

HOW CALIFORNIA SEA GRANT'S STATE FELLOWSHIP PROGRAM FUELS **CAREERS IN COASTAL CONSERVATION AND MANAGEMENT**

By Shauna Oh, Delanie Medina, and Clare Leschin-Hoar

ABSTRACT. California Sea Grant's State Fellowship Program, modeled after NOAA Sea Grant's highly successful John A. Knauss Marine Policy Fellowship Program, provides hands-on experience in the planning, implementation, and management of marine, coastal, and/or watershed resource policies and programs in the state of California. The program matches graduate students who have recently completed their degrees with hosts in municipal, state, and federal agencies and in research and conservation organizations in California for a 12-month paid fellowship. Over 300 fellows have been matched with over 40 unique hosts since its launch in 1987. Many alumni are now employed in key positions in government at the state and federal level, with 80% of participants in a given year going on to jobs in policy and/or resource management after completing their fellowships. This article provides a brief history of the program and testimonials from past fellows and hosts, and explores the program's important role in providing agencies with well-trained, environmentally literate staff who can support the needs of coastal communities and ecosystems for the climate challenges ahead.

CREATING A SCIENCE PIPELINE

With each headline-grabbing, record-breaking storm or once-in-a-lifetime weather event, the challenges facing America's coastal regions become clearer. Stronger, more frequent storms, record drought conditions, changing migration patterns in fish stocks, and rising sea levels are just some of the very real challenges coastal communities face today. These now-frequent events reinforce the importance of establishing a steady stream of competent, experienced, and thoughtful scientists and policymakers who will employ science-based information to address the challenges of changing conditions and lead California to effective and inclusive policies and toward a more engaged and informed citizenry.

Many California agencies are involved in the management and planning of coastal resources, work that requires a

large number of well-trained, environmentally literate, and politically astute individuals to manage future ocean and coastal problems. Currently, only a few statewide educational programs provide technically trained graduate students with practical experience in marine resource management. The California Sea Grant State Fellowship Program, established in 1987, recognized the need for educating the next generation of marine and coastal policymakers early on.

This program provides a unique educational and professional opportunity for graduate students interested in California's coastal and marine resources and in the policy decisions affecting those resources. Modeled after the highly successful national John A. Knauss Marine Policy Fellowship Program (<https://seagrants.noaa.gov/knauss-fellowship-program/>), the State Fellowship Program is designed to provide

recent graduates with opportunities to acquire hands-on experience in the planning and implementation of coastal and marine resource policies and programs in the state of California. It matches highly motivated, outstanding graduate students (near completion of degree or recently completed) with hosts in municipal, state, or federal agencies and in science and conservation organizations within California. Since the program's inception, over 300 fellows have been successfully placed in more than 40 host organizations (see **Figures 1 and 2** and **Boxes 1 and 2** for examples).

FELLOWSHIP RECRUITMENT AND PLACEMENT PROCESS

California Sea Grant's Science Integration Team works collaboratively with the Communications Team to broadly advertise the State Fellowship Program by utilizing the program's web pages, social media, and an email database containing over 5,000 contacts, including scientists, students, agency staff, news media, legislators, industry representatives, marine science libraries, conservation, nonprofit organizations, and others. Fellowship applications are reviewed in a two-stage process consisting of a review of written applications and a subsequent interview. During both review stages, all applications are evaluated for eligibility, diversity, appropriateness of experience, communications skills, academic background, community and extracurricular activities, interest in the fellowship, and for personal

