Fellow will help advance these initiatives to broader NOAA, the US Coast Guard and possibly to the U. S. delegation to the International Maritime Organization. More information: [http://channelislands.noaa.gov/management/resource/ship\\_strikes.html](http://channelislands.noaa.gov/management/resource/ship_strikes.html)

### **Management Plan Revision**

As mandated by the National Marine Sanctuaries Act the management plan for CINMS must be updated. Beginning in 2017 the Fellow will work with sanctuary staff to develop and implement the management plan revision process. This process requires involvement of the Sanctuary Advisory Council and close coordination among sanctuary staff at the local, regional and national levels. The Fellow will be involved with all aspects of policy development and rulemaking as guided by the National Environmental Policy Act and Administrative Procedures Act.

### **Sanctuary Advisory Council**

The Fellow will participate and support meetings with the Sanctuary Advisory Council and its working groups, including agenda preparation with the Executive Committee, preparing and delivering presentations, corresponding with council members and the public. The Fellow will support the Council's development of collaborative, innovative policy solutions to complex marine resource issues.

### **In addition to the above projects, the Sea Grant Fellow's duties and opportunities will include:**

- Processing and creating marine mammal sightings maps in ArcGIS during large cetacean season from sightings reported on two whale apps '[SpotterPro](#)' and '[WhaleAlert](#).'
- Participating in sanctuary staff meetings and other planning meetings on the local, regional, and national level, including occasionally providing progress reports and/or presentations.
- Reviewing and responding to the proposed regulatory actions of other agencies to ensure consistency with the sanctuary's mission and regulations. This may involve producing internal memos of findings based on review of agency documents and drafting comment letters.
- Assisting with the review and development of sanctuary research and salvage permits, including literature review on research methods and potential environmental impacts.
- Contributing to superintendent reports, the sanctuary's annual operating plan, and other required reports, including compilation, information gathering, and document editing/formatting.
- Representing the sanctuary at select meetings and conferences, to observe, learn, potentially speak/present, and assist with follow-up actions.
- Participating in sanctuary research and monitoring activities and communicating findings to a diverse audience. This will involve occasional trips aboard the sanctuary research vessels, assisting on deck, helping with data acquisition and processing, and summarizing information for presentation.
- Helping to update the sanctuary's [website](#) and posting to sanctuary [social media](#) accounts.
- Possible opportunities to visit the Office of National Marine Sanctuaries' West Coast Regional Office in Monterey, CA, and offices of the Greater Farallones, Cordell Bank and Monterey Bay national marine sanctuaries on the central California coast.

A competitive Sea Grant Fellow applicant will have: strong research and demonstrated writing skills; some GIS experience; a personable approach and comfort working with a variety of constituencies in public and occasionally contentious settings; the ability to effectively manage multiple projects; and enthusiasm for ocean stewardship and conservation.



UNITED STATES DEPARTMENT OF COMMERCE  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
West Coast Region  
650 Capitol Mall, Suite 5-100  
Sacramento, California 95814-4700

## NOAA Fisheries - Office of Aquaculture, West Coast Region 2017 Sea Grant Fellowship Opportunity

### 1. Host Location and Contact Information:

**West Coast Regional Aquaculture Coordinator, California**  
**NOAA Fisheries**  
650 Capitol Mall, Suite 5-100  
Sacramento, CA 95814

### 2. Supervisor & Point of Contact for prospective fellows and finalists:

Diane Windham  
West Coast Regional Aquaculture Coordinator – California  
NOAA Fisheries  
(see address above)  
(916) 930-3619  
[diane.windham@noaa.gov](mailto:diane.windham@noaa.gov)

### 3. Position Description:

NOAA has a multi-faceted role in aquaculture from supporting cutting-edge science and research to federal policymaking and regulation. The **NOAA Fisheries Office of Aquaculture** fosters sustainable aquaculture that provides safe, sustainable seafood; creates employment and business opportunities in coastal communities; and complements NOAA's comprehensive strategy for maintaining healthy and productive marine populations, ecosystems, and vibrant coastal communities.

