

**2018-2022 Self-Assessment and Program Summary
 Californian Cooperative Ecosystem Studies Unit**

January 2023

Submitted by

University of California (HOST)
 (UC-Berkeley, UC-Davis, UC-Irvine, UC-Los Angeles, UC-Merced, UC-Riverside, UC-San Diego,
 UC-Santa Barbara, UC-Santa Cruz) and

<p>California State University, Channel Islands California State University, Chico California State University, Fresno California State University, Fullerton California State University, Humboldt California State University, Los Angeles California State University, Monterey Bay California State University, Northridge California State University, Pomona California State University, Sacramento California State University, San Diego California State University, San Francisco California State University, San Luis Obispo California State University, Sonoma California State University, Stanislaus</p> <p>Contacts:</p>	<p>Carnegie Mellon University Occidental College School of Architecture, University of Southern California California Association of Resource Conservation Districts California Department of Fish and Wildlife California Invasive Plant Council Institute for Bird Populations Institute of Wildlife Studies Point Blue Conservation Science San Bernardino County Museum San Diego Natural History Museum Santa Barbara Botanic Garden Zoological Society of San Diego</p>	
<p>Dennis Baldocchi Executive Associate Dean, Research and Education Rausser College of Natural Resources University of California, Berkeley 101 Giannini Hall MC #3100 Berkeley, CA 94704-3100 Phone: 510-642-2874 E-mail: baldocchi@berkeley.edu</p>	<p>Kairi Williams Assistant Vice Chancellor for Research Administration and Compliance Sponsored Projects Office 1608 Fourth Street, Suite 220 Berkeley, CA 94710-5940 Phone: 510-642-2866 E-mail: kdw@berkeley.edu</p>	<p>Lourdes G. DeMattos Director The Regents of the University of California Office of the President 1111 Franklin St., 11th Fl. Oakland, CA 94607-5200 Phone: 510-987-9850 E-mail: lourdes.demattos@ucop.edu</p>

Introduction

California is home to a unique set of ecosystems and many endemic species due to its seasonal, Mediterranean type climate and unique geography; this state is bounded by the ocean to the west, Sierra Nevada mountains to the east, deserts to the south and rain forests to the north.

California's set of unique ecosystems and climate space demands a collaborative research and outreach framework that is up to the task. The Californian Cooperative Ecosystem Studies Unit (CA- CESU) has built and sustained a network of dedicated professionals and researchers to meet this challenge. Over the past twenty years, our university, non-federal and federal agency partners have collaborated on scores of studies spanning the spectrum of California's major environmental concerns. Participation has not been limited to agency employees and university researchers; both undergraduate and graduate students have taken part in CESU activities, contributing to the social capital that has been the foundation of our efforts. Our network of institutions has broadened in recent years, incorporating the resources of more campuses in the California State University system and in numerous organizations in the non-government sector. Indeed, the fertility of ongoing collaboration is evident on the campuses themselves, particularly at UC Berkeley, where federal agency personnel are based in university departments.

Membership in the CA-CESU expanded notably during these past five years to include six new non-federal partners:

- Marine Ecology and Telemetry Research
- The Marine Mammal Center
- Stanford University
- Sierra Streams Institute
- California Academy of Sciences
- National Association of Tribal Historic Preservation Officers

Building upon the last fifteen years, the CA-CESU has continued to grow in the fourth five-year period; between 2018 and 2022, our unit collaborated in 421 CESU projects, totaling \$169 million in funding. This compares to 479 projects valued roughly at \$107 million for the previous five-year period. Importantly, project information from NRCS, USFS, BLM, BOR, and USGS was only compiled for 2020 - 2022, thus the number of projects and funding during 2018-2022 is much higher than reported here.

The University of California, with UC Berkeley as host institution, has continued to provide space, coordination, and administrative support for operation of the CA-CESU. We started 2021 with Director Nick Mills and Ruxin Liu as the administrative lead for the CA-CESU. In 2022, Dennis Baldocchi became Director and Nalui Garcia administrative lead. Ben Becker assumed duties as NPS Science Advisor and Research Coordinator in 2021.

University of California and the CA-CESU host campus at Berkeley have continued to endure budget cuts year after year. In line with this new normal, we have drastically suppressed our internal costs and are proposing to maintain the same level of administrative cost for hosting the CESU at UC Berkeley as for the past five year period. We require that all federal partners help support this administrative burden; each of the 14 federal partners are, at minimum, expected to contribute a total of \$21,400 annually to the host university during the 5-year tenure of this agreement.

All CA-CESU partners have expressed intent for continued participation for the next five years of the program. The charts below and throughout the report summarize CA-CESU activity.

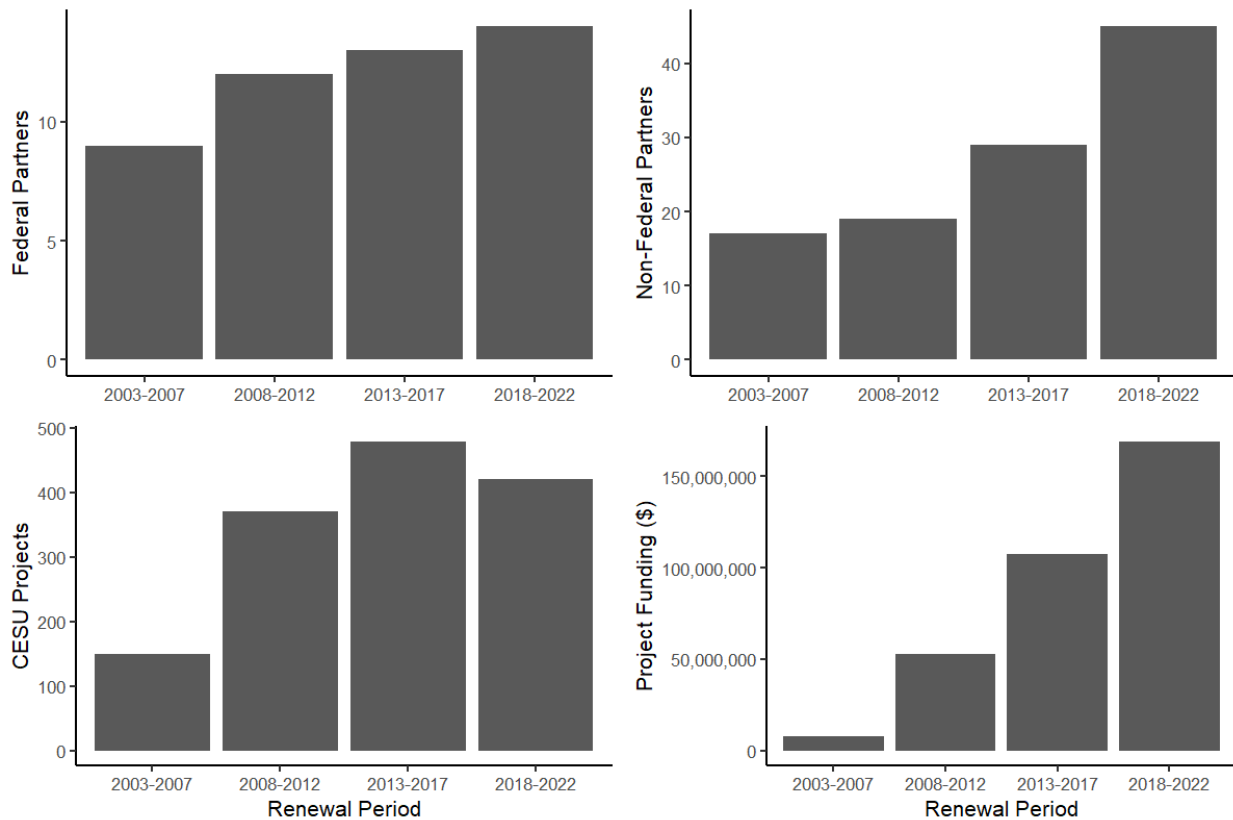


Figure 1. Trends in Californian CESU federal partners, non-federal partners, projects, and funding over the four 5-year renewal periods since establishment of the CA-CESU in 2003. Note that project information from NRCS, USFS, BLM, BOR, and USGS was only compiled for 2020 - 2022, thus the number of projects and funding during 2018-2022 is much higher than reported here. Note that prior reports indicated 5-year periods are titled with 6 year overlapping periods (e.g., 2013-2018). We now begin with 5 year non-overlapping titles for 2018-2022. Nonetheless, prior period reporting only reported projects during the correct 5-year reporting term.

CESU Host University and Nonfederal Partner Self-Assessment Report

The host university, working with its tribal and nonfederal partners, shall prepare a self-assessment that includes:

- a three to five page self-assessment report reflecting on the activities of the CESU over the current five-year term according to the CESU renewal criteria and questions provided (pp. 5-7);
- additional supporting documents related to the activities of the CESU (e.g., strategic plan, annual meeting agendas, meeting minutes); and
- additional information or insights (e.g., successes, challenges) deemed useful to share with the CESU Council for the development of the CESU and the CESU Network. CESU Renewal Criteria and Questions

For each question listed below, indicate “YES” or “NO” (as appropriate) AND provide additional details and/or examples in support of your answer (e.g., participation statistics, student involvement on projects, tangible and intangible benefits, challenges, best practices). Questions were derived from Article II of the CESU agreement.

Category A: Federal Responsibilities

Did each federal agency in the CESU...

1. Provide opportunities for coordinated, collaborative scientific and scholarly activities (i.e., research, technical assistance, and education) that inform stewardship of, and education about, public trust heritage resources in alignment with CESU, agency, and partner mission goals, programmatic objectives, and authorities? Provide details, including reference to agency-support (or lack thereof) and activities over the current five-year term (e.g., number of projects; types of projects; management issues, topics, or subject matter areas).

From 2018 to 2022, a total of 421 collaborative research, technical and education projects were conducted through the CA-CESU. These projects represented a broad variety of research topics in biological, physical, social and cultural disciplines. Ten federal agencies provided over \$169 million dollars in funding across 35 partners. Two federal partners, the Bureau of Indian Affairs and the National Aeronautics and Space Administration, had no CESU projects with the Californian Unit during this period that we are aware of.

Table 1. Projects and funding by the Federal Agency from 2018-2022.

Department	Federal Agency	Number of Projects	Total Funding (\$) (2018-2022)
Agriculture	NRCS*	11	2,832,656
Agriculture	USFS*	1	25,000
Commerce	BOEM	11	6,977,360
Defense	Air Force	8	2,727,958
Defense	Army	3	2,395,707

Defense	Marine Corp	11	3,271,651
Defense	Navy	72	32,109,803
Defense	USACE	53	66,319,363
Interior	BLM*	35	3,247,236
Interior	BOR*	8	28,047,366
Interior	NPS	143	12,684,176
Interior	USFWS	60	5,525,481
Interior	USGS*	21	2,651,578

**Data for NRCS, USFS, BLM, BOR, and USGS only compiled for 2020 - 2022 and therefore can be assumed to be only ~60% of total projects and funding.*

In today’s climate of change looming as an ever-pressing challenge, foreseeably hamstrung research budgets, and the increasing need for environmental discourse, the collaborative framework offered by the CA-CESU is more important than ever. The organization that has been built by the CA-CESU has proved resilient in the face of the financial hardships of recent years, and has increased in participation and scope. We look forward to the discoveries and accomplishments of the next five years.

2. Provide funds for basic support and salary for CESU host university (or other non-federal partner institution) faculty/personnel, as appropriate? How have federal partners provided support to the host university over the current five-year term (both financial and in-kind) specifically to support CESU operations? Provide details regarding support (e.g., support by agency, fiscal year, instrument/mechanism) and associated expenditures.

Federal partners provided financial support to bear the administrative burden of the host university: \$64,441 from NPS cooperative agreement for FY18-22, award #P21AC11997 and \$122,587 from NPS cooperative agreement for FY18-23, award #P19AC01004. The total host campus support for the period was \$187,028 representing less than half of the associated expenditures: 5% of the CESU Director’s time at \$18,283 per year, 15% of the CESU Coordinator’s time at \$10,276 and 5% of the transitional CESU Coordinator’s time at \$6,861 including 17.5% IDC for a grand total for five year period of \$204,520.

3. Make available federal personnel to serve on the CESU Federal Managers Committee? Did all federal technical representatives actively participate in CESU Federal Managers Committee activities, CESU partner meetings, and other CESU activities (e.g., communication, planning, reporting)? Provide details, including reference to consistent agency participation (or lack thereof) over the current five- year term (identified by agency, as appropriate).

Most federal managers actively participated in committee activities. Examples include attending and actively contributing in annual CESU meetings, distributing information (requests for statement of interests, notice of funding opportunities, job and internship announcements announcements, etc.) among managers and partners, and providing letters of support for new members. We met remotely for an annual

meeting of all federal agencies and partners each year in December with NPS and UC Berkeley facilitating the meetings. The NPS representative compiled information annually from the other federal partners in their reporting and co-planned and facilitated the annual meeting. Federal partners also played an important role in seeking, nurturing, and adding new members/institutions to join the CA-CESU.

4. Comply with CESU Network, host university, and nonfederal partner institution rules, regulations, and policies (e.g., professional conduct; health and safety; use of services and facilities; use of animals, recombinant DNA, infectious agents or radioactive substances) and ensure its employees follow the Code of Ethics for U.S. Government Employees? Provide details, including examples of best practices or areas of concern (identified by agency, as appropriate).

The CESU Network, host university and non-federal partners complied with institution rules, regulations and policies. Examples include 1) standard language in agreements that address compliance with regulations and code of ethics of the various institutions, 2) language in agreements regarding best practices in handling biohazards, safety, etc., 3) data and benefits sharing agreement assistance, NEPA compliance for research in federal lands. A specific example is the Grinnell Resurvey Research Project conducted by several CA-CESU partners on federal lands in California, which required extensive coordination, permitting, and adherence to federal regulations to conduct this important study on numerous federal lands including Yosemite NP, Death Valley NP, Lassen Volcano NP, Joshua Tree NP, among others managed by BLM and the Forest Service. The project published several important peer-reviewed papers on climate change adaptation and response of desert birds and mammals which were presented to the park managers and scientists in 2021.

5. Did federal agency employees actively participate in the activities of the host university and nonfederal partner institutions, including serving on graduate student committees or teaching courses? Provide details, including examples of courses or other service activities.

Various federal agencies and partners gave seminars for numerous classes (2018-2022) Class examples include - Conservation Biology (NPS annually), Marine Mammals, Mammalogy, Conservation Seminars, and ESPM Seminars). NPS and BLM co-taught a seminar (Fall 2019 and 2020) at the host University (UCB) on Science and Stewardship for Public Lands (3 units). Guest lecturers were from most of the federal agencies that are members of the CESU (FWS, USGS, NPS, DOD, NPS, BLM as examples). In Spring 2018, an NPS scientist, Patrick Gonzalez, co-taught a seminar on Special Topics in Environmental Science, Policy, and Management.

Since 2021, the NPS Science Advisor at UC Berkeley has implemented a data science mentoring program for undergraduates working on projects fulfilling NPS data analysis needs for parks including Yosemite, Pinnacles, Golden Gate NRA, Point Reyes NS, and several inventory and monitoring networks. This program is planned to expand over the next CESU renewal period.

Several CA-CESU members served on committees of graduate students including at UCB, Sonoma State University and San Francisco State University

Numerous technical agreements specifically focused on educating students. Specifically UC Berkeley's agreement of science for the next generation training students for careers and expertise needed to work in public lands research and management.

6. Take responsibility for their respective agency's role in administering the CESU agreement, transferring funds, and supervision of agency employees? Provide details, including examples of best practices or areas of concern (identified by agency, as appropriate).

The federal agencies and host university have maintained a good working relationship. The federal partners have been responsive to information requests and have provided financial support for funding opportunities/etc. Host support funding for UC Berkeley comes from the federal agencies at the Washington level and has been more consistent since 2020, greatly enhancing the ability of UCB to engage and support the CESU program.