BOX 1. FORTY-TWO DISTINCT HOSTS THAT HAVE PARTICIPATED IN THE STATE FELLOWSHIP PROGRAM

- » Joint Committee on Fisheries and Aquaculture
- » California Department of Fish and Wildlife
- » Pacific Fisheries Legislative Task Force
- » San Francisco Bay Conservation and Development Commission
- » California Ocean Resources Management Program
- » State Water Resources Control Board
- » NOAA Channel Islands National Marine Sanctuary
- » Delta Stewardship Council
- » Senate Committee on Natural Resources and Wildlife
- » State Coastal Conservancy
- » California State Lands Commission
- » NOAA Fisheries
- » California Coastal Commission
- » NOAA Sentinel Site
- » California Regional Water Quality Control Board
- » NOAA NMFS Southwest Fisheries Science Center
- » Senate Committee on Agriculture and Water Resources
- » Office of Lt. Governor Newsom
- » NOAA Monterey Bay National Marine Sanctuary
- » Southern California Coastal Water Research Project
- » Subcommittee on River Protection and Restoration
- » Fish and Game Commission
- » California Research Bureau
- » Port of San Diego
- » California Natural Resources Agency
- » San Francisco Estuary Partnership
- » California Environmental Protection Agency
- » State Controller's Office
- » NOAA Marine Protected Areas Center
- » California Sea Grant
- » Naval Acquisition Intern Program
- » Monterey Bay Aquarium
- » California Ocean Protection Council
- » NOAA Office of Aquaculture
- » California Ocean Science Trust
- » NOAA Office of Coastal Management
- » NOAA Coastal Services Center
- » California Department of Transportation
- » California Department of Parks and Recreations
- » California Energy Commission
- » NOAA Marine Protected Areas
- » NOAA Tijuana River National Estuarine Research Reserve

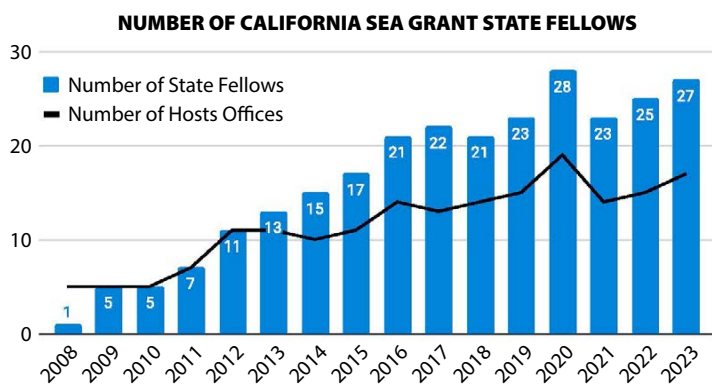


FIGURE 1. Growth of the California Sea Grant Fellows over 16 years.

characteristics such as initiative, adaptability, and analytical skills. State fellow alumni, with their unique perspectives and relevant experience, are also recruited to provide feedback during the process.

Fellowship assignments for each incoming class are based on interviews and ranking of preferences by both the selected finalists and participating hosts at a mandatory matching workshop held either virtually or in person in Sacramento. Placement of a fellow in

each prospective host office is not guaranteed, and no applicant or finalist is guaranteed a fellowship.

ATTRACTING ENGAGED HOSTS

The State Fellowship Program is open for support by municipal, state, and federal agencies as well as nongovernmental organizations in California with mandates in coastal or marine research, policy, or management. Hosts provide an educational opportunity to fellows who will, in



FIGURE 2. Where do state fellows land?

turn, provide substantial professional contributions to the office. Hosts are expected to supervise, mentor, and provide opportunities for fellows to be involved in substantive issues that support fellows' professional and educational goals. The fellows are expected to engage with the host office full time, remotely and/or on site, and with other staff and/or leadership as appropriate. Hosts and fellows are responsible for agreeing on remote/virtual, on-site, and hybrid arrangements.

Host applications are screened for quality of the fellowship opportunity, level of educational benefit for the fellow, and the host office's previous experience working with interns, fellows, or other mentoring/educational programs.

FUNDING, ENGAGEMENT, AND PROFESSIONAL DEVELOPMENT

State fellows receive financial support of a monthly stipend and health insurance for the 12-month fellowship assignment. Both California Sea Grant (CASG) and the respective host agency contribute to this monthly award based on a cooperative interagency agreement. Hosts are expected to cover 75% of the cost of the first fellowship award per year and

100% of additional fellowship awards. Additional funds are provided to cover travel for any Sea Grant-coordinated state fellow meetings and other fellowship related travel or professional development activities. This travel expands on the fellows' professional development and skill building within the host agencies and allows them to connect with their cohort statewide and nationally. Many of the state fellows attend, present, speak, and network at a variety of meetings, trainings, and conferences throughout their fellowship experience.

