

New CA-CESU Member 2022

NATHPO: Protecting Native Places

VALERIE J. GRUSSING, PhD
NATHPO EXECUTIVE DIRECTOR
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Tribal Historic Preservation Officers

- Assume NHPA duties of SHPO
- Sovereignty & self-determination
- Funding from Historic Preservation Fund
- Many hats:
 - Inventories of Tribal cultural resources & places
 - Review federal projects for their impact on them
 - National Register of Historic Places
 - Tribal museums & cultural centers, oral history prog
 - Revitalization of cultural traditions & languages
 - NAGPRA duties
 - Natural resources and landscape conservation



What are some of the main Tribal cultural resource management issues you face?
(mentimeter.com)



NATHPO

- Nationwide Tribal NGO
- Advocacy in Washington, DC
- Consultation guidance
- Coordination & communication
- Tools, information & resources
- Follow us on FB, Twitter, and subscribe to email

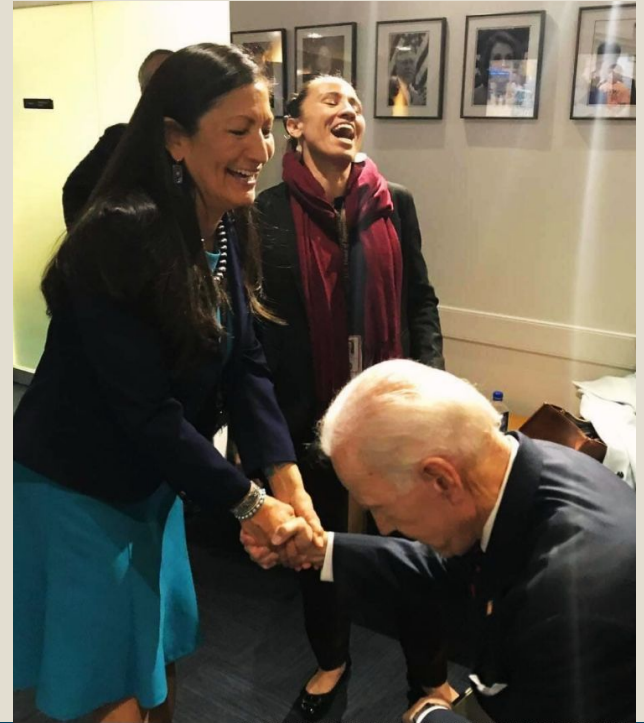


NATHPO Events

- 23rd Annual NATHPO Conference
- Offensive Place Names: Guide to Renaming
- turboTHPO: Expert Help with NPS THPO Application
- Tribal Lands Bills: with Rep. Grijalva & Sen. Heinrich
- THPO Toolkit: Section 106 (with UAIC)
- Tribal Cultural Landscapes: A Template for Tribal Data Collection
- Sacred Places Summit

Consultation

- Requirements vs best practices
- Making meaningful mean something
- Strengthening nation-to-nation relationship has 2 parts
- Infrastructure, energy, broadband
- Rebuilding foundations of culture



A Seat at the Table

- Same language & cultural understandings?
- Grown-up table – complete with meal and utensils.
- Which tribes, where, how?
- Tribal capacity:
 - Funding/staffing
 - Knowledge/tools



It's All Connected

- Co-management (PNP Fund)
- Climate change (IHIs)
- Traditional knowledge
- LAND Initiative



Non-Federal Partners

Point Blue Conservation Science



Our 160 scientists develop nature-based solutions to climate change, habitat loss, and other environmental threats through science, partnership, and outreach.



Since 1965 we've used a rigorous and collaborative approach to track ecosystem health and inform impactful solutions for wildlife and people.



From the Sierra to the sea, across the Western Hemisphere, and as far as Antarctica, we're planning for the changes ahead.

[learn more at pointblue.org](https://www.pointblue.org)

California Academy of Sciences



Rebecca F. Johnson, Ph.D.
Co-Director, Center for Biodiversity and Community Science
Co-Director, *Thriving California* Initiative
rjohnson@calacademy.org



- » 100 Research scientists and collections staff
- » 8 Million specimens from California (46 M overall)
- » Species identification and taxonomic expertise across the tree of life
- » Ability and expertise to curate, house and care for voucher specimens in perpetuity

Taxonomic Expertise and Collections



- » Expertise in field biodiversity surveys and specimen collection for all taxa (marine & terrestrial)
- » Community Science campaign development, bioblitz organization and implementation

Field surveys, Specimen Collection & Community Science



***Educational Programs, Outreach, Curriculum and Teacher
Professional Development, Data Visualization and Exhibit Design***