7. Provide administrative assistance, as appropriate, necessary to execute the CESU agreement and subsequent amendments or modifications (e.g., timely processing, signatures)? Provide details, including reference to consistent and/or effective assistance (or lack thereof) over the current five- year term (identified by agency, as appropriate).

The NPS Science Advisor has been proactive in securing support for the host campus and has taken initiative to manage the website proposal regarding updating the California [CESU website](#). The Proposal to Update the California Cooperative Ecosystem Studies Unit (CESU) Website is to align the website more closely with the mission and the evolving scope of activities of the CESU and to promote cooperative research sponsored by federal partner agencies with partner universities and research institutions of the California CESU. The first draft of the proposal was produced in the Summer and Fall of 2020 and the target date for completion for the first phase of the website reconfiguration was October 2022.

We have been successful in securing signatures from our federal agencies and partners regarding our latest amendments to the Joint and Cooperative Venture Agreement. While there has always been some delay with voting and RSVPing for annual meetings, the majority of the members respond timely. We remain hopeful that the next 5-year period will yield greater lines of communication and collaboration given the introduction of our updated website.

Category B: Host University Responsibilities

Did the host university...

1. Allow and encourage its faculty to engage in participating federal agency sponsored research, technical assistance and education activities related to the CESU objectives? Provide details, including description of faculty engagement and two highlighted/example projects.

Please see below, an example of an UC Berkeley faculty led CESU Project:

PI Ted Grantham, sponsor National Park Service (P19AC01004-03), Science for the Next Generation, 9/01/2021 - 12/31/2024.

Professor Grantham's research involves analyzing underwater videos taken in the summer of 2021 in the Lagunitas Creek watershed, encompassing four streams: Lagunitas Creek, Olema Creek, Devil's Gulch, San Geronimo Creek. Data collection from these videos includes identifying coho salmon and steelhead

trout, measuring each fish, and assigning different foraging behaviors to each fish. Data from these videos will help assess how coho salmon populations across the watershed respond to extreme drought and go towards understanding linkages between summer stream habitat and juvenile population dynamics.

2. *Provide basic administrative and clerical support over the current five-year term (i.e., in support of CESU operations)? Provide details (e.g., nature and level of support).*

2a. How much did it cost the host institution to support the CESU over the current five-year term? Provide details (e.g., CESU-specific costs, Director and/or staff time, % FTE, travel, facilities, administrative services, equipment, supplies, communications, printing, web hosting).

The administrative and clerical support for the host institution were are follows: 5% of the CESU Director's time at \$18,283 per year, 15% of the CESU Coordinator's time at \$10,276 and 5% of the transitional CESU Coordinator's time at \$6,861 including 17.5% IDC for a total of \$204,520 for the five year period.

2b. Where is the CESU Director's office officially stationed within the host institution (e.g., Office of the President, School of Natural Resources, Department of Forest Resources)? Provide details (e.g., location relative to other departments, schools, greater organization), as appropriate.

The CESU Director and Coordinator offices are located at the Office of the Dean, Rausser College of Natural Resources which is centrally located on the main University of California, Berkeley campus. The Director also maintains an office at 345 Hilgard Hall on the Berkeley campus.

3. Provide access for CESU federal agency personnel (e.g., CESU Research Coordinator) to campus facilities, including library, laboratories, and computer facilities? Provide details and examples.

As the host university, we provide NPS and other federal personnel access to university privileges. We grant NPS and other federal personnel access to extensive UC Berkeley libraries, museums and computing facilities. Laboratory accommodations are provided upon request. Additionally, we provide access to our Zoom platform and IT support in handling website updates and development.

4. Provide suitable office space, furniture and laboratory space, utilities, computer network access and basic telephone service for CESU federal agency personnel (e.g., CESU Research Coordinator) to be located at the Host University? Provide details (e.g., challenges, successful approaches, examples).

As the host university during 2018 to 2022, UC Berkeley provides support in the form of office space and administrative support to the on-campus NPS CA-CESU Science Advisors (Sarah Allen (2018-2019), and Ben Becker (2021-Present); Principal Climate Change Scientist, Patrick Gonzalez; and BLM Ecologist, James Wiegand. Offices are located in Mulford Hall, the main administrative and teaching building for the Department of Environmental Science, Policy, and Management. Offices have access to wifi, wired internet, and phone. Teaching and meeting room facilities are also provided via department staff.

The Host Institution has been very welcoming and supportive to the federal partners on campus. UCB has provided centrally located office space shared by federal agency staff (NPS (2018 - 2022) & BLM (2018 - 2020), access to computer network, IT support, mail service, and basic telephone services. UCB also has

provided administrative support and classrooms to CESU federal partners. A classroom was provided with AV equipment for a seminar for UCB students co-taught by federal agency staff in fall of 2018 - 2020. The CA-CESU also currently shares office space with the UC Berkeley Natural Reserve to host student offices.

5. Offer educational and training opportunities to participating federal agency employees, as appropriate? Provide details (e.g., number of trainings, number of people, course dates, course descriptions).

Yes, a variety of training and educational opportunities provided by UC campuses and offices are easily accessible for federal representatives. CA-CESU representatives are often able to share information regarding these opportunities with their agency colleagues. For example, federal agency personnel are eligible to participate in the College of Natural Resources statistics (R programming) courses regularly hosted on campus.

6. Coordinate activities, as appropriate, with the CESU federal, tribal, and nonfederal partners and develop administrative policies for such coordination? Provide details.

6a. Was a CESU Managers Committee maintained and convened, at least annually? Please provide details (e.g., meeting dates, meeting agendas, number/affiliation of participants, meeting minutes).

CESU managers participated in annual meetings and the agendas and participant lists are included in this packet. Federal Managers are beginning inter-agency CA-CESU coordination meetings in February 2023 to improve project coordination across agencies and partners where feasible and appropriate.

6b. Were periodic meetings of the CESU partners convened, at least annually, for the purpose of collaboration and coordination of CESU activities? Provide details (e.g., meeting dates, meeting agendas, level of participation, affiliation of participants, meeting minutes).

For the past five years, we held annual meetings for the CA-CESU partners. The meetings from 2018-2022 were held in December via Zoom. The meeting sessions lasted between two and three hours, and were fruitful in discussing new research opportunities, new members, and ideas for improving collaboration among our partner institutions. A diverse group of partners have been able to attend, representing member university faculty and staff, federal managers and representatives, as well as non-federal agency partners. Our annual meeting minutes can be found on our [website](#), additionally, the agendas and participant lists for all meetings are included with this packet.

6c. What efforts were made to communicate each tribal and nonfederal partner institution's strengths and expertise to the federal partners (e.g., listing investigators on the CESU website, expertise database, meetings)? Provide details (e.g., challenges, successful approaches).

During our annual meetings, we discussed ways to increase collaboration among members. For the past few years, we have worked on updating our website to address the issue of visibility and connection among all the partners. In the upcoming period, we will continue to identify productive and efficient ways to establish best practices.

6d. How were federal funding announcements and/or other opportunities communicated to partners across the CESU? Provide details (e.g., challenges, successful approaches).

Federal funding announcements and job opportunities are sent to the host campus coordinator, who uploads the documents to the CA-CESU [website](#) and sends all the partners the information and link via email. Since the introduction of our updated website, we have successfully kept our contact list up-to-date and have enabled website features for partners to update their information when needed.

Category C: Participation of all Partners

1. What efforts did the host university, tribal, non federal, and federal partners undertake to engage students in projects and other activities of the CESU? Provide details (e.g., challenges, best practices, statistics for graduate and undergraduate student involvement, example projects).

The vast majority of CA-CESU projects include undergraduate or graduate student participation, although this is difficult to precisely track due to lack of recording by most agency partners. However, there are many examples of CA-CESU projects that provide direct funding for student research projects, internships and research positions at the university.

Undergraduate students have been trained and are leading data analysis and report preparation for numerous national parks in California in a program designed to foster student interest in federal science careers and to meet diversity goals of federal agencies.

The NPS Research Coordinator located at the Host Institution--the UC Berkeley College of Natural Resources-- mentors students, oversees student research, assists with finding internships, employment, and other project opportunities. These opportunities help foster the discovery of new avenues of research and provide training for future professionals in the field. It also educates students, staff, and faculty about the work of the federal agencies, creating even more opportunities for partnership.

2. Did all partners actively participate in CESU activities (e.g., meetings, phone calls, signing amendments, strategic planning, reporting)? Provide details (e.g., if not, why not? participation statistics, challenges to participation, successful approaches, best practices).

Most partner institutions actively participated in CESU activities. This includes meetings and conference calls as well as developing, writing, editing, and refining content for publications, outreach, and general communications. They have also been involved in coordinating projects, research, and reporting. Annual Meetings involved presentations from multiple federal agencies, new partner agencies, specific emerging research activities around fire, indigenous co-management of resources, and recent archaeology. Similar discussion and planning occurs around administrative logistics, opportunities for future research and collaboration, and strategic plan discussions.

3. What percentage of partners received funding through the CESU over the current five-year term? Provide details (e.g., partner funding statistics, notable barriers, successful approaches).

Thirty-nine of 45 (87%) non-federal partners engaged in research and education partnerships from 2018 - 2022.

Table 2. Number of projects and total funding to each non-Federal partner from 2018 - 2022.

Non-Federal Partner	Projects	Funding
Cal. Assoc. of Resource Conservation Districts	3	\$611,998
California Department of Fish and Wildlife	1	\$434,615
California Invasive Plant Council	1	\$34,991
California State University (CSU)	2	\$34,617
CSU-Cal Poly Humboldt	22	\$924,467
CSU-Cal Poly San Luis Obispo	13	\$10,168,723
CSU-Channel Islands	4	\$32,302
CSU-Chico	5	\$242,530
CSU-Fresno	2	\$52,051
CSU-Fullerton	2	\$142,240
CSU-Monterey Bay	6	\$778,402
CSU-Northridge	1	\$25,000
CSU-Sacramento	6	\$253,383
CSU-San Diego	27	\$5,432,616
CSU-San Francisco	3	\$177,683
CSU-Sonoma	5	\$1,127,927
CSU-Stanislaus	3	\$95,273
Institute for Bird Populations	10	\$1,889,029
Institute for Wildlife Studies	17	\$13,592,018
Marine Ecology and Telemetry Research	1	\$842,448
Occidental College	2	\$222,866
Point Blue Conservation Science	4	\$1,663,008
San Diego Natural History Museum	11	\$1,539,449
San Diego Zoo	7	\$7,749,108
Santa Barbara Botanical Garden	13	\$1,365,888
Sierra Streams Institute	1	\$465,292

Smithsonian Institution	1	\$74,671
Southern California Marine Institute	1	\$750,000
Stanford University	1	\$2,991,295
University of California	22	\$510,100
University of California, Berkeley	20	\$687,773
University of California, Davis	85	\$30,648,296
University of California, Los Angeles	24	\$3,803,735
University of California, Merced	6	\$245,329
University of California, Riverside	10	\$1,582,058
University of California, San Diego	34	\$58,980,150
University of California, Santa Barbara	24	\$4,807,651
University of California, Santa Cruz	26	\$13,662,004
University of Southern California	2	\$174,350

4. What efforts were made to encourage and broaden participation in the CESU by all partners (e.g., HBCUs, tribal colleges, small academic institutions, state and local government agencies)? Provide details (e.g., participation statistics, challenges to participation, successful and/or novel approaches).

Federal partners actively engaged new partners to join the CA-CESU. Over the past five years they have helped new partners to be included. Since 2018, we have welcomed six new members to the CA-CESU.

- Marine Ecology and Telemetry Research
- The Marine Mammal Center
- Stanford University
- Sierra Streams Institute
- California Academy of Sciences
- National Association of Tribal Historic Preservation Officers

Applications are being processed for 2 additional applicants in early 2023. These institutions and organizations have been actively engaged with federal partners on numerous projects over the past several years. NOAA, DOD, NPS just to name a few have encouraged these institutions to join the network because of their long-standing collaborations on several projects.

We also reached out to State Agencies who are doing ecosystem research, like the Delta Stewardship Council and the Department of Water Resources, to solicit their engagement in joining. Their representatives joined the annual virtual meeting. They also express interest in being able to provide research funding, like the Federal Agencies, to other CA CESU members and partners, if rules at the Federal level are able to change.

5. What is the date of the most current version of the CESU's strategic plan? How well do the activities of the CESU reflect the priorities and objectives outlined in the plan? Provide details (e.g., challenges, best practices, example projects).

The latest [CA-CESU strategic plan](#) was developed in collaboration with our partners, adopted locally, and submitted to the National CESU Council in June of 2004. The plan, with its aims of fulfilling relevant scientific and social objectives, was reviewed at the meeting of partners in 2008 and has been retained without changes. We are hopeful that the next 5-year period will allow us to revisit and revise our strategic plan to meet new challenges in managing and protecting federal resources.

CA-CESU mission statement reads: "The mission of the Californian Cooperative Ecosystem Studies Unit is to provide research, technical assistance and education across the biological, physical, social, and cultural sciences to address natural and cultural resource management issues at multiple scales and in an ecosystem context in California and nationally as appropriate." The mission statement, which is similar to the CESU network mission statement, has remained relevant and has not changed.

6. Did the participating federal agencies, host university, tribal, and nonfederal partners develop and follow annual work plans to guide the activities of the CESU? Provide details (e.g., challenges, successful approaches, example projects).

Yes, we followed work plans established in the 2004 strategic plan. During the current 5-year period we conducted business following well-established and practical procedures from past years. Each federal representative, including the NPS CA-CESU Science Advisor has CESU responsibilities detailed in their work plan.

7. Have partners successfully obtained the tribal, federal, state, or local government permits and/or permissions from private landowners necessary to execute projects under the CESU agreement over the current five-year term? Provide details (e.g., challenges, successful approaches, examples).

Partners have obtained tribal, federal, state, or local government permits to execute projects under the CESU agreement. Specifically, NPS CESU projects generally require compliance and permitting under NEPA for research activities in NPS units.

8. What instances exist where projects, programs, or partners have derived benefit as a result of the established CESU relationship, independent of federal awards administered through the CESU (i.e., where simply being a partner in the CESU aided furtherance of other efforts; without/outside direct funding through a CESU project award)? Provide a brief description of any such examples.

CESU projects enabled partners indirect learning on agency protocols, procedures, contacts, organizational structure, navigating agency bureaucracy while doing research on federal and state lands. CESU network facilitates interagency collaboration, leveraging expertise, and sharing information and resources. The ability to engage students, and for them to learn and contribute to federal agency activities has also been beneficial to both parties. Good examples of collaboration that grew out of and was initially independent of federal awards was the informal relationship between NPS and various UC campuses providing accommodations for researchers and their students while doing research in parks.

Table 3: Summary of CA-CESU Agreement funding (in \$1,000s) provided by Agencies (Top) to Non-Federal Partners (Down) from 2018 - 2022.