CASG has developed programming and content to facilitate the state fellows growing together as a cohort, beginning with an orientation at the outset of the fellowship year. Throughout the State

Fellowship Program, CASG offers all fellows monthly check-ins along with professional development training. One common training is a meeting facilitation course provided by NOAA's Office for Coastal Management. Each year, our program strives to respond to areas requested by a particular cohort for growth and learning. This has ranged from a science communication course to a regular topical webinar series to diversity, equity, inclusion, and environmental justice training. As fellows begin to wrap up their fellowships, CASG helps host career panels that invite state fellow alumni to share their experiences in the private, public, non-profit, and academic sectors. The panels typically include early career, mid-level, and seasoned professionals in order to provide a range of perspectives and experiences. Additionally, each fellowship year finishes with the fellows providing presentations to their cohort about their unique fellowship experiences and sharing about projects, mentorship, training, and networking opportunities.

Over the course of the 12-month fellowship, there are opportunities for the state fellows to collaborate with the California Sea Grant Extension Program. During spring, fellows interact with extension specialists and hear about various extension project opportunities that align with their fellowship assignments or with their professional and career interests. These optional interactions are designed to provide additional opportunities for fellows to explore topics of interest, expand their networks, and increase the diversity of opportunities for engagement. Fellows choose a project of interest and coordinate with the relevant extension specialist(s) and their hosts to determine their level of availability for a particular extension project, contributing no more than two months spread out over the year.

Several other Sea Grant programs in the network have adopted marine policy fellowships of their own, inspired or modeled after the California Sea Grant State Fellowship Program (**Box 3**). For

BOX 2. SPOTLIGHT ON CALIFORNIA SEA GRANT STATE FELLOWS



Valerie Termini, California Sea Grant State Fellow Class 2007

As far back as she can remember, Valerie Termini knew she wanted a future in ocean conservation, but figuring out how to navigate a career caring for the oceans without becoming a scientist herself felt somewhat murky. Leaning towards policy instead, Termini soon found her groove, thanks in part to a year-long California Sea Grant State Fellowship.

Nearly two decades later, she now holds the title of Chief Deputy Director of California's Department of Fish and Wildlife and oversees a staff of over 3,400 employees managing California's diverse fish, wildlife, and plant resources and habitats. She is just one among hundreds of aspiring researchers and future policy-makers who benefited from a year in the program and then joined a wide network of past fellows working in marine-related organizations from coast to coast.

"That's one of the secret powers of this program," says Termini. "We now have California Sea Grant State fellows throughout the halls of power that influence good policy making everywhere."



Lily Tsukayama, California Sea Grant State Fellow Class 2017

Lily Tsukayama first imagined herself in a state-level career after completing her master's degree at the Bren School of Environmental Science and Management at the University of California, Santa Barbara. Instead, she found herself working at the Port of San Diego in 2017, the agency's first year as host to a fellow. There she served as a project manager on a pilot program with the San Diego Ocean Planning Partnership—a

collaboration between the Port and the State Lands Commission.

"I had never envisioned myself working for an agency like the Port before, but we do a lot of work with the community here and a lot of public outreach and engagement," she says. "The people at the agency saw potential in me that I didn't realize myself. And when I think back on what's important to me, working at a local agency really has aligned with what I'm interested in doing. I've felt so fortunate to be placed where I am."

upcoming cohorts, CASG is planning to collaborate with the Sea Grant Fellowship Coordinators Network to leverage other Sea Grant programs as a resource for training, development, collaboration, and networking among state policy fellows across the region.

