

**Policy Interests**

*First Preference:*

Environment and Climate Science

*Second Preference:*

Diplomacy and Foreign Policy

*Third Preference:*

Forestry, Water, and Natural Resources

**Skills and Proficiencies**

*Select up to six:*

Big Data & Analytics, Fieldwork Analysis, Community Outreach, Data Visualization/Infographics, Graphic Design, Volunteer Management

## **Professional Bio | 1500 Characters**

*Provide a brief summary of your background, work history, and interests.*

I am an interdisciplinary scientist trained to solve complex global problems. During my Caltech PhD I tackled broad questions around climate change, our planet's most pressing environmental issue. I leveraged my education across biology, chemistry, geology, and social science to investigate diverse ecosystems. In collaboration with the USGS, I linked extreme El Niño events with altered biochemistry in Mono Lake, a pivotal ecological and Indigenous heritage site. In the deep ocean, I disproved a leading hypothesis on the age of organic carbon, strengthening our understanding of climate feedback loops. As a postdoc, I brought my interdisciplinary work to Lake Superior, which supplies clean drinking water to millions of Americans. My work there highlighted the role of large lakes in storing carbon over long time scales, a key climate mitigation strategy. These experiences solidified my desire to maximize science impacts through policy. As an American Geophysical Union Voices for Science fellow, I successfully advocated for science legislation by connecting researchers with federal representatives. I am also an international women in STEM advocate, founding the social media site *Women Doing Science*, which published 800+ bilingual posts of diverse female scientists to a global audience of ~100,000. Now, as a science communication and policy officer at UCSB, I continue to work at this nexus, transforming scientific discovery into meaningful, global change.

## **Executive Applicant Statement | 7000 Characters**

*Provide a statement about your qualifications for the fellowship and your career goals. The statement should address: reasons for applying, qualifications, areas of interest, role as a fellow, and career goals.*

I have a distinct memory of the first time I voted. As I submitted my ballot, I thought of my dad. We spent hours on the phone chatting about ballot measures and comparing editorial board notes. He was a campaign manager for President Bill Clinton and speech writer before segueing into foreign relations at the State Department with USAID. At first, I was indifferent to this heritage, firmly branding myself as just a scientist. But over time, I felt the pull. I increasingly sought opportunities to visit Washington DC to work at the intersection of science, communication, and policy. Now, a decade after my first vote, a future in science and policy is all I can see.

I focused my education on breadth, hoping to learn something about everything. As an undergraduate, I selected the College of Creative Studies at the University of California, Santa Barbara (UCSB), where students are encouraged to invest significant time in research. Although I received a Biology degree, I took advanced courses in pure mathematics, organic chemistry, art history, oceanography, physics, and geology. I joined the Valentine Lab at sea, investigating methane seeps, illegal chemicals (e.g., DDT) dumping, and oil spill recovery on oceanographic vessels. I was selected as a student speaker for my graduation and my dad eagerly revisited his policy roots to help me perfect my speech. I developed a newfound appreciation for this extra layer of education from my dad, which transformed me into the communicator I am today.

I chose my Caltech PhD program because of opportunities for growth as a flexible, interdisciplinary scientist. For one chapter, I was a biologist, visiting Mono Lake with the USGS to capture the microbial response to an abrupt El Niño Southern Oscillation event. In another, I was an engineer, developing new chemical methods to study organic compounds with mass spectrometers. Sometimes my projects took me back to oceanography, where I investigated carbon sequestration in the deep ocean. For my last PhD project, I was a social scientist, leading a case study on how social media can highlight diverse women in STEM. While juggling my scientific identities I discovered my passion as a communicator who translates diverse science stories to the public via social media, K-12 outreach, and visual infographics. I craved more opportunities to maximize the impact of fundamental research — turning to policy was a natural next step.

The largest conference in my field, hosted by the American Geophysical Union (AGU), was in Washington DC halfway through my PhD, coinciding with Caltech's annual policy trip. We met with new DOE leadership under the Trump administration, including the Assistant Secretary for Fossil Energy Steven Winberg. I was fascinated by how the government restructured under a new president, moving staff from renewable teams to coal. Our conversation was productive: I especially resonated with lessons on resilience from career staffers that had weathered numerous administrations to make gradual impacts. We visited AAAS for a conversation with former Chief Executive Officer Rush Holt, learning about his journey from physicist to congressional fellow to U.S. Representative. In other visits to DARPA, NSF, NIH, and OSTP, I learned about the explicit connection between science and policy in fields I had never considered before, especially foreign relations and diplomacy. I excitedly dished details to my dad, uncovering new stories from his time on the campaign trail, office of presidential transition, and the State

Department, which furthered my desire to pursue a career in policy.