Partner	Air Force	Army	BLM	BOEM	BOR	Marine Corps	Navy	NPS	NRCS	USACE	USFS	USFWS	USGS
Cal. Assoc. of Res. Cons. Districts	\$592							\$20					
CA Department of Fish and Wildlife							\$348			\$87			
California Invasive Plant Council								\$35					
California State University								\$35					
CSU-Cal Poly Humboldt			\$266	\$462				\$24	\$105			\$68	
CSU-Cal Poly San Luis Obispo	\$54		\$117	\$418	\$9,349			\$96				\$134	
CSU-Channel Islands								\$32					
CSU-Chico			\$57		\$30			\$155					
CSU-Fresno			\$40					\$12					
CSU-Fullerton							\$118	\$25					
CSU-Monterey Bay			\$452				\$325	\$2					
CSU-Northridge											\$25		
CSU-Sacramento								\$159				\$94	
CSU-San Diego				\$300		\$ -	\$4,393	\$39		\$641		\$11	\$49
CSU-San Francisco								\$130					\$48
CSU-Sonoma						\$923		\$205					
CSU-Stanislaus			\$20		\$75								
Institute for Bird Populations		\$284	\$50					\$1,492		\$63			
Institute for Wildlife Studies			\$50				\$10,895	\$478		\$2,169			
Marine Ecology and Telemetry Research							\$842						

Occidental College							\$223						
Point Blue Conservation Science	\$1,237						\$81			\$345			
San Diego Natural History Museum						\$595	\$806	\$22		\$117			
San Diego Zoo						\$293	\$6,125			\$1,331			
Santa Barbara Botanical Garden			\$417				\$895					\$54	
Sierra Streams Institute	\$465												
Smithsonian Institution						\$75							
Southern California Marine Institute				\$750									
Stanford University										\$2,991			
University of California								\$329				-\$289	\$470
University of California, Berkeley								\$477	\$14	\$198		\$0	
University of California, Davis		\$2,112	\$1,596		\$10,710		\$940	\$5,685	\$2,464	\$1,520		\$4,845	\$775
University of California, Los Angeles						\$753	\$1,576	\$930		\$492		\$53	
University of California, Merced			\$40		\$31			\$174					
University of California, Riverside	\$379		\$25			\$633		\$295	\$250				
University of California, San Diego							\$3,978	\$213		\$54,790			
University of California, Santa Barbara			\$117	\$2,320			\$83	\$990				\$396	\$901
University of California, Santa Cruz				\$2,727	\$7,852		\$431	\$631		\$1,575		\$160	\$287
University of Southern California							\$52						\$122

Table 4: Compiled List of Californian CESU Projects from 2018 - 2022

Using the data provided by the CESU Federal Managers Committee, the CESU Director has compiled a list of agency-supported CESU projects conducted over the current five-year CESU term. Note that project information from NRCS, USFS, BLM, BOR, and USGS was only compiled for 2020 - 2022. Negative dollar amounts generally result from unspent funds being de-obligated from projects initiated prior to FY18.

- Agency Project Number
- Federal agency
- Fiscal Year
- Partner(s) (i.e., award recipient)
- Project title (First 50 characters from database)
- Amount of award

ProjectNumber	Agency	FY	PARTNER	TITLE	TOTAL
W9126G-18-2-0034	Air Force	2018	Cal. Assoc. of Resource Conservation Districts	Natural Resources Support	\$326,620
W9126G-18-2-0035	Air Force	2018	Cal. Assoc. of Resource Conservation Districts	Natural Resources Support (Habitat)	\$265,403
W9126G-18-2-0039	Air Force	2018	Point Blue Conservation Science	Natural Resources Support (Sea Birds)	\$117,443
W9126G-19-2-0003	Air Force	2019	Point Blue Conservation Science	Natural Resources Support (Sea Birds)	\$1,037,065
W9126G-19-2-0032	Air Force	2019	University of California, Riverside	Natural Resources Support (Pollinators)	\$379,264
W9126G-21-2-0022	Air Force	2021	CSU-Cal Poly San Luis Obispo	Natural Resources Support	\$54,082
W9126G-21-2-0009	Air Force	2021	Point Blue Conservation Science	Natural Resources Support	\$82,789
W9126G-21-2-0053	Air Force	2021	Sierra Streams Institute	Dry Creek Riparian Restoration Management for Natural	\$465,292
W9126G-18-2-0071	Army	2018	Institute for Bird Populations	Avian Presence and Abundance	\$93,466
W9126G-19-2-0070	Army	2019	Institute for Bird Populations	Avian Study II	\$190,141
W9126G-22-2-0001	Army	2022	University of California, Davis	Researching Methods to Improve Passage and Determine	\$2,112,100
L19AC00034	BLM	2020	CSU-Cal Poly Humboldt	CA Elephant Seal Monitoring King Range NCA	\$83,371
L19AC00209	BLM	2020	CSU-Cal Poly Humboldt	Impact of Larval Newt Predation of California Red-	\$24,404
L19AC00211	BLM	2020	CSU-Cal Poly San Luis Obispo	Subterranean Ecology of Endangered Species	\$47,186
L20AC00415	BLM	2020	CSU-Chico	Post-Fire Vegetation Recovery in Dozer Lines	\$57,165
L19AC00267	BLM	2020	CSU-Monterey Bay	Return of the Natives to Fort Ord National Monument	\$101,051
L20AC00447	BLM	2020	Institute for Bird Populations	Mapping Avian Diversity, and Rare and Management S	\$49,667
L20AC00365	BLM	2020	Institute for Wildlife Studies	Assessing Pronghorn Connectivity Among Three State	\$49,990
L19AC00196	BLM	2020	Santa Barbara Botanical Garden	Saving for the Future Conservation Seed Banking	\$44,077
L20AC00445	BLM	2020	Santa Barbara Botanical Garden	Inventory and Monitoring for Priority Sensitive Sp	\$99,236
L20AC00476	BLM	2020	Santa Barbara Botanical Garden	Understanding and Conserving the Endangered Kern M	\$105,928
L20AC00477	BLM	2020	Santa Barbara Botanical Garden	Restoring Pollination Networks for the California	\$49,992
L19AC00331	BLM	2020	University of California, Davis	Desert Wildlife Corridor Evaluation	\$ -
L20AC00489	BLM	2020	University of California, Davis	DNA Metabarcoding Tools for the Endangered Blunt-N	\$239,000
L20AC00490	BLM	2020	University of California, Davis	Impacts of Solar Energy Development on Desert Wild	\$402,453

L20AC00495	BLM	2020	University of California, Davis	Restoring the Amargosa Legacy and Preserving the I	\$50,000
L20AC00496	BLM	2020	University of California, Davis	Size-Dependent Survival and the Impact of Ravens o	\$344,655
L19AC00343	BLM	2020	University of California, Santa Barbara	Endangered Species Prey Items	\$117,419
L21AC10484	BLM	2021	CSU-Cal Poly Humboldt	North Coast Seabird Protection Network: Seabird Di	\$46,092
L21AC10501	BLM	2021	CSU-Monterey Bay	RON/FONM: Ensuring Native Plant Success and Future	\$228,857
L17AC00027	BLM	2021	CSU-Stanislaus	Kit Fox Conservation	\$20,000
L12AC10518	BLM	2021	University of California, Davis	Restoration of Desert Wetlands to Support a Source	\$150,000
L21AC10412	BLM	2021	University of California, Davis	Genetic Diversity Study of Rare and Common Flannel	\$70,000
L21AC10469	BLM	2021	University of California, Riverside	Assessing the Impacts of Aridity on Selected Species	\$25,000
L22AC00223	BLM	2022	CSU-Cal Poly Humboldt	Student Opportunities to Support Native See Collec	\$26,846
L22AC00308	BLM	2022	CSU-Cal Poly Humboldt	Management of an Invasive Fish Species in the Eel	\$60,000
L22AC00319	BLM	2022	CSU-Cal Poly Humboldt	Elephant Seal and Harbor Seal Population Baseline	\$25,000
L22AC00357	BLM	2022	CSU-Cal Poly San Luis Obispo	An Integrated Population Model for Giant Kangaroo	\$30,000
L22AC00360	BLM	2022	CSU-Cal Poly San Luis Obispo	Projecting impacts of climate change on blunt-nose	\$40,000
L22AC00395	BLM	2022	CSU-Fresno	Repatriation and Preservation of Blunt-Nosed Leopard	\$40,000
L22AC00303	BLM	2022	CSU-Monterey Bay	Return of the Natives and Graduate Student Assistant	\$121,648
L22AC00336	BLM	2022	Santa Barbara Botanical Garden	Monitoring California Jewelflower Demography in th	\$58,548
L22AC00352	BLM	2022	Santa Barbara Botanical Garden	Conservation Seed Banking for BLM Special Status	\$59,651
L21AC10518	BLM	2022	University of California, Davis	Restoration of Desert Wetlands to Support a Source	\$300,000
L22AC00358	BLM	2022	University of California, Davis	Current Rangewide Status and Habitat Affiliations	\$40,000
L22AC00479	BLM	2022	University of California, Merced	Reproduction of Blunt-Nosed Leopard Lizards in Wil	\$40,000
PC-16-01					
M16AC00023	BOEM	2018	CSU-Cal Poly San Luis Obispo	Scenarios for Replacing Conventional Energy with O	\$418,352
PC-14-04					
M15AC00012	BOEM	2018	CSU-San Diego	Archaeological and Biological Assessment of Submer	\$299,755

PC-15-05					
M15AC00006	BOEM	2018	University of California, Santa Barbara	A Demonstration Marine Biodiversity Observation Ne	\$900,000
PC-15-02					
M15AC00007	BOEM	2018	University of California, Santa Cruz	BOEM-MARINe (Multi-Agency Rocky Intertidal Network	\$884,000
PR-19-HSU					
M19AC00005	BOEM	2019	CSU-Cal Poly Humboldt	Offshore Wind Generation and Load Compatibility As	\$462,368
PC-15-03					
M15AC00014	BOEM	2019	University of California, Santa Barbara	Synthesis of Pacific Platform Research	\$ -
PC-16-x07					
M16AC00025	BOEM	2019	University of California, Santa Barbara	Net Environmental Benefit Analysis of Pacific Plate	\$ -
PC-19-04					
M19AC00011	BOEM	2019	University of California, Santa Barbara	Understanding Biological Connectivity Among Offsho	\$945,000
PC-19-01					
M19AC00023	BOEM	2019	University of California, Santa Cruz	BOEM-MARINe (Multi-Agency Rocky Intertidal Network	\$1,842,885
PC-20-02					
M21AC00021	BOEM	2021	Southern California Marine Institute	The Environmental Status of Artificial Structures	\$750,000
PC-21-02					
M21AC00023	BOEM	2021	University of California, Santa Barbara	Using Outcomes from Marine Protected Area Implement	\$475,000

NA	BOR	2018	University of California, Santa Cruz	Assessing the Impacts of Different Contract Points	\$23,170,253
R20AC00111	BOR	2020	CSU-Chico	Modeling Effects of Wildfire and Fire Retardant on	\$15,000
R20AP00261	BOR	2020	CSU-Stanislaus	Tulare Basin Endangered Species Surveys	\$75,273
R17AC00129	BOR	2020	University of California, Davis	Drivers of Delta Smelt Health Condition and Reprod	\$850,000
R20AC00027	BOR	2020	University of California, Davis	Conservation Hatchery Operation for Delta Smelt Re	\$3,070,264
R20AC00094	BOR	2020	University of California, Davis	Food-Temperature Optimization Model for Central Va	\$239,756
R20AC00021	BOR	2020	University of California, Merced	Delta-Mendota Sub-basin Models and Evaluation of S	\$30,859
R18AP00136	BOR	2020	University of California, Santa Cruz	Assessing the Impacts of Different Contact Points	\$595,961
N62473-17-2-0017	Marine Corps	2018	University of California, Riverside	Provide Monitoring and Management of Federally Thr	\$632,853
N62473-19-2-0007	Marine Corps	2019	CSU-Sonoma	Manage and Research the Archaeological Collection	\$923,096
N62470-15-2-8015	Marine Corps	2019	San Diego Natural History Museum	Collect Herbarium Specimens to Prepare a Scientific	\$39,375
N62473-17-2-0015	Marine Corps	2019	University of California, Los Angeles	Address Captive Rearing and Associated Research of	\$509,444
N62473-20-2-0008	Marine Corps	2021	CSU-San Diego	Rangewide Monitoring and Management of Flat-tailed	\$ -
N62473-21-2-0017	Marine Corps	2021	San Diego Natural History Museum	Avian Species Studies Surveys	\$354,892
N62473-20-2-0004	Marine Corps	2021	San Diego Zoo	Western Snowy Plover	\$292,902
N62473-21-2-0001	Marine Corps	2021	University of California, Los Angeles	Desert Tortoise Head Start Program	\$243,919
N62473-22-2-0012	Marine Corps	2022	San Diego Natural History Museum	Sierra Nevada Red Fox Status Update for the Mono L	\$94,000
N62473-22-2-0013	Marine Corps	2022	San Diego Natural History Museum	Golden Eagle Monitoring and Management	\$106,500
N62473-22-2-0004	Marine Corps	2022	Smithsonian Institution	Range Wide Western Pond Turtle Study/Surveys	\$74,671
W9126G-17-2-0016	Navy	2018	California Department of Fish and Wildlife	Navy/CDFG CESU agreement for NR Law Enforcement	\$347,692

N62473-17-2-0010	Navy	2018	CSU-San Diego	Restoration of a One Acre Dune Habitat with Site M	\$36,287
N62473-18-2-0009	Navy	2018	CSU-San Diego	Provide Support for the Recovery of Black Abalone	\$132,500
W7126G-18-2-0024	Navy	2018	CSU-San Diego	Demonstration of Multi-Sensor Airborne Mapping Too	\$233,059
W9126G-15-2-0034	Navy	2018	CSU-San Diego	Vegetation Classification and Mapping of Vegetation	\$ -
W9126G-16-2-0044	Navy	2018	CSU-San Diego	Botanical Program Implementation	\$368,719
W9126G-16-2-0047	Navy	2018	CSU-San Diego	Dune Restoration	\$60,000
W9126G-17-2-0029	Navy	2018	CSU-San Diego	Fog and Coastal Low Cloud Analysis for Federally L	\$208,730
W9126G-18-2-0068	Navy	2018	CSU-San Diego	Shrub Cover Monitoring and Sensitivity Analyses of	\$226,861
W9126G-16-2-0007	Navy	2018	Institute for Wildlife Studies	San Clemente Island Bell's Sparrow Monitoring	\$303,539
W9126G-16-2-0018	Navy	2018	Institute for Wildlife Studies	Island Fox Management in Support of the Loggerhead	\$1,293,182
W9126G-17-2-0030	Navy	2018	Institute for Wildlife Studies	Seabird and Shorebird Monitoring	\$549,941
W9126G-18-2-0003	Navy	2018	Institute for Wildlife Studies	SCI Shrike Captive Breeding	\$2,882,687
W9126G-18-2-0026	Navy	2018	Institute for Wildlife Studies	SCI Shrike Monitoring	\$2,735,136
W9126G-18-2-0050	Navy	2018	Institute for Wildlife Studies	Bell's Sparrow Management Plan	\$235,723
W9126G-18-2-0072	Navy	2018	Institute for Wildlife Studies	Predator Research and Ecosystem Management	\$2,286,218
N62473-18-2-0012	Navy	2018	Occidental College	Conduct Subtidal Habitat Surveys for Invertebrates	\$71,216
N62473-18-2-0007	Navy	2018	San Diego Natural History Museum	Design and Implement Bat Surveys	\$52,238
W9126G-18-2-0005	Navy	2018	San Diego Natural History Museum	Predator Management and Research to Protect the Ca	\$463,739
W9126G-18-2-0069	Navy	2018	San Diego Natural History Museum	Update Flora and Modernize Herbarium Specimen Data	\$124,585
W9126G-14-2-0001	Navy	2018	San Diego Zoo	SCI Shrike Captive Breeding	\$86,000
W9126G-17-2-0003	Navy	2018	San Diego Zoo	Least Tern & Snowy Plover Monitoring and Raptor Ma	\$2,376,558
Wj9126G-14-2-0001	Navy	2018	San Diego Zoo	SCI Shrike Captive Breeding	\$84,680
N62473-17-2-0005	Navy	2018	Santa Barbara Botanical Garden	Address Erosion Control and Habitat Enhancement	\$15,651
N62473-18-2-0018	Navy	2018	Santa Barbara Botanical Garden	Survey for Terrestrial Invertebrates	\$250,000
N62473-18-2-0004	Navy	2018	University of California, Davis	Monitor for the Seasonal Occurrence and Habitat Us	\$679,172
N62473-18-2-0014	Navy	2018	University of California, San Diego	Provide for the Eradication of the Argentine Ant	\$1,463,636
N62473-18-2-0016	Navy	2018	University of California, San Diego	Support the Navy's Passive Acoustic Monitoring Req	\$857,557
N62473-17-2-0018	Navy	2018	University of California, Santa Cruz	Collect and Analyze Hearing Data on Hawaiian Monk	\$383,530