A COMMITMENT TO DIVERSITY, EQUITY, INCLUSION, AND ACCESSIBILITY

CASG is committed to increasing the diversity of the Sea Grant workforce. We prioritize diversifying the applicant pool for the State Fellowship Program to better reflect the population of California—which will help diversify the host agencies as well. To get there, CASG has taken steps to understand the barriers and create pipelines of access for graduate students to feel equipped and qualified to apply for the fellowship program. Targeted approaches will be reinforced or tested to advance our program's commitment to diversity, equity, inclusion, and accessibility (DEIA).

Each applicant is asked how they heard about the fellowship opportunity. This information is used to validate the outreach methods that best translate to more applicants from universities, academic fields, and communities that previously have not applied to the State Fellowship Program. Each year we find new examples, key nodes, and the best ways to improve our marketing and outreach methods in an iterative process. One successful practice has been to identify from which eligible graduate programs in California there have been no applicants and to identify staff at those institutions who could share the opportunity with their students. With nearly 120 universities and colleges in California that offer graduate degrees, this strategy has led to easily trackable results.

To further highlight this focus on DEIA, materials within the Request for Application have been updated to explicitly ask applicants to comment on their own experiences with diversity. The

BOX 3. OTHER STATE POLICY FELLOWSHIP PROGRAMS IN THE SEA GRANT NETWORK

- » Alaska Sea Grant State Fellowship Program
- » Washington Sea Grant Keystone Fellowship Program
- » Oregon Sea Grant Natural Resource Policy Fellowship Program
- » Hawaii Sea Grant Grau Coastal and Marine Resource Management Fellowship Program
- » Florida Sea Grant Graduate Student Coastal and Ocean Fellowship Competition Program
- » Virginia Sea Grant Graduate Fellowship Program
- » Maryland Sea Grant State Science Policy Fellowships
- » Delaware Sea Grant Coastal Policy Fellowship

BOX 4. BENEFITS TO HOSTS: QUOTES FROM HOST SURVEYS

"[The State Fellowship Program] adds so much value to our workplace. We always learn as much from them as we teach them and it's great to have an annual infusion of enthusiasm and creativity."

"As we enter into our tenth year of being a Sea Grant Host, I can look back over the decade with this program and know, with certainty, two important things: 1) we got a LOT done with the help of our fellows over time in terms of very substantive and meaningful marine conservation policy, management, and science; and 2) we are very proud to have played a role in the development of skills and experience that has helped each of the fellows move on to meaningful careers. Many of them are still with us, or at other NOAA offices."

"As a former fellow and now fellow mentor, I've gained so much value from this fellowship (employment, coastal management training, professional development, and growth) and am quite encouraged to continue to participate from the host agency side to "give back" to the program."

"The program provides an opportunity to access highly qualified, recent graduates with strong skills and interest in coastal management. We have used the program as a recruitment tool and have been able to retain many fellows on staff...it is a great way for people to learn more about agency work and how to apply their academic knowledge, prior experience in government context."

"We're committed to supporting and cultivating the next generation of ocean leaders, and this fellowship provides a fantastic opportunity to do so. Our Ocean Policy Program in particular has benefited from having a Sea Grant Fellow, as we are a very small team and the added capacity is now crucial for our operations."

personal statement prompt includes: "One to two paragraphs of the statement should illustrate (1) the applicant's experience collaborating or engaging with people from diverse, including underserved, cultural, ethnic, and socioeconomic, backgrounds, and (2) how the applicant would incorporate principles of diversity, equity, inclusion, justice, and/

or accessibility into their fellowship." This explicit inclusion has empowered and encouraged applicants to be more thoughtful about addressing diversity, equity, inclusion, and environmental justice issues as they progress through the application review and matching process. Through engagement with other fellowship programs and the University

of California San Diego and Scripps Institution of Oceanography's Diversity Office, the instructions and resources for State Fellowship alumni reviewers have been improved with guidance on reducing implicit bias and highlighting the need to recognize individual circumstances. Alumni reviewers are instructed to recognize that the "distance traveled" to reach particular achievements will differ among applicants. Some individuals will have the economic privilege to volunteer or work for low pay to gain experience in the environmental field. Others will have had to work regular jobs to pay for school. CASG values the endpoint of what applicants have achieved along with the personal leadership skills demonstrated along their journey to success.