NOAA Fisheries plays a central role in developing and implementing policies that enable marine aquaculture and works to ensure that aquaculture complies with existing federal laws and regulations that NOAA enforces under its marine stewardship mission. In the United States, marine aquaculture operates within one of the most comprehensive regulatory environments in the world. Projects that are sited in U.S. waters must meet a suite of federal, state, and local regulations that ensure environmental protection, water quality, food safety, and protection of public health. Science and adaptive management inform NOAA policy, regulatory, and management decisions regarding aquaculture in marine waters. NOAA's aquaculture efforts are led by NOAA Fisheries and include activities at **NOAA Fisheries science centers and regional offices**, NOAA's National **Sea Grant program**, and NOAA's **National Ocean Service**. The Aquaculture Office integrates and coordinates the agency's aquaculture policies, research, outreach, and international efforts. NOAA is working with its federal, state, and tribal partners on a variety of initiatives stemming from the 2011 Aquaculture Policies, the recent National Ocean Policy Implementation Plan, and its mandates under the Magnuson Stevens Act and the National Aquaculture Act, the [National Shellfish Initiative](#) and the [Aquaculture Technology Transfer Initiative](#). Several statewide shellfish initiatives are also in development, including in California.

Since 2008, NOAA has been expanding its aquaculture efforts by establishing Regional Coordinators around the country. This allows NOAA to have a regional presence and allows better attention to and awareness of region-specific issues. The office has Regional Aquaculture Coordinators in the Northeast region, Southeast region, West Coast region (WA/OR/CA), and the Pacific Islands region. California primarily grows Pacific



oysters, Kumamoto oysters, and manila clams for commercial purposes with lesser amounts of Mediterranean mussels, Atlantic oysters, red abalone, rock scallops, and seaweed. Research in the Southwest focuses on abalone recovery at the Southwest Fisheries Science Center and Olympia oyster restoration by various sectors of academia, primarily in the San Francisco Bay area. There is growing interest in research on shellfish bio-remediation/environmental benefits of shellfish culturing.

A Sea Grant fellow within NOAA Fisheries' CA office will assist the Regional Aquaculture Coordinator in a range of duties addressing policy level issues to direct coordination with Federal, State and local regulatory agencies, local stakeholder interests, academia, and the aquaculture industry. In California, a variety of projects are getting underway, and a Sea Grant fellow will have opportunity to be involved with several collaborative/regionally specific projects, as well as internal regional office NOAA activities and coordination:

California aquaculture activities and a Sea Grant fellow's ideal complementary skill set include:

- **CA Shellfish Initiative:** a collaborative effort to expand shellfish aquaculture (commercial and native shellfish restoration), to include stakeholder interests with localized regional planning and policy efforts through 2015 and beyond. Skills needed include communication, collaboration, planning, and administrative/detail-oriented.
- **Humboldt Bay Pre-Permitting Project and Coast Seafoods Permit Renewal/Expansion:** the local harbor district is leading an interagency effort to expand shellfish leases in the Bay, and includes interagency meetings, planning stages, and CEQA planning. Same skills as above.
- **Offshore shellfish and finfish projects (including Rose Canyon Fishery finfish proposal, Santa Barbara Mariculture mussel permit, Catalina Sea Ranch offshore mussel farm, and the upcoming Ventura Shellfish Enterprise):** with growing interest in offshore aquaculture in CA and federal waters; environmental impact analyses, project monitoring and user conflicts present challenging interagency cooperative opportunities requiring skills listed above as well as diplomacy, in an environment that brings together ocean resource utilization, conservation, and scientifically sound monitoring programs. Where appropriate, align with offshore activities in other regions.
- **Coordination on aquaculture projects with the CA Dept. of Fish and Wildlife's State Aquaculture Coordinator:** the State and Federal coordinators must work closely together on all projects, so there is opportunity to work together and benefit from cross-training with both agencies to gain understanding of Federal and State policies and regulations.
- **NOAA West Coast Region Aquaculture web page/aquaculture outreach:** the regional and national webpages are undergoing revision and redesign, in coordination with NOAA's Office of Communication. Updates, project reporting/ "stories", new research and policy/permitting information are among areas to be addressed. Outreach/education opportunities are available. Computer skills, web page experience, social media experience, writing skills needed.

The Sea Grant fellow may participate in agency meetings, site visits, policy discussions and planning, communication to agencies and constituencies, literature reviews, spatial data sharing, and conference calls. A successful candidate must be able to work independently but function as part of a team, with emphasis on communication, interaction, and policy/regulatory information; there is little direct scientific research, but the ability to conduct science literature/bibliographic, legal, and administration research is vital. Strong writing, organizational, and interpersonal/listening skills are also highly valued. Openness to a broad variety of experiences and projects will enhance the fellowship.