N62473-18-2-0001	Navy	2018	University of California, Santa Cruz	Provide Black Abalone Surveys	\$47,000
W9126G-15-2-0017	Navy	2018	University of California, Santa Cruz	Investigations into Recruitment Enhancement and CI	\$ -
W9126G-17-2-0040	Navy	2018	University of Southern California	Reconstruction of Historical Topography to Estimate	\$52,460
N62473-19-2-0018	Navy	2019	CSU-Monterey Bay	Conduct Imagery-Based Subtidal Surveys for Fishes	\$324,769
W9126G-19-2-0059	Navy	2019	CSU-San Diego	Vegetation Studies (USGS Burn Plots, Invasive Spec	\$87,011
W9126G-19-2-0073	Navy	2019	CSU-San Diego	Botany SCI	\$1,558,617
W9126G-19-2-0010	Navy	2019	Institute for Wildlife Studies	Bell's Sparrow Monitoring	\$944,737
W9126G-19-2-0067	Navy	2019	Point Blue Conservation Science	Migratory Bird Support	\$80,558
N62473-19-2-0003	Navy	2019	Santa Barbara Botanical Garden	Conduct Voucher Specimen Cataloging	\$447,080
N62473-19-2-0016	Navy	2019	University of California, Los Angeles	Monitor Several Physical and Biological Parameters	\$1,453,996
N62473-20-2-0007	Navy	2020	CSU-San Diego	Studying the Impacts of Non-Native Species on Nati	\$35,029
N62473-20-2-0008	Navy	2020	CSU-San Diego	Rangewide Monitoring and Management of Flat-tailed	\$186,481
N62473-20-2-0014	Navy	2020	CSU-San Diego	Rare Plant Surveys and Monitoring	\$107,464
W9126G-20-2-0019	Navy	2020	CSU-San Diego	Coral Reef Arks	\$201,177
N62473-19-2-0025	Navy	2020	Marine Ecology and Telemetry Research	Cuvier's Beaked Whale and Fin Whale Survey at South	\$842,448
N62473-20-2-0006	Navy	2020	San Diego Natural History Museum	Bat Surveys at Naval Base San Diego	\$33,202
N62473-20-2-0012	Navy	2020	University of California, San Diego	Southern California Beaked Whale Occurrence	\$425,000
N62473-20-2-0013	Navy	2020	University of California, Santa Barbara	EFH Amphibious Landing Area Surveys at SCI	\$83,361
N62473-21-2-0013	Navy	2021	CSU-Fullerton	Safety Zone Rocky Intertidal Biodiversity Surveys	\$117,660
N62473-19-2-0017	Navy	2021	CSU-San Diego	I Botany Management Program Implementation	\$192,558
N62473-21-2-0004	Navy	2021	CSU-San Diego	NBC Dune Restoration and San Clemente Island Polli	\$82,990
W9126G-21-2-0020	Navy	2021	CSU-San Diego	Environmental Monitoring Research	\$159,988
N62473-21-2-0011	Navy	2021	Occidental College	Safety Zone Kelp Forest Surveys	\$151,651
N62473-19-2-0015	Navy	2021	San Diego Natural History Museum	Detachment Fallbrook Multiple Taxonomic Group Surv	\$51,838
N62473-19-2-0024	Navy	2021	San Diego Natural History Museum	Bat Surveys at NBPL and MCMWTC	\$80,363
N62473-21-2-0002	Navy	2021	Santa Barbara Botanical Garden	Invasive Algae Survey to Benefit Rare and Endanger	\$57,775
N62473-21-2-0005	Navy	2021	Santa Barbara Botanical Garden	NBVC Vouchered Flora for Wetlands	\$56,826
N62473-19-2-0023	Navy	2021	University of California, Davis	Abalone Reproductive Survey	\$116,424

W9126G-21-2-0067	Navy	2021	University of California, Los Angeles	Spatial Analysis & Conservation Planning Rare Plan	\$122,082
N62473-19-2-0006	Navy	2021	University of California, San Diego	SDB Automated Environmental Data Collection	\$52,270
N62473-21-2-0012	Navy	2021	University of California, San Diego	Southern California Beaked Whale Monitoring	\$363,470
N62473-22-2-0005	Navy	2022	CSU-San Diego	Historic Chinese Abalone Fishing Industry Study at	\$369,500
N62473-22-2-0009	Navy	2022	CSU-San Diego	Evaluation of Microhabitat Associations in Support	\$146,053
W9126G-22-2-0007	Navy	2022	Institute for Wildlife Studies	Fox Population Monitoring and Veterinary Care and	\$308,114
W9126G-22-2-0018	Navy	2022	Institute for Wildlife Studies	Seabird and Shorebird Monitoring Project	\$174,182
W9126G-22-2-0025	Navy	2022	Institute for Wildlife Studies	Shrike Monitor & Release	\$777,387
W9126G-22-2-0028	Navy	2022	Institute for Wildlife Studies	Predator Research and Ecosystem Management	\$597,932
W9126G-22-2-0017	Navy	2022	San Diego Zoo	SCI Shrike Captive Breeding	\$752,931
W9126G-22-2-0019	Navy	2022	San Diego Zoo	California Least Tern and Western Snowy Plover Nes	\$630,916
N62473-22-2-0015	Navy	2022	Santa Barbara Botanical Garden	Naval Outlying Field San Nicolas Island and Other	\$67,370
N62473-22-2-0007	Navy	2022	University of California, Davis	Study of Abalone Reproductive Biology in Support o	\$144,560
N62473-22-2-0003	Navy	2022	University of California, San Diego	Eradication of the Argentine Ant (Linepithema Humi	\$349,708
N62473-22-2-0014	Navy	2022	University of California, San Diego	Southern California Beaked Whale Distribution	\$466,030
P18AC01148	NPS	2018	Cal. Assoc. of Resource Conservation Districts	Range Management collaboration	\$19,975
P18AC01261	NPS	2018	CSU-Cal Poly Humboldt	_	\$15,920
P17AC01178	NPS	2018	CSU-Cal Poly San Luis Obispo	_	\$103,927
P14AC01613	NPS	2018	CSU-Channel Islands	_SENIOR CAPSTONE RESEARCH PROJECTS FOR MEDN PARKS	-\$1,400
P16AC01497	NPS	2018	CSU-Channel Islands	_SURVEY AND DOCUMENTATION OF HISTORIC ARCHEOLOGICA	\$ -
P14AC01614	NPS	2018	CSU-Chico	_STREAM MONITORING DESIGN AND ASSESSMENT FOR MEDIT	\$16,635
P13AC01160	NPS	2018	CSU-Monterey Bay	_PREDICTING HABITAT SELECTION BY YELLOWSTONE BISON	-\$7,967
P18AC00300	NPS	2018	CSU-Sacramento	_	\$39,103
P18AC00308	NPS	2018	CSU-Sacramento	DENA 217675 XXX SHELLABARGER PASS PALEO_DENA 21767	\$42,468

P13AC00727	NPS	2018	CSU-San Diego	_ARCHAEOLOGICAL INVESTIGATION OF CHINESE ABALONE S	\$0
P17AC01401	NPS	2018	CSU-San Diego	_SANTA ROSA ISLAND ARCHEOLOGICAL DATA RECOVERY	-\$6,055
P18AC01163	NPS	2018	CSU-San Diego	_	\$31,213
P17AC01613	NPS	2018	Institute for Bird Populations	_	\$383,488
P18AC01099	NPS	2018	Institute for Bird Populations	_	\$43,346
P18AC01215	NPS	2018	Institute for Bird Populations	_	\$348,664
P12AC10860	NPS	2018	Institute for Wildlife Studies	_NATURAL RESOURCE CONDITION ASSESSMENTS IN THE INT	\$ -
P14AC01310	NPS	2018	Institute for Wildlife Studies	_NATURAL RESOURCE CONDITION ASSESSMENTS FOR PUHE,	\$21,744
P15AC01667	NPS	2018	University of California	_DEVELOPING GRAZING GUIDELINES FOR THE ASH MOUNTAIN	-\$105
P18AC00006	NPS	2018	University of California	_	\$ -
P18AC00684	NPS	2018	University of California	_	\$8,887
P18AC00826	NPS	2018	University of California	_	\$118,246
P13AC01171	NPS	2018	University of California, Berkeley	_DEVELOPING UPDATED RANGELAND MONITORING METHODS F	-\$1
P15AC01877	NPS	2018	University of California, Berkeley	_SCIENCE FOR THE NEXT GENERATION	\$11,867
P16AC01700	NPS	2018	University of California, Berkeley	_LEADERSHIP, COORDINATION, AND ADMINISTRATIVE OVER	\$37,800
P12AC10724	NPS	2018	University of California, Davis	_DEVELOPING TOOLS FOR MEADOW MANAGEMENT AT YOSEMITE	-\$405
P15AC00996	NPS	2018	University of California, Davis	_TREE-LEVEL MONITORING OF GIANT SEQUOIA RESPONSE T	\$27,351
P15AC01816	NPS	2018	University of California, Davis	_GENETIC IDENTIFICATION AND HABITAT ASSOCIATIONS O	\$26,725
P16AC01786	NPS	2018	University of California, Davis	_PESTICIDE PRIORITIZATION MONITORING IN CALIFORNIA	\$73,648
P17AC01193	NPS	2018	University of California, Davis	_BOTANICAL INTERNSHIPS AT LASSEN VOLCANIC NP	\$11,207
P17AC01416	NPS	2018	University of California, Davis	MASTER COOPERATIVE AGREEMENT _ASSESSMENT OF WATER Q	\$145,000
P18AC00036	NPS	2018	University of California, Davis	_	\$648,039

P18AC01222	NPS	2018	University of California, Davis	MASTER COOPERATIVE AGREEMENT_MASTER COOPERATIVE AG	\$2,993,815
P12AC15022	NPS	2018	University of California, Los Angeles	_ASSESS AQUATIC INVERTEBRATES AND ALGAE AS INDICATOR	-\$1,542
P13AC01174	NPS	2018	University of California, Los Angeles	_MACROINVERTEBRATE IDENTIFICATION AND ANALYSES DUR	\$10,842
P16AC01575	NPS	2018	University of California, Los Angeles	P13AC00676_REVIEW AND CONSERVE SEQUOIA AND KINGS C	\$47,950
P16AC01801	NPS	2018	University of California, Los Angeles	_MACROINVERTEBRATE ASSEMBLAGES ALONG THE TUOLUMNE	\$199,999
P17AC01374	NPS	2018	University of California, Los Angeles	_	\$40,000
P18AC00495	NPS	2018	University of California, Los Angeles	_	\$34,016
P18AC01431	NPS	2018	University of California, Merced	_	\$ -
P18AC00332	NPS	2018	University of California, Riverside	_	\$ -
P18AC01395	NPS	2018	University of California, Riverside	_	\$75,000
P14AC01661	NPS	2018	University of California, Santa Barbara	_ANALYSIS AND PUBLICATION OF LONG-TERM CHANNEL ISL	\$ -
P15AC01121	NPS	2018	University of California, Santa Barbara	_MERCED RIVER RESTORATION IN YOSEMITE VALLEY	\$235,520
P18AC01415	NPS	2018	University of California, Santa Barbara	_	\$96,602
P19AC01203	NPS	2019	California State University	CONDUCT CULTURAL RESOURCE ASSISTANCE OF ABANDONED	\$34,700
P12AC10931	NPS	2019	CSU-Cal Poly Humboldt	WHITEBARK PINE MONITORING, DISEASE DYNAMICS, AND M	-\$231
P13AC00744	NPS	2019	CSU-Cal Poly Humboldt	_CLIMATE SENSITIVITY IN WHITE SPRUCE AS INDICATED	-\$117
P15AC01072	NPS	2019	CSU-Cal Poly Humboldt	SHARING TRIBAL STORIES ON THE OREGON AND CA NHTS_SH	-\$38
P16AC01303	NPS	2019	CSU-Cal Poly Humboldt	THIS STUDY WILL PROVIDE A QUANTIFICATION OF THE EF	-\$523
P17AC01583	NPS	2019	CSU-Cal Poly San Luis Obispo	THE NPS WILL COLLABORATE WITH KEY PROFESSIONALS AT	-\$171
P17AC01689	NPS	2019	CSU-Channel Islands	ESTABLISH A LONG-TERM, COLLABORATIVE RELATIONSHIP	\$34,033

P19AC01202	NPS	2019	CSU-Chico	STREAM CONDITION MONITORING AND DATA ANALYSIS FOR	\$138,730
P19AC00784	NPS	2019	CSU-Fresno	THE GOAL OF THIS PROJECT IS TO PROCESS BAT CALLS R	\$12,051
P19AC01148	NPS	2019	CSU-Sonoma	IDENTIFICATION AND EVALUATION OF WWII AND MEXICAN	\$130,000
P19AC01236	NPS	2019	San Diego Natural History Museum	CONSERVATION OF NATIVE BIODIVERSITY IN SOUTHERN CA	\$21,503
P15AC01683	NPS	2019	University of California	ANZA TRAIL AND 4-H OUTREACH INTERNSHIP_ANZA TRAIL	-\$2,177
P19AC01146	NPS	2019	University of California	MONITORING SPREAD OF PHYTOPHTHORA RAMORUM IN REDWO	\$31,673
P19AC01239	NPS	2019	University of California	THE PURPOSE OF THE STUDY IS TO DETERMINE SCIENTIFIC	\$33,943
P19AC01249	NPS	2019	University of California	ASSESSMENT OF THE CURRENT CONDITION AND FUTURE VUL	\$59,972
P15AC01366	NPS	2019	University of California, Berkeley	P13AC00676_CATALOG AND DIGITIZE HISTORIC JOHN MUIR	-\$34
P15AC01889	NPS	2019	University of California, Berkeley	GRAZING MANAGEMENT PLAN AND MAPPING ON RANCHING SP	\$41,813
P16AC01770	NPS	2019	University of California, Berkeley	_CATALOG, PRESERVE, AND DIGITIZE DR. ROBERT ALLEN'	-\$624
P19AC01004	NPS	2019	University of California, Berkeley	THIS PROJECT WILL PREPARE THE NEXT GENERATION OF S	\$122,586
P19AC01226	NPS	2019	University of California, Berkeley	EVALUATE VARIABILITY AND LONG-TERM TRENDS IN BAY A	\$22,891
P19AC00118	NPS	2019	University of California, Davis	FIELD STATION PARTNERSHIP WITH THE UNIVERSITY OF C	\$ -
P16AC01848	NPS	2019	University of California, Merced	PROVIDE OPPORTUNITIES FOR PUBLIC SERVICE YOUTH EMP	\$14,000
P19AC01223	NPS	2019	University of California, Riverside	PREPARE HISTORIC RESOURCES STUDY OF CLIMBING FOR J	\$105,929
P19AC01015	NPS	2019	University of California, San Diego	3D PHOTOGRAMMETRY PROCESSING AND VISUALIZATION_3D	\$14,076
P19AC00789	NPS	2019	University of California, Santa Barbara	THE NATIONAL PARK SERVICE WILL COLLABORATE WITH TH	\$59,925
P19AC00882	NPS	2019	University of California, Santa Barbara	GEOMORPHIC ASSESSMENT OF THE TUOLUMNE RIVER IN TUO	\$231,500
P19AC01210	NPS	2019	University of California, Santa Barbara	PROVIDE STUDENTS WITH OPPORTUNITIES TO ENGAGE IN S	\$40,020