In addition to enhancing our tracking of all applicants and fellows by graduate school, degree type, and degree title, CASG has embarked on tracking the demographic diversity of applicants to the State Fellowship Program. Each applicant has the opportunity to fill out a voluntary and anonymous questionnaire that collects data on age range, gender identity, disability, military status, and family education history (Figure 3).

As the State Fellowship Program continues to grow, California Sea Grant will explore expanding eligibility to allow applicants from outside the state

of California. Currently, applications may be submitted by graduate students close to completing a degree (master's, PhD, or JD) in a field related to conservation, management, protection, stewardship, public policy, or law of marine, coastal, and/or watershed environments, or areas that impact those environments, at a California University. CASG will try expanding the program to universities outside of the state of California to diversify our pool of applicants and increase accessibility for California residents who attend graduate programs in another state. Additionally, in 2020, CASG began collecting demographic data on state fellow applicants to improve our understanding of who is applying and if we are reaching graduate students from marginalized California communities, who often have experienced the most environmental and economic burdens in relation to coastal and ocean policy. As we continue to collect this information, CASG will reassess our efforts to ensure we are creating diverse pathways of access to our program.

Workforce development is an important goal of the greater Sea Grant network. The State Fellowship Program works closely with participating academic institutions and hosts to contribute toward a diverse, skilled, and environmentally literate workforce. We are also

working to advance our shared commitment to DEIA by implementing new processes and programming for fellowship outreach, recruitment, placement, and engagement, including enhanced tracking of the demographic diversity of applicants and alumni. In doing so, we hope to continue providing the training opportunities and relationships needed to foster the growth of a thriving California Sea Grant State Fellowship network and career paths that support the needs of California's diverse populations with science-informed decision-making and leadership surrounding the use and conservation of California's coastal and marine resources.

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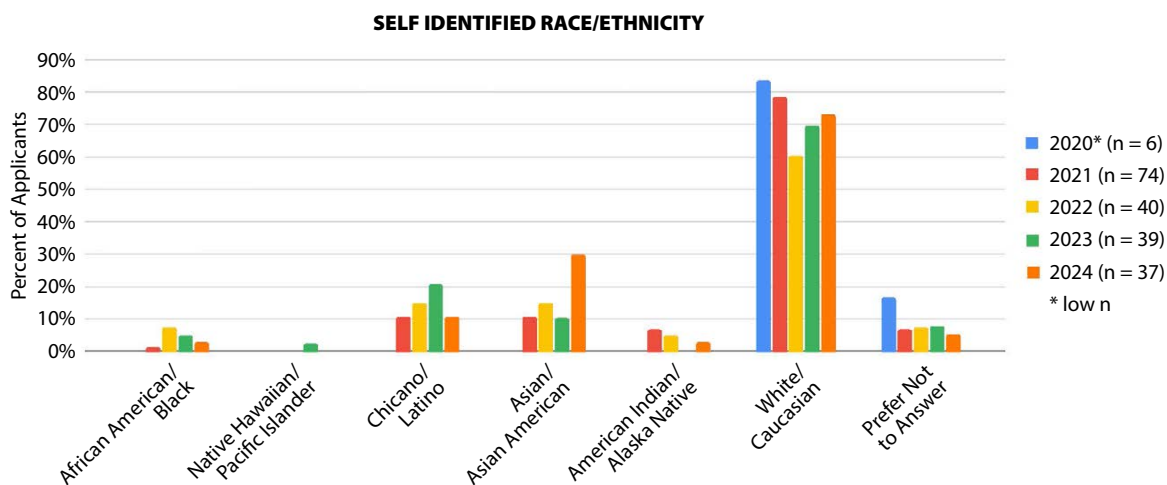


FIGURE 3. Self-identified race/ethnicity from all 2020–2024 State Fellowship Program applicants.