**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

August 29, 2016

Host Agency: NOAA/NMFS Southwest Fisheries Science Center

Location: (there are three possible locations for the Fellowship)

8901 La Jolla Shores Drive, La Jolla, CA 92037

110 Shaffer Road, Santa Cruz, CA 95060

Suite 255A, 99 Pacific Street, Monterey, CA 93940

Fellow Supervisors: Lead Scientist of project and Division Director

### **Agency Background:**

The NOAA Southwest Fisheries Science Center (SWFSC; <https://swfsc.noaa.gov>) is one of six federal regional science centers that comprise the science expertise for the National Marine Fisheries Service (<http://www.nmfs.noaa.gov/>). The SWFSC provides national and international leadership and innovation in several key areas of Pacific Ocean fisheries and marine mammal science and management in the California Current, throughout the Pacific Ocean and in the Southern Ocean off Antarctica. The SWFSC has three facilities: the headquarters laboratory is in La Jolla, and satellite laboratories in Santa Cruz and Monterey. SWFSC scientists conduct fisheries, marine biological, economic and oceanographic research, observations and monitoring of living marine resources and their environment. Center scientists also conduct research on the impacts of environmental variability and climate change on marine ecosystems and on fishery and conservation socio-economics. The ultimate goal of these efforts is to ensure that the region's marine and anadromous fish, marine mammal, marine turtle, seabird, and invertebrate populations remain at sustainable and healthy levels, as functioning parts of their ecosystem and enhancing the quality of life for the public.

### **Position Description:**

One Fellow will be selected and assigned to work at one of the laboratories based on the project assignment (below) negotiated between the Fellow and host. The Sea Grant Fellow will have the opportunity to work at the interface between fishery science and regulatory actions. In this time of extreme weather events and changing climate, the SWFSC must interpret new science findings into management scenarios that will ensure resilient coastal communities. There are a number of areas where the Sea Grant Fellow could contribute that include management plans for highly migratory species, developing management strategies to implement Ecosystem Based Fishery Management (EBFM) within the California Current large marine ecosystem or for the Antarctic fisheries, and critical issues regarding Central Valley salmon. The Fellow will work under the direction of the lead scientist to assist with strategies on informing adaptive management options. Initially, the Fellow will meet with the Division Director and the lead scientist to develop a mentoring plan. The plan will be based on the specific needs of the project and the Fellow's interests. The three will meet regularly during the yearlong fellowship. The Fellow will be encouraged to participate in conferences, interagency meetings and collaborative projects and is expected to be a significant contributor to the work.



## Southwest Fisheries Science Center Potential Assignments:

- **Development of NE Pacific Ecosystem Based Fishery Management (ERD)** – (EBFM) scenarios using results from the California Current Integrated Ecosystem Assessment ([CCIEA](#)). A Fellow working on this project would be based at La Jolla and also work with staff in Monterey. The Environmental Research Division (ERD) is the lead division working with the Pacific Fishery Management Council (PFMC) on developing a Fishery Ecosystem Plan to manage all species, including protected species, through a comprehensive ecosystem plan. The CCIEA has developed a robust set of environmental, ecological and human dimension indicators that will form the basis of EBFM recommendations. NMFS employees are working with the various PFMC subcommittees on recommendations for developing and implementing this plan.

- **Water resources management (FED)** –The Fellow will participate in research on economic and social aspects of water use policy in California. In-stream flow and water quality are primary factors affecting habitat quality for protected species of anadromous fish, including endangered Chinook salmon and steelhead in the Central Valley and endangered coho salmon, Chinook salmon, and steelhead trout in California coastal watersheds. The Fellow will be located in Santa Cruz and collaborate with researchers at the SWFSC’s Fisheries Ecology Division ([FED](#)) on projects such as quantifying the economic impacts of reallocating water between fish habitat and human uses, designing cost-effective policies for anadromous fish habitat restoration, assessing the benefits and costs of water quality and habitat improvement projects, and developing risk management strategies for allocating water to competing uses over multiple time periods.