P13AC01084	NPS	2019	University of California, Santa Cruz	MEDITERRANEAN COAST NETWORK ROCKY INTERTIDAL AND K	\$0
P15AC00724	NPS	2019	University of California, Santa Cruz	IMPROVE TREATMENT OF CONDORS FOR LEAD EXPOSURES BY	-\$2
P19AC00863	NPS	2019	University of California, Santa Cruz	THIS PROJECT WILL IMPLEMENT THE ROCKY INTERTIDAL M	\$140,481
P19AC00930	NPS	2019	University of California, Santa Cruz	ASSESSING ENDANGERED BLACK ABALONE RECRUITMENT AT	\$47,235
P19AC01001	NPS	2019	University of California, Santa Cruz	THIS PROJECT WILL ESTABLISH THE USE OF ADDITIONAL	\$89,381
P16AC00582	NPS	2020	California State University	BIRD AND BUTTERFLY COMMUNITY RESPONSE TO LARGE-SCA	-\$83
P17AC01144	NPS	2020	CSU-Cal Poly Humboldt	A CASE STUDY IN YUOK TRADITIONAL ECOLOGICAL KNOWL	-\$318
P16AC01448	NPS	2020	CSU-Cal Poly San Luis Obispo	GRAZING ALLOTMENT MONITORING AND REVIEW OF EXISTING	-\$7,926
P20AC01013	NPS	2020	CSU-Fullerton	TO EXPAND ON LIMITED NPS RESEARCH AND INTERPRETATI	\$24,580
P20AC01011	NPS	2020	CSU-Sacramento	ENGAGING UNIVERSITY HISTORY DEPARTMENT FACULTY AND	\$34,004
P15AC01455	NPS	2020	CSU-San Diego	COOPERATIVE RESEARCH AND TRAINING PROGRAMS - RESOU	-\$3,164
P20AC00867	NPS	2020	CSU-San Diego	THE IMPACT OF CHANGING OCEAN CONDITIONS ON THE REC	\$17,026
P20AC00906	NPS	2020	CSU-San Francisco	WEST COAST ACID DEPOSITION ANALYSIS_ WEST COAST ACI	\$41,223
P15AC01544	NPS	2020	University of California	RESTORING WILDFIRE UNDER CHANGING CLIMATE: HOW MUCH	-\$323
P13AC01288	NPS	2020	University of California, Berkeley	ADMINISTRATIVE SUPPORT FOR THE CALIFORNIAN CESU PA	-\$1
P15AC01818	NPS	2020	University of California, Berkeley	COOPERATIVE RESEARCH AND TRAINING PROGRAMS - RESOU	-\$1,920
P16AC01594	NPS	2020	University of California, Berkeley	STATE-OF-THE-ART SEARCHABLE WEB INTERFACE FOR AMER	\$ -
P16AC01664	NPS	2020	University of California, Berkeley	PARTNERSHIP TO PROVIDE INTERNSHIPS IN FIELD SCIENCE	\$0

P16AC00024	NPS	2020	University of California, Davis	TULE ELK HEALTH ASSESSMENT AT POINT REYES NATIONAL	-\$3,501
P16AC01102	NPS	2020	University of California, Davis	RESEARCH AND DEVELOPMENT TO SUPPORT THE INTERAGENCY	-\$3,601
P16AC01670	NPS	2020	University of California, Davis	FISHERIES INFORMATION SYSTEMS HISTORY AND ENVIRONM	\$0
P20AC00781	NPS	2020	University of California, Davis	GENETIC ANALYSIS AND HISTORY OF OLIVE ORCHARD AT J	\$17,916
P20AC00863	NPS	2020	University of California, Davis	USING ENVIRONMENTAL DNA AND AERIAL IMAGERY TO CHAR	\$36,190
P20AC00946	NPS	2020	University of California, Davis	COMMEMORATING THE 19TH AMENDMENT AND SUPPORTING IN	\$31,977
P14AC01074	NPS	2020	University of California, Los Angeles	COOPERATIVE RESEARCH AND TRAINING PROGRAMS - RESOU	-\$1
P15AC01218	NPS	2020	University of California, Los Angeles	CONSERVE YOSEMITE ETHNOGRAPHIC COLLECTIONS_CONSERV	-\$9,802
P15AC01615	NPS	2020	University of California, Los Angeles	SURVEY AND CONSERVE YOSEMITE NATIONAL PARK PAPER C	-\$7,801
P20AC00516	NPS	2020	University of California, Los Angeles	DOCUMENTATION AND DEVELOPMENT OF A MANAGEMENT PLAN	\$199,000
P20AC01047	NPS	2020	University of California, Los Angeles	THE PURPOSE OF THIS STUDY IS TO EVALUATE THE IMPACT	\$134,999
P20AC01093	NPS	2020	University of California, Los Angeles	POPULATION GENETIC STRUCTURE OF SMALL VERTEBRATES	\$75,000
P20AC00527	NPS	2020	University of California, San Diego	DATA DRIVEN ANALYSIS AND FORECASTING: A PARTNERSHIP	\$158,626
P16AC01701	NPS	2020	University of California, Santa Barbara	CRITICAL RESTORATION EFFORTS NEEDED TO RECOVER END	\$ -
P20AC01115	NPS	2020	University of California, Santa Barbara	THIS COLLABORATIVE PROJECT BETWEEN INVESTIGATORS A	\$232,880
P14AC01528	NPS	2020	University of California, Santa Cruz	KLAMATH NETWORK INTERTIDAL COMMUNITY STRUCTURE MON	-\$810
P15AC01395	NPS	2020	University of California, Santa Cruz	EXPANDING AND UPDATING ROCKY INTERTIDAL MONITORING	-\$491
P15AC01275	NPS	2021	CSU-Channel Islands	CONNECTING MULTICULTURAL PRE-SERVICE TEACHERS WITH	-\$332

P21AC11278	NPS	2021	CSU-Monterey Bay	CSUMB STUDENT ILLUSTRATOR INTERNSHIP AT MT. RAINIE	\$10,043
P21AC12081	NPS	2021	CSU-San Francisco	JUAN BAUTISTA DE ANZA NATIONAL HISTORIC TRAIL: PUB	\$88,461
P21AC10366	NPS	2021	CSU-Sonoma	IDENTIFICATION OF UNIQUE RESOURCE TYPES AT AMACHE_	\$24,943
P21AC11318	NPS	2021	CSU-Sonoma	ARCHAEOLOGICAL DATA RECOVERY PROGRAM FOR THE FORT	\$49,888
P21AM00011	NPS	2021	CSU-Sonoma	SONOMA STATE UNIVERSITY CESU MASTER AGREEMENT SONO	\$ -
P21AC10259	NPS	2021	Institute for Bird Populations	BIRD COMMUNITY MONITORING AND PROGRAM REVIEW FOR P	\$317,712
P21AC11997	NPS	2021	University of California, Berkeley	CA-CESU - LEADERSHIP, COORDINATION AND ADMINISTRATION	\$64,441
P21AC11294	NPS	2021	University of California, Davis	RESEARCH AND DEVELOPMENT TO SUPPORT THE INTERAGENCY	\$1,562,798
P21AC12213	NPS	2021	University of California, Los Angeles	MACROINVERTEBRATE ASSEMBLAGES ALONG THE TUOLUMNE R	\$144,998
P21AC12291	NPS	2021	University of California, Los Angeles	SUPPORT CESAR CHAVEZ NATIONAL MONUMENT MUSEUM AND	\$33,088
P21AC10907	NPS	2021	University of California, Merced	DIGITIZE AND PRESERVE SEQUOIA AND KINGS CANYON ARC	\$105,020
P16AC01162	NPS	2021	University of California, Riverside	UPDATE HISTORIC RESOURCES STUDY: HOMESTEADS AND IN	-\$1,058
P21AC10394	NPS	2021	University of California, San Diego	3D PHOTOGRAMMETRY PROCESSING, VISUALIZATION, AND H	\$40,000
P21AC10873	NPS	2021	University of California, Santa Barbara	BACKCOUNTRY ARCHAEOLOGICAL INVENTORY AND CONDITION	\$57,912
P21AC12290	NPS	2021	University of California, Santa Barbara	SANDY BEACH ANALYSIS AND PROGRAM REVIEW_SANDY BEAC	\$36,095
P21AC11692	NPS	2021	University of California, Santa Cruz	PROVIDING EDNA SERVICES THROUGH CALEDNA_PROVIDING	\$195,558
P21AC12018	NPS	2021	University of California, Santa Cruz	LONG-TERM ROCKY INTERTIDAL MONITORING TREND ANALYSIS	\$78,311
P22AC01245	NPS	2022	California Invasive Plant Council	THIS PROJECT WILL PROVIDE: TRAINING SESSION FOR NP	\$34,991

P22AC01789	NPS	2022	CSU-Cal Poly Humboldt	CALIFORNIA STATE POLYTECHNIC UNIVERSITY, HUMBOLDT	\$8,820
P22AC01893	NPS	2022	CSU-Sacramento	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$43,808
P22AC01055	NPS	2022	Institute for Bird Populations	FUNDING OPPORTUNITY NUMBER: P-P-CESU-22-006 PURPOSE	\$30,480
P22AC02259	NPS	2022	Institute for Bird Populations	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$78,211
P22AC02338	NPS	2022	Institute for Bird Populations	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$290,505
P22AC00217	NPS	2022	Institute for Wildlife Studies	INVESTIGATORS WITH THE INSTITUTE FOR WILDLIFE STUD	\$312,675
P22AC01336	NPS	2022	Institute for Wildlife Studies	THE INSTITUTE FOR WILDLIFE STUDIES WILL REVIEW THE	\$143,737
P22AC01730	NPS	2022	University of California	THE GOAL OF THIS AGREEMENT IS TO COMPLETE A TREND	\$79,000
P22AC01582	NPS	2022	University of California, Berkeley	PERFORMANCE GOALS THIS PROJECT WILL DETERMINE PR	\$137,860
P22AC02433	NPS	2022	University of California, Berkeley	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$40,076
P22AC02330	NPS	2022	University of California, Davis	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$117,729
P22AC02418	NPS	2022	University of California, Los Angeles	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$28,924
P22AC02421	NPS	2022	University of California, Merced	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$55,450
P22AC01122	NPS	2022	University of California, Riverside	JOSHUA TREE NATIONAL PARK JOTR AND RECIPIENT STA	\$103,031
P22AC01419	NPS	2022	University of California, Riverside	THIS PROJECT WILL STUDY THE IMPACTS OF WILDFIRE ON	\$12,246
P15AC01412	NPS	2022	University of California, Santa Barbara	RESTORING RARE FROGS IN YOSEMITE NATIONAL PARK_RES	\$0
P22AC02283	NPS	2022	University of California, Santa Cruz	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$34,076
P22AC02366	NPS	2022	University of California, Santa Cruz	PROGRAMMING SUPPORTS A COMPREHENSIVE NETWORK OF CO	\$46,950
NR183A750007C002	NRCS	2018	University of California, Berkeley	CA Herbarium Data	\$13,514
NR183A750023C005	NRCS	2018	University of California, Davis	CA Central Valley CEAP Watershed	\$275,000

NR1874820006C001	NRCS	2018	University of California, Davis	Redevelopment of SoilWebs Native Apps	\$100,000
NR193A750023C011	NRCS	2019	University of California, Davis	Machine-Based Algorithms	\$99,409
NR193A750023C015	NRCS	2019	University of California, Davis	CEAP Wetlands CCV Water Benefits	\$180,000
NR193A750023C016	NRCS	2019	University of California, Davis	Central Valley CEAP	\$560,450
NR203A750023C003	NRCS	2020	CSU-Cal Poly Humboldt	Wetlands management -- California	\$105,000
NR203A750023C017	NRCS	2020	University of California, Davis	Environmental effects/aquifer recharge	\$800,000
NR213A750025C002	NRCS	2021	University of California, Davis	Soil Web Maintenance / New Development	\$150,000
NR213A750025C008	NRCS	2021	University of California, Riverside	Wildfire Impacts-DSP in Steep Shrublands	\$249,793
NR223A750023C010	NRCS	2022	University of California, Davis	Wildfire Effects on California Soils	\$299,491
W912HZ-11-2-0047 P00004	USACE	2018	University of California, Berkeley	Phage-based Bio-Laminar Nanoscale Structures	\$0
W912HZ-17-2-0001 P00001	USACE	2018	University of California, Davis	Evaluating Atmosphere Modeling to Predict Risk to	\$ -
W912HZ-17-2-0001 P00002	USACE	2018	University of California, Davis	Evaluating Atmosphere Modeling to Predict Risk to	\$ -
W912HZ-17-2-0001 P00003	USACE	2018	University of California, Davis	Evaluating Atmosphere Modeling to Predict Risk to	\$719,853
W912HZ-14-2-0025 P00004	USACE	2018	University of California, San Diego	Coastal Ocean Data Systems (CODS): Development and	\$2,941,803
W912HZ-14-2-0025 P00007	USACE	2018	University of California, San Diego	Coastal Ocean Data Systems (CODS): Development and	\$185,946
W912HZ-15-2-0019 P00007	USACE	2018	University of California, San Diego	Research to Investigate Atmospheric Rivers (AR) an	\$3,997,134
W912HZ-17-2-0024 P00002	USACE	2018	University of California, San Diego	Innovative Technologies in Structural Health Monit	\$1,998,096
W912HZ-15-2-0019 P00010	USACE	2019	University of California, San Diego	Research to Investigate Atmospheric Rivers (AR) an	\$ -
W912HZ-15-2-0019 P00011	USACE	2019	University of California, San Diego	Research to Investigate Atmospheric Rivers (AR) an	\$ -

W912HZ-15-2-0019 P00012	USACE	2019	University of California, San Diego	Research to Investigate Atmospheric Rivers (AR) an	\$3,999,915
W912HZ-15-2-0019 P00013	USACE	2019	University of California, San Diego	Research to Investigate Atmospheric Rivers (AR) an	\$ -
W912HZ-17-2-0024 P00003	USACE	2019	University of California, San Diego	Innovative Technologies in Structural Health Monit	\$1,999,833
W912HZ-19-2-0020	USACE	2019	University of California, San Diego	Development and Testing Advancements in Spectral W	\$9,219,225
W912HZ-19-2-0023	USACE	2019	University of California, San Diego	Research to continue investigation of Atmospheric	\$5,750,000
W9126G-17-2-0016	USACE	2020	California Department of Fish and Wildlife	Navy/CDFG CESU agreement for NR Law Enforcement	\$86,923
W9126G-18-2-0068	USACE	2020	CSU-San Diego	Other	\$ -
W9126G-19-2-0073	USACE	2020	CSU-San Diego	Botany of San Clemente Island	\$544,630
W9126G-20-2-0019	USACE	2020	CSU-San Diego	Coral Reef Arks	\$96,281
W9126G-19-2-0070	USACE	2020	Institute for Bird Populations	Avian Study II	\$63,347
W9126G-16-2-0018	USACE	2020	Institute for Wildlife Studies	Island Fox Management in Support of the Loggerhead	\$374,103
W9126G-17-2-0030	USACE	2020	Institute for Wildlife Studies	Seabird and Shorebird Monitoring	\$219,385
W9126G-18-2-0026	USACE	2020	Institute for Wildlife Studies	SCI Shrike Monitoring	\$693,085
W9126G-18-2-0072	USACE	2020	Institute for Wildlife Studies	Predator Research and Ecosystem Management	\$566,987
W9126G-19-2-0010	USACE	2020	Institute for Wildlife Studies	Bell's Sparrow Monitoring	\$315,177
W9126G-19-2-0003	USACE	2020	Point Blue Conservation Science	Natural Resources Support Seabirds - VAFB	\$345,153
W9126G-18-2-0005	USACE	2020	San Diego Natural History Museum	Predator Management and Research to Protect the Ca	\$117,214
W9126G-17-2-0003	USACE	2020	San Diego Zoo	Least Tern & Snowy Plover Monitoring and Raptor Ma	\$600,478
W9126G-18-2-0003	USACE	2020	San Diego Zoo	San Clemente Island Shrike Captive Breeding	\$731,001
W912HZ-20-2-0073	USACE	2020	University of California, Berkeley	Levee Monitoring with Distributed Strain Sensing,	\$108,000
W912HZ-20-2-0004	USACE	2020	University of California, Los Angeles	Quantitative Model for Optimizing Coastal Systems	\$330,000
W912HZ-15-2-0019	USACE	2020	University of California, San Diego	Water Operations Technical Support: Research to In	\$ -
W912HZ-17-2-0024	USACE	2020	University of California, San Diego	Cyber Modeling: A Digital Surrogate Approach for Op	\$1,998,579
W912HZ-20-2-0015	USACE	2020	University of California, San Diego	Predicting Coastal Water Quality - Understanding t	\$249,976
W9126G-17-2-0040	USACE	2020	University of Southern California	Reconstruction of Historical Topography to Estimate	\$ -