Energized from this trip, I applied and was accepted to the AGU Voices for Science program. My cohort received formal training on communication and policy and learned about the federal budget process and science advocacy. We prepared summaries of our research and spent a day in Congress visiting the offices of California Senators and Representatives. It was invigorating to see policymakers eagerly engaged with experts across fields. In one visit, we had a thirty-minute discussion of science agency appropriations around a heavy, wooden table strewn with one-pagers. In another, I had two minutes to pitch water policy to a tired staffer in a crowded hallway, like a Sorkin West Wing scene. For my fellowship focus, I brought this experience to other fundamental researchers. I co-wrote a peer reviewed article outlining a ten-step guide for academics to engage in federal science policy. I also coordinated local congressional visits to the Los Angeles offices of U.S. Sen. Dianne Feinstein and U.S. Rep. Judy Chu for a dozen of my peers. Here, I facilitated rapidly evolving dialogue between staffers and scientists, oscillating from Earthquake hazards to clean drinking water to STEM education. Both Rep. Chu and Sen. Feinstein co-sponsored House and Senate versions of the science legislation we advocated for in these discussions. Two of the participating students are now in DC as a NOAA Knauss fellow and an AAAS AGI legislative fellow.

My PhD policy experience led me to my current role as the Science Communication and Policy Officer at UCSB's National Center for Ecological Analysis and Synthesis (NCEAS), where I continue to help scientists communicate with diverse stakeholders. Working with the NOAA RESTORE science program, I helped launch the \$3.5 million Gulf Ecosystem Initiative. This five-year collaborative program funds data science-driven research in fisheries and climate change to better understand the ecological impacts of past and present management decisions. Although this project and others at NCEAS have brought me closer to federal decision-making, my desire to impact policy is not fully satiated.

As a AAAS fellow in the Executive branch, I would have the opportunity to apply and develop my skills as a scientist and communicator. I have always been drawn to the fast-paced, dynamic environments in academia and see clear parallels in an agency career. I would be excited to work at any placement that values interdisciplinary scientists, where I would act as a generalist across important global problems. For example, at USAID, where my interest was first sparked through stories from my dad, I might best serve in helping to implement their ambitious 2022-2030 climate change plan. Here, I would combine my broad geoscience knowledge and general interest in foreign affairs and diplomacy. I am also interested in working on domestic issues around energy, water, and climate, for example with the DOE and/or NOAA in implementing clean technology as part of the Inflation Reduction Act and Bipartisan Infrastructure Law. Ultimately, I view the AAAS fellowship as an opportunity to launch a life in federal science policy — a career where I could tell my own children stories of how science made a tangible difference in the world.

### **Extracurricular Activities | 3500 Characters**

*Provide brief examples of your activities beyond the lab, classroom, or office, and your role and accomplishments in these efforts. These might include activities with community groups, professional associations, advisory committees, nonprofit organizations, outreach, and teaching to non-scientific audiences.*

My childhood memories are rich with late night trips to my mom's medical research lab. I played with stretchy parafilm and brightly colored test tubes while she fed her cells and investigated new treatments for diabetes. I never doubted I could be a scientist because I saw that representation every day. Throughout my scientific career, I have strived to pass on this privilege to others, especially women and students of color.

As my scientific career developed, I was inspired to become a long-term mentor for young scientists as my mother was for me. In graduate school, I worked with the Westridge School for Girls for three years. My students visited Caltech throughout the year to work on research, learn about safety, write protocols, process data, and present at conferences. I mentored incoming women in my lab group and was formally recognized with the Caltech Graduate Student Council's annual mentorship award. I continued this practice as a postdoc, partnering with UC Santa Barbara LEADS, a program that elevates opportunities for under-represented STEM students. I met with my student throughout my postdoc and we continued the relationship after the project to discuss his continuing geoscience career.

Eager to expand my impact after seeing the direct positive consequences of my mentorship, I turned to community activism. I founded the social media movement [Women Doing Science](#), which highlighted over 800 international scientists to an audience of ~100,000 followers on Instagram, Facebook, and Twitter. I led a cohort of 50+ international volunteers, training teams of science writers, recruiters, and translators. *Women Doing Science* also partnered with the American Geophysical Union (AGU) to fundraise (\$30,000) for the Wonder Fund, a conference scholarship for Black and Indigenous geoscientists. My work with *Women Doing Science* was formally recognized by Caltech, both as a published chapter in my thesis and through the division's Diversity, Equity, and Inclusion award. I grew further as a science communicator and activist as an AGU Voices for Science Policy fellow. Here, I successfully advocated for co-sponsorship from Sen. Dianne Feinstein and Rep. Judy Chu on STEM Education bills like *Combating Sexual Harassment in the Sciences Act* and the *21st Century STEM for Girls and Underrepresented Minorities Act*.

I am also a passionate educator at the local level. In high school through graduate school, I volunteered as a Birch Aquarium docent, translating the science of Scripps Institution of Oceanography to the public through kelp tank dive shows and hall of fishes tours. In college, I worked directly with local schools, volunteering with SciTrek and 5th Grade Chemistry Outreach, which brought interactive science lessons to elementary students. As a graduate student, I volunteered as a Caltech Y RISE tutor, linking students failing math or science with free private tutoring. During my five years with the program, I stepped into leadership by running tutor trainings and expanding the program into the summer for standardized test prep. These efforts were recognized with Caltech's Lucy Guernsey Service Award. After my PhD, I continue to engage by developing a K-12 *Women Doing Science* curriculum and presenting about women in STEM at the Santa Barbara Public Library. If selected as an AAAS executive fellow, I would continue to bring

this lens of diversity and inclusion to my work on international issues around climate, water, and energy.