- **Warm waters and turtles in the California Bight (FRD, ERD, & MMTD)** – The swordfish drift gillnet fishery is closed when waters warm, allowing an influx of protected loggerhead sea turtles. The regulation was originally written based on an “El Niño effect” but the issue is more complicated than that alone (e.g. “the Blob”). Fellow would work in La Jolla or Monterey on a funded project to refine the policy to ensure that “adaptive management” and science are better represented in management approaches.

**Dynamic Ocean Management (ERD & partners)** – Dynamic Ocean Management to reduce bycatch in federal fisheries. Protecting highly migratory species from fishing gear bycatch relies on a suite of tools from seasonal closures, gear restrictions, and fisher communication. We are developing a real-time tool to reduce bycatch in pelagic fisheries yet current regulations do not have a provision for such an approach. The Fellow would work with Monterey scientists and NGO partners (e.g. Center for Ocean Solutions) to develop a policy framework for implementation of Dynamic Ocean Management in state and federally managed fisheries.

- **Dungeness crab fishery and multiple stressors (ERD)** – Dungeness crab fisheries are being hit with multiple regulatory concerns, e.g. record whale entanglements due to inshore distribution of humpbacks the past two years, and increased domoic acid from harmful algal blooms resulting in the shutdown of the fishery. The fellow would work with scientists at SWFSC and partners to develop policy approaches that would account for multiple stressors yet maximize the ability of the fishery to remain open. The position would be in Monterey.

SWFSC – Southwest Fisheries Science Center – Cisco Werner, Director: [cisco.werner@noaa.gov](mailto:cisco.werner@noaa.gov)

AERD – Antarctic Ecosystem Research Division – George Watters ([george.watters@noaa.gov](mailto:george.watters@noaa.gov))

ERD – Environmental Research Division – Toby Garfield ([toby.garfield@noaa.gov](mailto:toby.garfield@noaa.gov))

FED – Fisheries Ecology Division – Steve Lindley ([steve.lindley@noaa.gov](mailto:steve.lindley@noaa.gov))

FRD – Fisheries Resources Division – Gerard DiNardo ([gerard.dinardo@noaa.gov](mailto:gerard.dinardo@noaa.gov))

MMTD – Marine Mammal & Turtle Division – Lisa Ballance ([lisa.ballance@noaa.gov](mailto:lisa.ballance@noaa.gov))





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**Port of San Diego  
Planning and Green Port - Aquaculture Program  
Two 2017 Sea Grant Fellowship Opportunities**

**Host Location and Contact Information:**

Port of San Diego  
Planning and Green Port – Aquaculture and Blue Technology Program  
3165 Pacific Highway  
San Diego, CA 92101

**Supervisor and Point of Contact for Prospective Fellows and Finalists:**

Paula Sylvia  
Program Manager – Aquaculture and Blue Technology; Planning and Green Port  
(see address above)  
619-686-6491  
[psylvia@portofsandiego.org](mailto:psylvia@portofsandiego.org)

**Port of San Diego**  
**Planning and Green Port - Aquaculture Program**  
**Two 2017 Sea Grant Fellowship Opportunities**

**Position Description:**

The Port of San Diego was created by the State Legislature to manage San Diego Bay and surrounding waterfront land through a regional governance approach in 1962. The Port of San Diego is the fourth largest of the 11 deep water Ports in California, and is bordered by five member cities: Chula Vista, Coronado, Imperial Beach, National City, and San Diego. The Port oversees two marine cargo terminals, two cruise ship terminals, over 20 public parks, the Harbor Police Department, and the leases of over 200 tenants and over 500 sub tenant businesses around San Diego Bay. The Port is an economic engine, and environmental steward of San Diego Bay and the surrounding tidelands, and a provider of community services and public safety.

The Port's Planning and Green Port Department consists of several programs:

1. **Aquaculture and Blue Technology**
2. **Energy:** Energy efficiency; Conservation, and Renewables; and Climate Planning and Policy
3. **Environmental Conservation:** Natural Resource Management; Permitting; and Mitigation Banking
4. **Environmental Protection:** Storm Water; Water Quality and Watersheds; Site Assessment and Bioremediation
5. **Long Range Planning:** Integrated Planning; Planning and Policy

Since 2015, the Port has been exploring Blue Economy opportunities to diversify its portfolio of business lines and assets in alignment with its mission and responsibility to the region and the State of California. The Blue Economy is comprised of a wide variety of marine-dependent business clusters such as aquaculture and fisheries, eco-tourism, scientific research, security, and blue technology. The Port is interested in further exploring aquaculture to support a variety of economic and environmental development opportunities in and around San Diego Bay.