W9132T-19-2-0006 P00001	USACE	2021	University of California, Los Angeles	INVESTIGATING THE INFLUENCE OF ENVIRONMENTAL NON-S	\$105,914
W9132T-19-2-0006 P00002	USACE	2021	University of California, Los Angeles	CESU INVESTIGATING THE INFLUENCE OF ENVIRONMENTAL	\$55,798
W912HZ-17-2-0024 P00005	USACE	2021	University of California, San Diego	CYBER MODELING, A DIGITAL SURROGATE APPROACH FOR OP	\$ -
W912HZ-17-2-0024 P00006	USACE	2021	University of California, San Diego	CYBER MODELING, A DIGITAL SURROGATE APPROACH FOR OP	\$1,990,256
W912HZ-19-2-0020 P00002	USACE	2021	University of California, San Diego	TASK 4 AND TASK 5 ARE VITAL TO OBTAINING HIGH QUAL	\$ -
W912HZ-19-2-0020 P00003	USACE	2021	University of California, San Diego	DEVELOPMENT AND TESTING ADVANCEMENTS IN SPECTRAL W	\$5,000,192
W912HZ-19-2-0020 P00004	USACE	2021	University of California, San Diego	DEVELOPMENT & TESTING ADVANCEMENTS IN SPECTRAL WAV	\$ -
W912HZ-19-2-0023 P00002	USACE	2021	University of California, San Diego	RESEARCH TO CONTINUE INVESTIGATION OF ATMOSPHERIC	\$ -
W912HZ-19-2-0023 P00003	USACE	2021	University of California, San Diego	RESEARCH TO CONTINUE INVESTIGATION OF ATMOSPHERIC	\$4,000,000
W912HZ-21-2-0024	USACE	2021	University of California, Santa Cruz	UPDATE OF THE STANDARD ASSESSMENT METHODOLOGY (SAM	\$653,705
W912HZ-21-2-0047	USACE	2021	University of California, Santa Cruz	ASSESSING THE ROLE OF RISK SCIENCE AND RISK TRANSFER	\$210,477
W9132T2220006	USACE	2022	Stanford University	Integrated Microgrids	\$2,991,295
W912HZ-22-2-0012	USACE	2022	University of California, Berkeley	Levee Monitoring with Distributed Strain Sensin	\$90,000
W912HZ-22-2-0022	USACE	2022	University of California, Davis	Libby and Bonneville Dams Maximum Precipitation St	\$800,001
W912HZ-19-2-0020 P00005	USACE	2022	University of California, San Diego	Opt 3/YR 4 - Development and Testing Advancements	\$5,497,464
W912HZ-19-2-0023 P00004	USACE	2022	University of California, San Diego	Research to Continue Investigation of Atmospheric	\$4,000,000
W9132T-22-2-0014	USACE	2022	University of California, San Diego	Innovative Technologies in Structural Health Monit	\$1,961,358
W912HZ-21-2-0024 P00001	USACE	2022	University of California, Santa Cruz	Exercise Tasks 5,6,&9 and NCTE for Task 10 for Upd	\$710,779

22-PA-11050100-017	USFS	2022	CSU-Northridge	Unmanned Aerial Systems/Vehicles (UAV) Data process	\$25,000
F16AC00685	USFWS	2018	CSU-Cal Poly Humboldt	HSU-DEVELOP [WATERBIRD SURVEY PROTOCOL_ WATERBIRD MO	-\$436
F16AC00692	USFWS	2018	CSU-Cal Poly Humboldt	CA-ARCATA FWS SNOWY PLOVER MONITORING_ WESTERN SNOW	\$36,995
F18AC00487	USFWS	2018	CSU-Cal Poly San Luis Obispo	OVERWINTERING MONARCH BUTTERFLIES MICROCLIMATE CON	\$48,667
F18AC00521	USFWS	2018	CSU-Sacramento	CA-RO8-INTEGRATION OF REFUGE DATA_ CA-RO8-INTEGRATION	\$49,000
F18AC00527	USFWS	2018	CSU-Sacramento	CA-RO8-WATER RESOURCE DATA_ CA-RO8-WATER RESOURCE D	\$45,000
F18AC00913	USFWS	2018	CSU-San Diego	SDSU FOUNDATION - TEXELLA_ SDSU FOUNDATION - TEXELL	\$10,906
F18AC00003	USFWS	2018	University of California	"SELENIUM EXPOSURE IN SPLIT TAIL _SELENIUM EXPOSURE	\$ -
F18AC00008	USFWS	2018	University of California	INVESTIGATE THE SPAWNING BEHAVIOR AND MICROHABITAT	\$ -
F17AC00020	USFWS	2018	University of California, Berkeley	CESU UC BERKELEY_A WORKSHOP: CORRIDORS AS ADAPTAT	-\$493
F17AC00034	USFWS	2018	University of California, Davis	_ MAINTENANCE OF JSATS ARRAY IN SOUTH DELTA FOR USF	\$149,999
F17AC00555	USFWS	2018	University of California, Davis	NV-RENO FWO-UC DAVIS-RELICT DACE_ NV-RENO FWO-UC DA	\$ -
F18AC00006	USFWS	2018	University of California, Davis	WA-ABERNATHY FTC-GENETIC EVALUATION_ WA-ABERNATHY	\$70,444
F18AC00057	USFWS	2018	University of California, Davis	CA-SF BAYDELTA-UC DAVIS CTR FOR AQ BIO&C_ CA-SF BAY	\$99,500
F18AC00058	USFWS	2018	University of California, Davis	CA SF BAY DELTA-UC DAVIS FISH_ CA SF BAY DELTA-UC DAV	\$97,036
F18AC00059	USFWS	2018	University of California, Davis	CA-SF BAY DELTA-UC DAVIS CONS CLTR LABS_ CA-SF BAY DE	\$99,902
F18AC00060	USFWS	2018	University of California, Davis	CA-SF BAY DELTA-UC DAVIS CTR FOR AQUATIC DEVELOPM	\$95,500
F18AC00061	USFWS	2018	University of California, Davis	CA SF BAY DELTA-UC DAVIS FISH CONS & CULT_ CA SF BAY	\$96,692

F18AC00075	USFWS	2018	University of California, Davis	CA SF BAY-DELTA DETERMINE SMELT SPAWNING BEHAVIOR_	\$212,888
F18AC00085	USFWS	2018	University of California, Davis	CA-SF-BAYDELTA-SELENIUM SPLITTAIL_CA-SF-BAY DELTA-S	\$75,727
F18AC00275	USFWS	2018	University of California, Davis	F18AC00275_F18AC00275	\$47,000
F18AC00276	USFWS	2018	University of California, Davis	_	\$47,955
F18AC00277	USFWS	2018	University of California, Davis	_	\$47,668
F18AC00334	USFWS	2018	University of California, Davis	F18AC00334_F18AC00334	\$45,272
F18AC00479	USFWS	2018	University of California, Davis	U.S FISH AND WILDLIFE WATERBIRD HABITAT ASSESSMENT	\$93,131
F16AC01284	USFWS	2019	University of California	NO-COST EXTENSION_SEED AMPLIFICATION FOR SIX TAXA	-\$1
F16AC00465	USFWS	2019	University of California, Davis	UC DAVIS CESU AGREEMENT_DESIGN AND IMPLEMENTATION	-\$1,499
F16AC00735	USFWS	2019	University of California, Davis	AMEND TO PROVIDE ADDITIONAL FUNDS AND EXTEND PERIO	\$93,647
F16AC01292	USFWS	2019	University of California, Davis	INVASIVE SPECIES MAPPING IN TULE LAKE NWR AND LOWE	-\$44
F19AC00062	USFWS	2019	University of California, Davis	_	\$1,235,145
F19AC00561	USFWS	2019	University of California, Davis	UC DAVIS SHERLOCK METHOD TO DETECT PRESENCE OF DEL	\$308,927
F19AC00577	USFWS	2019	University of California, Davis	WALL CANYON SUCKER GENETICS PROJECT_WALL CANYON SU	\$68,608
F19AC00939	USFWS	2019	University of California, Davis	CA-SF BAY DEL IMPR SURVIVAL DELTA SMELT_CA-SF BAY	\$447,199
F19AC00940	USFWS	2019	University of California, Davis	MOLECULAR BASIS OF HATCHERY ADAPTATION IN DELTA SM	\$449,941
F19AC00943	USFWS	2019	University of California, Davis	THE SIGNIFICANCE OF TURBIDITY IN SAFEGUARDING DELT	\$400,000
F19AC00944	USFWS	2019	University of California, Davis	TESTING OF WAKASAGI HATCHING FRAMES FOR DELTA	\$99,997
F19AC00410	USFWS	2019	University of California, Santa Cruz	DOUBLE-CRESTED CORMORANT MONITORING IN CALIFORNIA_	\$46,081
F20AC11270	USFWS	2020	CSU-Cal Poly Humboldt	FUNGAL COMMUNITY ASSOCIATED WITH APPLIGATE'S MILKV	\$16,685
F20AC11404	USFWS	2020	CSU-Cal Poly Humboldt	CONTINUED MONITORING OF NATIVE AND TRANSPLANTED AP	\$15,801

F20AC10888	USFWS	2020	CSU-Cal Poly San Luis Obispo	CAMATTA CANYON AMOLE: CAMATTA RANCH AND LOS PADRES	\$36,000
F20AC11996	USFWS	2020	CSU-Cal Poly San Luis Obispo	SA MONARCH MICROHABITAT_SA MONARCH MICROHABITAT	\$49,385
F18AC00965	USFWS	2020	CSU-Stanislaus	CA-BITTER CREEK NWR SURVEYS & MONITORING_CA-BITTER	\$ -
F20AC10887	USFWS	2020	Santa Barbara Botanical Garden	RECOVERY ACTIONS FOR THREE ENDANGERED PLANT SPECIE	\$53,755
F15AC00525	USFWS	2020	University of California, Davis	VERNAL POOL SPECIES GENETICS STUDY_CONSERVING RARE	-\$28,267
F20AC00037	USFWS	2020	University of California, Davis	DEVELOPMENT OF A GENOMIC TOOL SIERRA NEVADA RED FOX	\$45,658
F20AC11492	USFWS	2020	University of California, Davis	CONTINUED MONITORING OF NATIVE AND TRANSPLANTED AP	\$160,203
F20AC10886	USFWS	2020	University of California, Los Angeles	RESEARCH TO SUPPORT CONSERVATION AND RECOVERY OF F	\$75,924
F20AC00043	USFWS	2020	University of California, Santa Barbara	CHYTRID TESTING AND TREATMENT_CHYTRID TESTING AND	\$49,500
F20AC00045	USFWS	2020	University of California, Santa Barbara	MOUNTAIN YELLOW-LEGGED FROG TRANSLOCATIONS IN YOSE	\$49,504
F20AC00046	USFWS	2020	University of California, Santa Barbara	CHYTRID RAPID RESPONSE KITS_CHYTRID RAPID RESPONSE	\$9,293
F20AC10843	USFWS	2020	University of California, Santa Barbara	FOOTHILL YELLOW-LEGGED FROG REINTRODUCTION FEASIBLE	\$287,259
F20AC10885	USFWS	2020	University of California, Santa Cruz	GENETIC ADMIXTURE STUDIES OF THE SANTA CRUZ LONG-T	\$114,000
F16AC00805	USFWS	2021	CSU-Cal Poly Humboldt	SPECIES IN CONFLICT: HUMANS, PLOVERS, AND RAVENS I	-\$4
F16AC00808	USFWS	2021	CSU-Cal Poly Humboldt	MODELING HABITAT CONNECTIVITY FOR PACIFIC MARTEN A	\$ -
F16AC01114	USFWS	2021	CSU-Cal Poly San Luis Obispo	PLANT CONSERVATION RESEARCH_PROMOTING PLANT CONSER	-\$2
F16AC00540	USFWS	2021	University of California, Davis	GENETIC MONITORING OF THE SIERRA NEVADA RED FOX DP	-\$1,383

F17AC00123	USFWS	2021	University of California, Davis	CLIMATE COMMONS AND CENTRAL VALLEY LANDSCAPE CONSE	\$0
F17AC00487	USFWS	2021	University of California, Davis	U.S. FISH AND WILDLIFE REFUGES THREAT AND VULNERAB	\$ -
F17AC00444	USFWS	2021	University of California, Los Angeles	LANDSCAPE GENOMICS TO INFORM UPCOMING USFWS LISTING	-\$23,014
F16AC00809	USFWS	2022	CSU-Cal Poly Humboldt	HABITAT USE AND CONSERVATION MANAGEMENT FOR THE PT	-\$1,170
F17AC00335	USFWS	2022	University of California, Davis	GENETIC AND PROPAGATION PLANS FOR DEVILS HOLE PUPF	\$ -
G20AC00058	USGS	2020	University of Southern California	USGS Innovation Fund Support for Development of a	\$121,890
G19AC00020	USGS	43423	University of California	Hydrology, Habitat, and Climate Adaptation Managem	\$74,904
G19AC00025	USGS	43430	University of California	Are Mountain Lakes on a Trajectory of Rapid Eutrop	\$10,000
G19AC00027	USGS	43430	University of California	Assessment of the Body Condition of Diving Ducks i	\$18,083
G19AC00033	USGS	43437	University of California	Using Dynamic Rupture Models to Better Understand	\$100,000
G19AC00058	USGS	43515	University of California	Improved Hydrologic Forecasting through Synthesis	\$50,000
G19AC00097	USGS	43556	University of California, Davis	Predicting Nitrate in Domestic and Production Well	\$115,959
G19AC00105	USGS	43617	CSU-San Diego	Genetic Connectivity in the California Freshwater	\$49,000
G21AC00026	USGS	44166	University of California, Santa Barbara	Improving Seasonal Scale Crop Yield Forecasting an	\$700,862
G21AC10003	USGS	44180	CSU-San Francisco	Communities at Risk in the HayWired Scenario	\$47,999
G21AC10094	USGS	44245	University of California, Davis	Applied Decision Methods for the Glen Canyon Dam A	\$23,781
G21AC10200	USGS	44319	University of California	Bringing the outside in: Using controlled studies	\$17,700
G21AC10432	USGS	44378	University of California, Santa Cruz	Five-year Cooperative Agreement between the U.S. G	\$108,260
G21AC10560	USGS	44427	University of California	Coral Reef Science to Protect Coasts	\$144,000
G21AC10640	USGS	44440	University of California, Davis	A biogeochemical framework to predict mercury risk	\$216,000
G21AC10753	USGS	44454	University of California	Supporting the coastal hazards and stakeholder eng	\$55,199
G21AC10747	USGS	44470	University of California, Davis	Viral discovery and surveillance in North America	\$244,766
G21AC10566	USGS	44470	University of California, Santa Cruz	Tectonics, Earthquake Hazards, Slope Stability, an	\$123,398
G22AC00369	USGS	44793	University of California, Davis	A decision framework for managing European Green C	\$174,577
G22AC00432	USGS	44805	University of California, Santa Cruz	eDNA metabarcoding to detect northern Western spad	\$55,200

G22AC00565	USGS	44825	University of California, Santa Barbara	Long-lead crop yield forecasting and crop condition	\$200,000
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Figure 2. Number of Projects by Federal Agency for 2018-2022

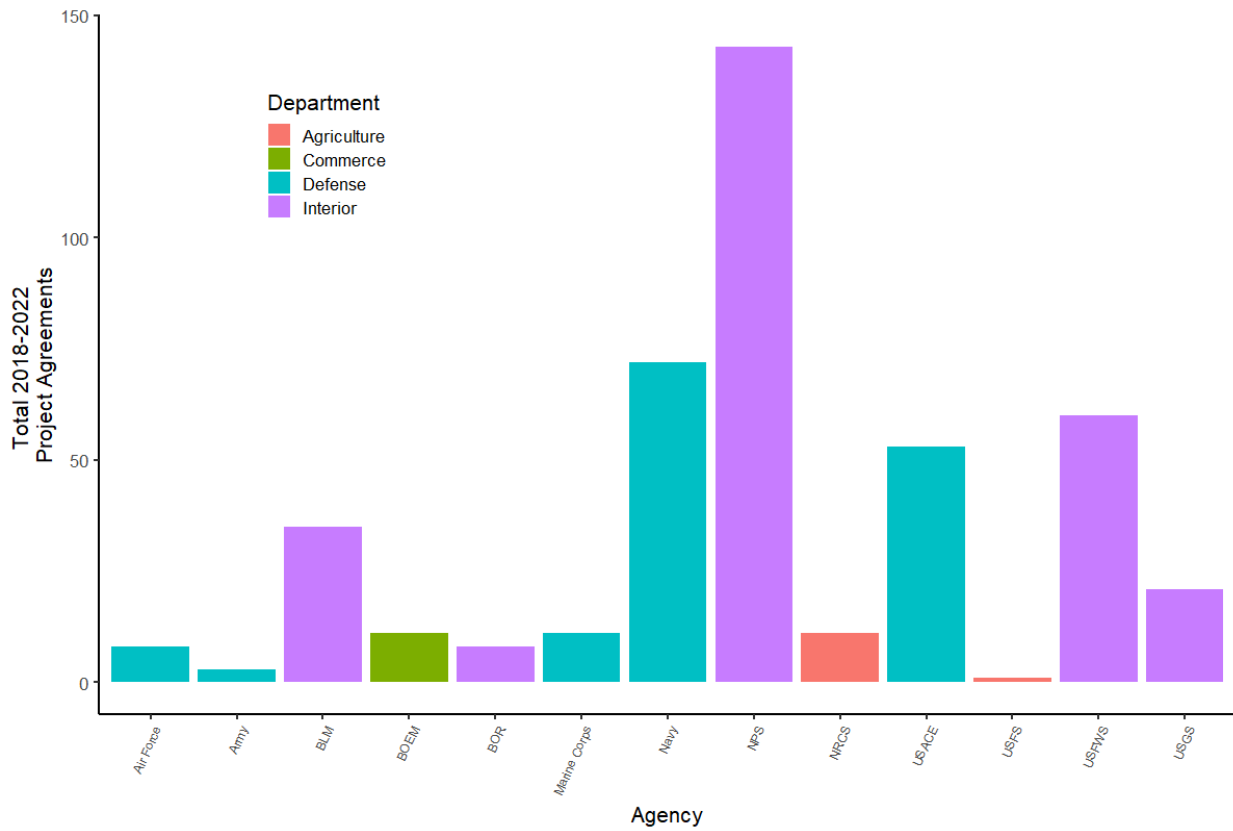


Figure 3. Funding by Federal Agency for 2018-2022

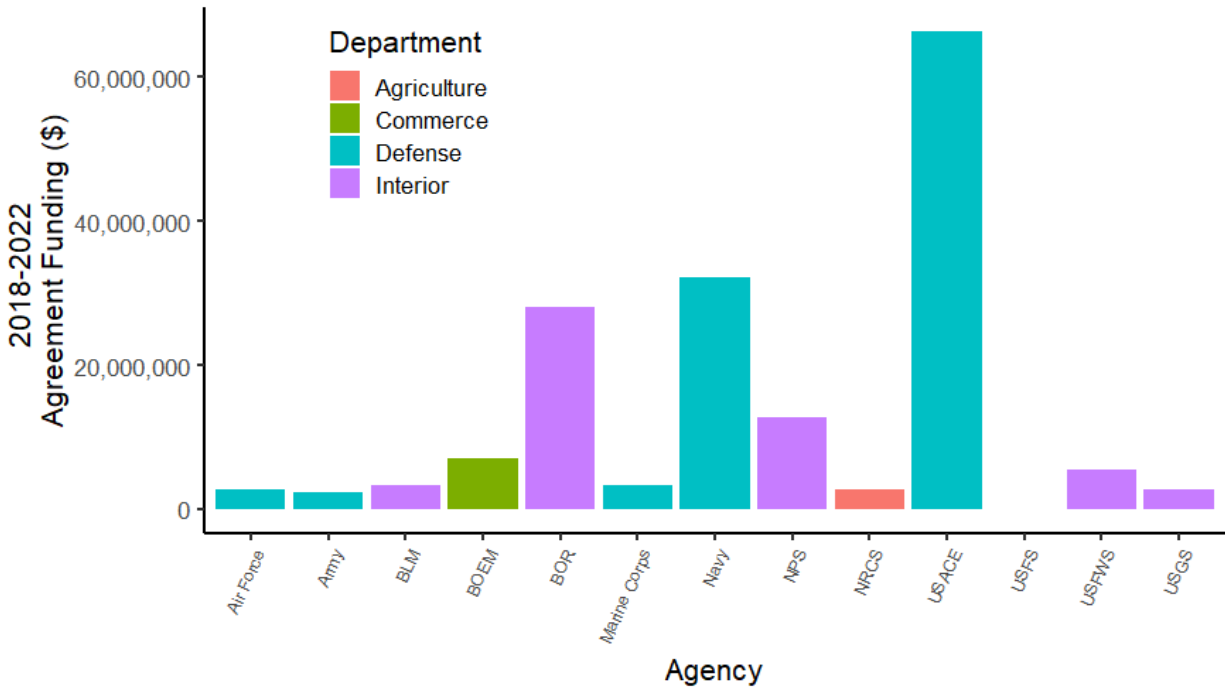


Figure 4. Number of Projects by Non-Federal Partner for 2013-2018

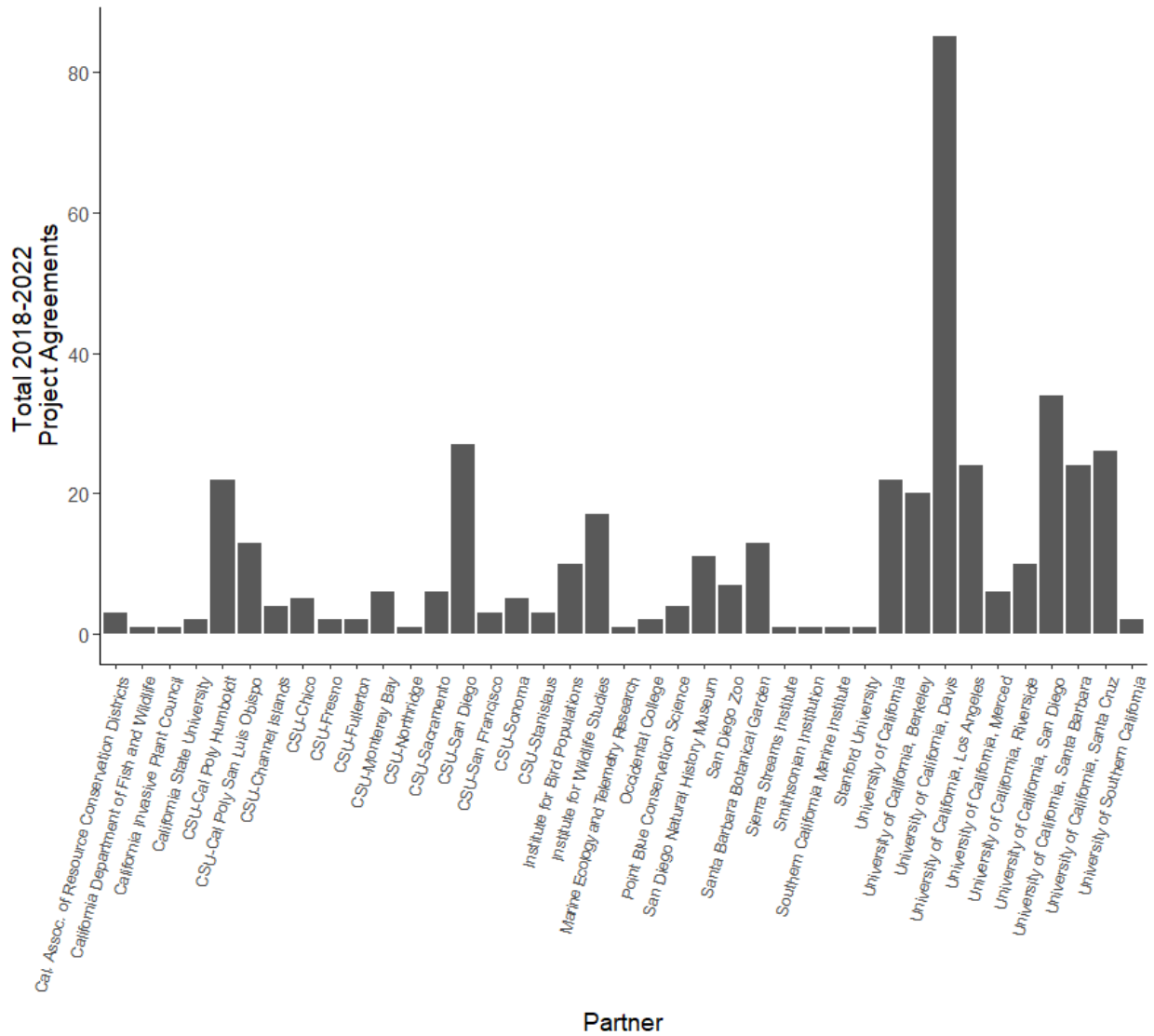


Figure 5. Funding by Non-federal Partner for 2018-2022

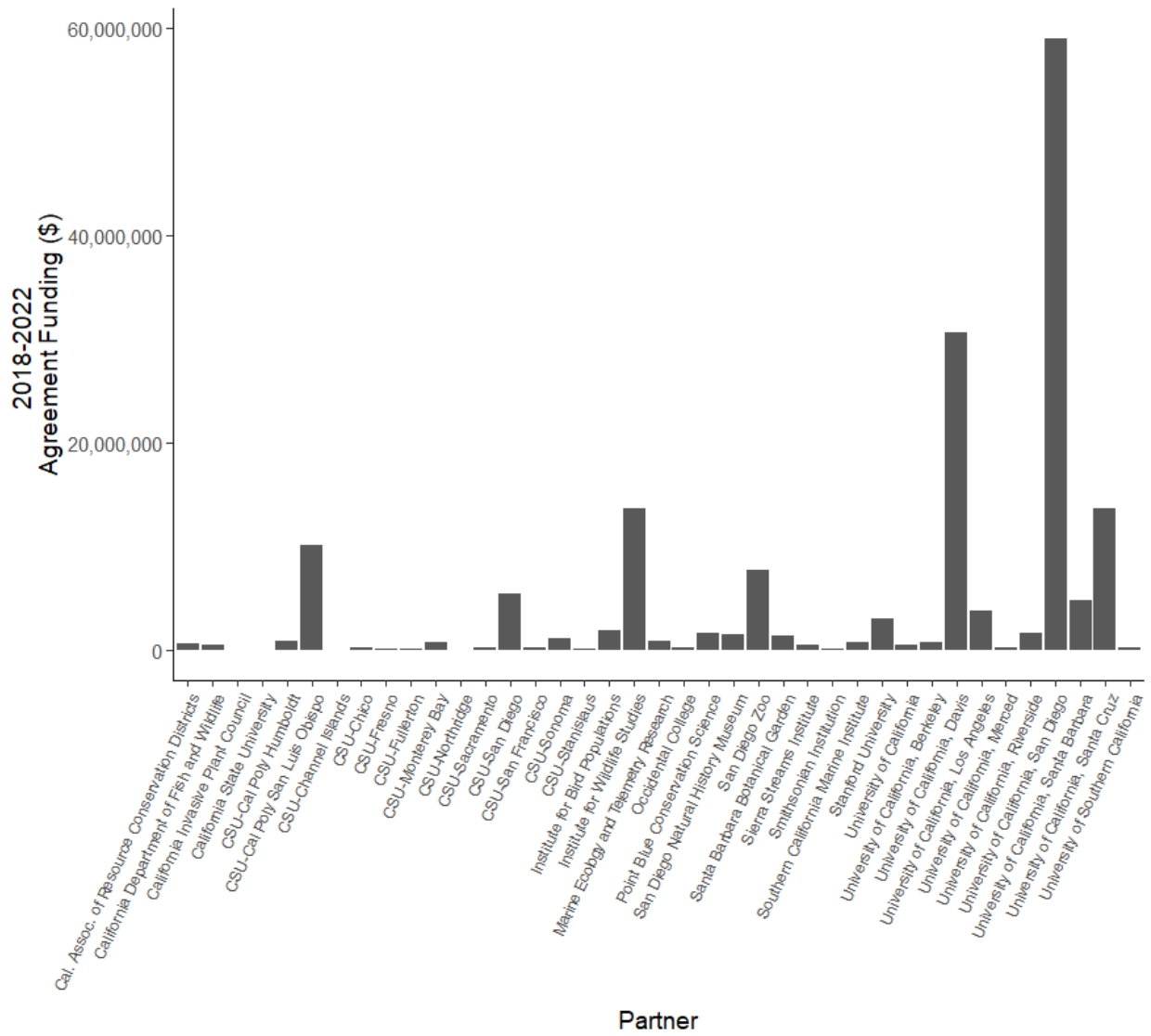


Table 6. Non-federal Partner Abbreviations:

Non-federal Partner	Name
CARCD	California Association of Resource Conservation Districts
CDFW	California Department of Fish and Wildlife
CMU	Carnegie Mellon University
CPIC	California Invasive Pest Council
CSU-C	California State University, Chico
CSU-CI	California State University, Channel Islands
CSU-F	California State University, Fresno
CSU-FUL	California State University, Fullerton
CSU-H	California State University, Humboldt
CSU-LA	California State University, Los Angeles
CSU-M	California State University, Monterey Bay
CSU-N	California State University, Northridge
CSU-P	California Polytechnic State University - Pomona
CSU-S	California State University, Stanislaus
CSU-SAC	California State University, Sacramento
CSU-SD	California State University, San Diego
CSU-SF	California State University, San Francisco
CSU-SLO	California Polytechnic State University, San Luis Obispo
CSU-SO	California State University, Sonoma
IBP	Institute for Bird Populations
IWS	Institute for Wildlife Studies
OXY	Occidental College
Point Blue	Point Blue Conservation Science
SBBG	Santa Barbara Botanic Garden

SDNHM	San Diego Natural History Museum
SDZ	San Diego Zoo
UC NRS	University of California Natural Reserve System
UCANR	University of California Agriculture and Natural Resources
UCB	University of California, Berkeley
UCD	University of California, Davis
UCI	University of California, Irvine
UCLA	University of California, Los Angeles
UCM	University of California, Merced
UCR	University of California, Riverside
UCSB	University of California, Santa Barbara
UCSC	University of California, Santa Cruz
UCSD	University of California, San Diego
USC	School of Architecture, University of Southern California