Aquaculture is a growing opportunity for new business development in southern California. This opportunity is primarily being driven by the growing global demand for seafood and the lack of a domestic supply. Traditional harvest fisheries are fully exploited and cannot meet this increasing demand. In the U.S., over 91% of our seafood is imported and 50% of that is from aquaculture, contributing to a nearly \$11 billion trade deficit. Demand will continue to increase with growing populations and an increased per capita consumption overall. While there is a clear food production component to this demand, aquaculture offers multiple co-benefits, such as fisheries enhancement, ecosystem restoration, mitigation banking, bio-fuel/medical purposes, bioremediation, and education and outreach.

Two Sea Grant Fellows within the Port of San Diego's Planning and Green Port Department will assist the Program Manager of Aquaculture in a range of duties encompassing planning and pre-development work for pilot scale aquaculture projects; involvement in policy level processes that may interact with government (federal, state, and local resource agencies), aquaculture industry, academia, and a variety

of other stakeholders and constituents; and will have the opportunity to be involved in a variety of collaborative aquaculture, blue technology, and natural resource projects.

The Port's current aquaculture initiatives and a Sea Grant Fellow's ideal complementary skill set include:

- **Supporting the CA Shellfish Initiative:** a collaborative effort to expand shellfish aquaculture (commercial and native shellfish restoration), to include stakeholder interests with localized regional planning and policy efforts. Skills needed include communication, collaboration, planning, inter-personal, administrative, and detail-oriented.
- **Marine Spatial Planning for Aquaculture:** Using a variety of marine spatial planning tools and trade-off analysis to inform aquaculture planning in and around San Diego Bay. This work may involve local, state, regional, and national collaborative efforts. While this work will be initially focused on aquaculture, it could be expanded to future ocean planning efforts. Skills needed include communication, collaboration, planning, inter-personal, administrative, and detail-oriented.
- **Planning and Pre-development:** involves planning, designing, site selection, drafting various permitting package materials for a variety of land and ocean based projects for appropriate algae, shellfish, and finfish projects, including technology park feasibility studies. Involves working with inter-disciplinary teams across departments to assimilate existing data (water and sediment quality), identifying data gaps, and planning for new data collection to assist with identifying suitable locations for various types of aquaculture operations. Skills needed include communication, collaboration, planning, inter-personal, administrative, detail-oriented, and computer and data management skills.
- **Projects:** assist with a variety of pilot and other projects conducted internally, or externally with potential business partners proposing aquaculture projects through the Port's newly established Aquaculture Business Incubator. This work may include proposal reviews, planning, permitting and entitlements (CEQA, Coastal, ACOE, RWQCB), coordination with partners, and education and outreach activities. Skills needed include communication, collaboration, planning, inter-personal, administrative, detail-oriented, and computer and data management skills.
- **Natural Resources and Coastal Resiliency:** potential to be involved or gain exposure to a variety of projects, including but not limited to: natural resources management, wetlands restoration and monitoring, living shorelines, climate change studies, permit compliance, bioremediation, sustainable energy, etc. Skills needed include communication, collaboration, planning, inter-personal, administrative, detail-oriented, and computer and data management skills, and also willing to work in the field if needed.
- **Other:** coordination on aquaculture projects with CA Department of Fish and Wildlife (CDFW) and National Oceanic and Atmospheric Administration (NOAA) Fisheries Aquaculture office in CA; participation in offshore aquaculture inter-agency and other working groups to promote sustainable development of aquaculture in California and the U.S.

A successful candidate must be able to work independently but also function as part of a multi-disciplinary team within the Port's Planning and Green Port Department, as well as counterparts in other agencies and industry, with emphasis on communication, inter-personal skills, interaction with policy and regulatory information; there is little emphasis on direct scientific research, however, the ability to conduct literature, legal, and administrative reviews/research will be an important contribution. Strong organizational, listening, and writing skills and a willingness to work on and interact with a broad variety of projects will greatly enhance the fellowship.