Complied List of CA-CESU Partners						
Renew	Member	Institution/Agency	Title	Name	Contact Information	Address and Phone Number
YES	Federal	Bureau of Land Management	Ecologist	Jim Weigand	jweigand@blm.gov	2800 Cottage Way, Room W-1623, Sacramento, CA 95825-1886, Phone: (916) 978-4656
YES	Federal	Bureau of Ocean Energy Management	Coordinator	Cathie Dunkel	catherine.dunkel@boem.gov	760 Paseo Camarillo, Suite 102 (CM 102), Camarillo, CA 93010, Phone: (805) 384-6386
YES	Federal	Bureau of Reclamation	Chief	Jobaid Kabir	jkabir@usbr.gov	2800 Cottage Way, Sacramento, CA 95825, Phone: (916) 978-5091
YES	Federal	U.S. Army Corps of Engineers	Program Manager	Kathy Mitchell	Kathy.s.mitchell@usace.army.mil	P. O. Box 17300, Fort Worth, Texas 76102-0300USACE Ft. Worth District, Phone: (817) 886-1709
YES	Federal	U.S. Army Corps of Engineers	Program Manager	Sherry Whitaker	sherry.l.whitaker@usace.army.mil	3909 Halls Ferry Road, Vicksburg, MS 39180, Phone: (601) 634-2990
YES	Federal	U.S. Fish and Wildlife Service	Chief	Cesar Cadena Blanco	cesar_blanco@fws.gov	2800 Cottage Way, Sacramento, CA 95825, Phone: (916) 978-6190
YES	Federal	U.S. Fish and Wildlife Service	Assistan Regional Director	Larry Rabin	larry_rabin@fws.gov	650 Capitol Mall, 8th Floor, Room B-300, Sacramento, CA 95814, Phone: (916) 414-6498
YES	Federal	National Aeronautics and Space Administration	Program Manager	Tina Norwood	tina.norwood-1@nasa.gov	300 E Street SW, Suite 2U82, Washington, DC 20546
YES	Federal	National Aeronautics and Space Administration	Deputy Director	Rose Grymes	rosalind.a.grymes@nasa.gov	300 E Street SW, Suite 2U82, Washington, DC 20546
YES	Federal	National Oceanic and Atmospheric Administration	Deputy Director	Kristen Koch	kristen.c.koch@noaa.gov	8901 La Jolla Shores Drive, La Jolla, CA 92037, Phone: (858) 546-7081
YES	Federal	National Oceanic and Atmospheric Administration	Director of Operations	Meghan Donahue	meghan.donahue@noaa.gov	8901 La Jolla Shores Drive, La Jolla, CA 92037, Office: (858) 546-7081
YES	Federal	National Park Service	Science Advisor	Ben Becker	ben_becker@nps.gov	160 Muirford Hall, MC #3114, Berkeley, CA 94720-3110, Phone: (510) 643-0665
YES	Federal	U.S. Army Corps of Engineers	Acting Director	Jennifer M. Seiter-Moser	Jennifer.M.Seiter-Moser@usace.army.mil	3909 Halls Ferry Road, Vicksburg, MS 39180, Phone: (601) 634-2990
YES	Federal	U.S. Forest Service	Forest Wildlife Biologist	Stephanie Coppeto	stephanie.coppeto@usda.gov	631 Coyote Street, Nevada City, CA 95959, Phone: (530) 559-1794
YES	Federal	Natural Resource Conservation Service	Deputy Director	Jacqueline Davis-Slay	Jacqueline.Davis-Slay@wdc.usda.gov	1400 Independence Avenue SW, Room 6006-S, Washington, DC 20250, Phone: (202) 720-6646
YES	Federal	U.S. Geological Survey	Supervisory Research Geographer	Miguel Villarreal	mvillarreal@usgs.gov	P.O. Box 158, Menlo Park, CA 94035, Phone: (650) 329-4261
YES	Federal	Bureau of Indian Affairs	Manager	Crystal Keys	crystal.keys@bia.gov	1849 C Street, N.W., Washington, D.C. 20240, Phone: (405) 247-1549
YES	Federal	Department of Defense	Program Director	Elizabeth Galli-Noble	elizabeth.j.galli-noble.civ@mail.mil	53560 Hull Street, San Diego, CA 92152-5001, Phone: (619) 553-7585
YES	Federal	Department of Defense - Navy	Manager	Kimberly O'Connor	kimberly.oconnor@navy.mil	1400 Defense Pentagon, Washington, DC 20301-1400
YES	State	California Department of Fish and Wildlife	Science Institute Lead	Christina Sloop	Christina.Sloop@wildlife.ca.gov	715 P Street, Sacramento, CA 95814, Phone: (916) 445-0411
YES	Private	Occidental College	Associate Professor, Biology Department	Dan Pondella	pondella@oxy.edu	1600 Campus Road, Los Angeles, California 90041, Phone: (323) 259-2955
YES	Private	Occidental College	Assistant Director, Vantuna Research Group	Chelsea Williams	cmunoz@oxy.edu	1601 Campus Road, Los Angeles, California 90041, Phone: (323) 259-2618
YES	Private	USC School of Architecture	Associate Dean for Academic Affairs	Doug Noble	dnoble@usc.edu	Watt Hall, Suite 204, Los Angeles, California, 90089-0291, Phone: (213) 740-4589
YES	Private	Carnegie Mellon University	Prof. & Chair, Environmental Science	Sean Anderson	Sean.Anderson@csuci.edu	1 University Dr., Camarillo CA, 93012, Phone: (805) 437-8984
YES	Private	Stanford University	Douglas Provostial Professor and Chair	Robert B. Jackson	rob.jackson@stanford.edu	450 Jane Stanford Way, Stanford, CA 94305-2004, Phone: (650) 497-5841
YES	NGO	California Academy of Sciences	Co-Director	Rebecca F. Johnson	rjohnson@calacademy.org	55 Music Concourse Drive, San Francisco, CA 94118, (415) 379-8000
YES	NGO	Institute for Bird Populations	Executive Director	Rodney Siegel	rsiegel@birdpop.org	P.O. Box 518, Petaluma, CA 94953, Phone: (707) 789-3224
YES	NGO	Institute for Wildlife Studies	President	David Garcelon	garcelon@iws.org	P. O. Box 1104, Arcata CA 95518, Phone: (707) 822-4258
YES	NGO	Santa Barbara Botanic Garden	Executive Director	Steve Windhager	swindhager@sbbg.org	1212 Mission Canyon Rd, Santa Barbara, CA 93105, Phone: (805) 682-4726
YES	NGO	San Bernardino County Museum	Museum Director	Melissa Russo	Melissa.Russo@sbc.sbcounty.gov	2024 Orange Tree Lane, Redlands, CA 92374, Phone: (909) 798-8608
YES	NGO	San Diego Nat History Museum	Ecologist	Kevin Clark	kclark@sndhm.org	1788 El Prado, Balboa Park, San Diego, CA 92101, Phone: (619) 255-0296
YES	NGO	California Invasive Plant Council	Executive Director	Doug Johnson	djohnson@cal-ipc.org	1442-A Walnut St. #462, Berkeley, CA 94709, Phone: (510) 843-3902
YES	NGO	San Diego Zoo	Brown Chair/Director	Ron Swaisgood	Rswaisgood@sandiegozoo.org	2920 Zoo Dr, San Diego, CA 92101, Phone: (619) 231-1515
YES	NGO	California Association for Resource Conservation Districts	Executive Director	Nancy Wahl-Scheurich	nancy-wahlscheurich@carcd.org	705 E Bidwell Street, Suite 2-415, Folsom, CA 95630, Phone: (916) 457-7904
YES	NGO	Point Blue Conservation Science	Coastal Marine Program Leader	Dan Robinette	drobinette@pointblue.org	999 Mesa Road, Bolinas CA 94924, Phone: (415) 868-0655
YES	NGO	The Marine Mammal Center	Executive Director	Jeffery Boehm	boehmj@tmcc.org	2000 Bunker Road, Fort Cronkhite, Sausalito, CA 94965-2619, Phone: (415) 289-7335
YES	NGO	Marine Ecology and Telemetry Research	President	Gregory Schorr	gschorr@marecotel.org	2468 Camp McKenzie Trail NW, Seabeck, WA 98380-4513
YES	NGO	Smithsonian Institution	Associate Director	Karen Otiji	OtijiK@si.edu	1000 Jefferson Dr SW, Washington, DC 20560, Phone: (202) 633-1000
YES	NGO	Sirerra Streams Institute	President, Board of Directors	Lang Waters	alltheyearscombine@gmail.com	117 New Mohawk Road, Suite H, Nevada City, CA 95959
YES	NGO	Sirerra Streams Institute	Interim Executive Director	Jeff Lauder	jeff@sierastrainsinstitute.org	117 New Mohawk Road, Suite H, Nevada City, CA 95959, Phone: (530) 470-6037
YES	NGO	Southern California Marine Institute	Budget and Research Coordinator	Adriana Stowell	Adriana.Stowell@csulb.edu	820 South Seaside Avenue, Terminal Island, CA 90731, Phone: (562) 985-3177
YES	NGO	Southern California Marine Institute	Assistant Director	Chelsea Williams	cmunoz@oxy.edu	821 South Seaside Avenue, Terminal Island, CA 90731, Phone: (562) 985-3172
YES	NGO	National Association of Tribal Historic Preservation Officers	Executive Director	Valerie Grussing	valerie@nathpo.org	PO Box 19189, Washington, DC 20036-9189, Phone: (202) 628-8476
YES	NGO	National Association of Tribal Historic Preservation Officers	Operations Director	Melissa Madrigal	melissa@nathpo.org	PO Box 19189, Washington, DC 20036-9189, Phone: (202) 628-8477
YES	UC	Berkeley	Professor of Conservation Biology	Steve Beissinger	beis@berkeley.edu	130 Muirford Hall, University of California, Berkeley, CA 94720-3110, Phone: (510) 643-3038
YES	UC	Davis	Professor of Environmental Science & Policy	James Quinn	jquinn@ucdavis.edu	One Shields Avenue, Davis, CA 95616, Phone: (530) 752-8027
YES	UC	Irvine	Director, Center for Environmental Biology	Travis Huxman	thuxman@uci.edu	449 Steinhaus Hall, Irvine, CA 92697, Phone: (949) 824-2594
YES	UC	Los Angeles	Asst. Director of Stunt Ranch Mountains Reserve	David Blake	dblake0405@g.ucla.edu	La Kretz Hall, Suite 300, Box 951496, Los Angeles, CA 90095-1496, Phone: (310) 825-5008
YES	UC	Los Angeles	Manager of Ecology & Evolutionary Biology	Phillip Q. Spinks	pqspinks@ucla.edu	La Kretz Hall, Suite 300, Los Angeles, CA 90095-1496

Attachment 1 - Compiled List of CESU Partners

YES	UC	Merced	Asst. Professor of Management of Complex Syst.	Jeffrey Jenkins	jjenkins8@ucmerced.edu	5200 North Lake Rd, Merced, CA 95343, Phone: (209) 228-4400
YES	UC	Riverside	Asst Professor of Plant Pathology & Microbiology	Emma Aronson	emma.aronson@ucr.edu	900 University Ave, Riverside, CA 92521, Phone: (951) 827-4201
YES	UC	San Diego	Professor, Division of Biological Sciences	Johnathan Shurin	jshurin@ucsd.edu	UC San Diego 9500 Gilman Dr. La Jolla, CA 92093, Phone: (858) 534-2230
YES	UC	Santa Barbara	Exe. Director, Natural Reserve System	Marion Wittmann	mwittmann@nrs.ucsb.edu	UC Santa Barbara, Santa Barbara, California 93106, Phone: (805) 893-6179
YES	UC	Santa Cruz	Director, Institute of Marine Science	Dan Costa	costa@biology.ucsc.edu	UC Santa Cruz, 1156 High Street, Santa Cruz, CA 95064, Phone: (831) 459-2786
YES	CSU	Cal Poly	Asst. Professor, Biological Sciences Department	Benjamin Ruttenberg	bruttenb@calpoly.edu	1 Grand Avenue, San Luis Obispo, CA 93407, Phone: (805) 756-2498
YES	CSU	Channel Islands	Associate Professor/Chair	Donald Rodriguez	donald.rodriguez@csuci.edu	1 University Dr., Camarillo CA, 93012, Phone: (805) 437-8400
YES	CSU	Chico	Professor, Psychology Department	Richard J. Tafalla	rjtafalla@csuchico.edu	400 West First Street, Chico, CA, 95929, Phone: (530) 898-4609
YES	CSU	Fresno	Associate Professor, Department of Biology	Steve Blumenshine	sblumens@csufresno.edu	2555 East San Ramon Ave M/S SB73, Fresno, CA 93740, Phone: (559) 278-8770
YES	CSU	Fullerton	Associate Professor of Biological Science	Jennifer Burnaford	jburnaford@fullerton.edu	800 N. State College Blvd, Fullerton, CA 92831-3599, Phone: (657) 278-2382
YES	CSU	Humboldt	Dean, College of Natural Resources	James H. Howard	cnrsdean@humboldt.edu	1 Harpst Street, Arcata, CA 95521, Phone: (707) 826-3011
YES	CSU	Los Angeles	Associate Professor of Biological Sciences	Andres Aguilar	aaguil67@calstatela.edu	5151 State University Drive, Los Angeles, CA 90032, Phone: (323) 343-3000
YES	CSU	Monterey Bay	Professor/ Chair of Marine Science	James Lindholm	jlindholm@csumb.edu	100 Campus Center, Seaside, CA 93955, Phone: (831) 582-4662
YES	CSU	Moss Landing Marine Laboratories	Professor and Chair, Moss Landing Marine Laboratories	Ivano Aiello	iaiello@mml.calstate.edu	8272 Moss Landing Road, Moss Landing, CA 95039, Phone: (831) 771-4480
YES	CSU	Northridge	Associate VP, Research & Sponsored Programs	Chris Sanford	christopher.sanford@csun.edu	18111 Nordhoff Street, Northridge, CA 91330, Phone: (818) 677-1200
YES	CSU	Cal Poly Pomona	Assistant Professor, Biological Sciences	Jayson Smith	jaysonsmith@cpp.edu	3801 West Temple Avenue, Pomona, CA 91768, Phone: (909) 869-3625
YES	CSU	Sacramento	Professor and Chair, Chemistry Department	Susan Crawford	scrawford@csus.edu	6000 Jed Smith Dr, Sacramento, CA 95819, Phone: (916)-278-6542
YES	CSU	San Diego	Associate Professor, Biology Department	Rebecca Lewison	rlawison@sdsu.edu	4165 Spruance Rd, San Diego, CA 92101, Phone: (619) 594-8287
YES	CSU	San Francisco	Assistant Professor, Department of Biology	Gretchen LeBuhn	lebuhn@sfsu.edu	1600 Holloway Avenue, San Francisco, CA 94132, Phone: (415) 405-0729
YES	CSU	Stanislaus	Professor & Coord, Endangered Species Recovery Prog.	Patrick Kelly	pkelly@csustan.edu	One University Circle, Turlock, California 95382, Phone: (209) 667-3446
YES	CSU	Stanislaus	Director, Office of Research & Sponsored Programs	Joyce Bell	jbell6@csustan.edu	One University Circle, Turlock, California 95382, Phone: (209) 667-3784
YES	CSU	Sonoma State University	Prof. & Director for Interdisciplinary Geospatial Analysis	Mathew Clark	matthew.clark@sonoma.edu	1801 East Cotati Ave, Rohnert Park, CA 94928, Phone: (707) 664-2558

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