Federal partnerships

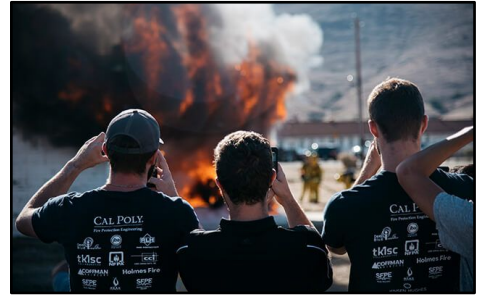
- » Marine Mammal Stranding Network- NOAA
- » California Coast Aquarium Exhibit - NOAA; National Marine Sanctuaries
- » Edwards Air Force Base Reptile and Amphibian Surveys- DoD
- » Repository for confiscated wildlife- USFWS
- » Small Mammal, Reptile & Amphibian Surveys, Desert National Wildlife Refuge-USFWS
- » Specimen repository for many taxa- NPS
- » Habitat conservation for recovery and conservation of coqui frogs in Puerto Rico- USFWS and USGS
- » Avian diversity surveys for wildfire resilience - US Forest Service



Cal Poly San Luis Obispo



- Focus on research and teaching; expertise in many disciplines
- Many strong undergraduate programs; several Master's programs including Biology/Ecology, Agriculture, Environmental Science/Management, Engineering (Fire, Water, Environmental, and others)
- Existing CESU projects
 - Offshore wind and interactions with fisheries (BOEM)
 - Fisheries monitoring (NOAA)
 - Light and noise pollution and avian fitness (NPS)
- We are always looking for more collaborations, especially for projects in Central CA; Fire Science, Water, other Engineering, and Applied Ecology and Marine Science are particular strengths
- Contact: Benjamin Ruttenberg
bruttenb@calpoly.edu





CALIFORNIA STATE UNIVERSITY
FULLERTON[™]

Orange County



- 110 degree programs: 55 undergrad, 53 MS, 2 PhD
- ~41,000 enrolled students
 - > 30% first-generation
 - > 48% Native American, Hispanic, Black, or Pacific Islander
- Faculty awarded \$31.5 million in grants / contracts in AY 19-20
- Strong research programs in Biological Science (marine systems, desert systems, plant biology), Geology (Marine Geology, Geochemistry, Sedimentology), Anthropology, Environmental Science, Engineering
- Ongoing CESU projects: Long-term monitoring of rocky intertidal systems (BOEM, US Navy)
- Strong interest in additional collaborations, especially for coastal marine and desert research

Contact: Jennifer Burnaford
jburnaford@fullerton.edu

California Association of Resource Conservation Districts (CARCD)

- **CARCD** is a 501c3 non-profit membership association dedicated to serving as a strong advocate, technical resource, and partner to California's 95 Resource Conservation Districts (**RCDs**)
- We foster connections and collaboration within the RCD network, amplifying the local impact of RCDs in California, strengthening locally-led conservation and stewardship of natural and agricultural resources.
- We fund and manage multi-RCD projects using block grants from agencies, foundations, and other donors
- Able to find best and highest use of funds through statewide access to projects and expertise of partners





The INSTITUTE for BIRD POPULATIONS

Primary activities:

Ecological research, monitoring, and conservation of birds (and insect pollinators)

- studying population responses to climate change, fire, and forest management
- assessing status and recommending conservation measures for species of concern
- advising on bird-friendly habitat restoration
- designing and implementing long-term monitoring programs
- avian demographic monitoring through the MAPS and MoSI programs
- Incorporating new technologies, especially Autonomous Recording Units

Focal regions include:

- Pacific Northwest
- Sierra Nevada
- Southwest
- Pacific Islands

Contact information:

Rodney Siegel, Executive Director

(707) 789-3224

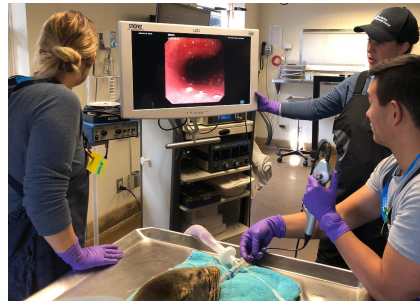
rsiegel@birdpop.org



The Marine Mammal Center

Advancing global ocean conservation through marine mammal rescue and rehabilitation, scientific research, and education

- World's largest marine mammal hospital
- Responded to over 25,000 animals in California and Hawaii
- Hundreds of peer-reviewed papers on marine mammal science
- Teaching hospital for students, scientists, and veterinarians





The Southern California Marine Institute (SCMI)

SCMI is a consortium representing a strategic alliance of 24 major universities, colleges, and foundations in Southern California engaged in specialized marine research and education.

We are a full functioning marine research institute equipped with offices, laboratories, classrooms, a seawater filtration system, dive locker, a warehouse, small boats and the Research Vessel Yellowfin.

The mission of the Southern California Marine Institute (SCMI) is to foster marine research and education, focusing on urban impacts of the greater Los Angeles region on the coastal ocean. We seek to improve scientific understanding and the development of solutions that will enable coastal waters and watersheds to thrive, adapt and become resilient to ongoing environmental stressors.

Within the last few years SCMI had supported research on the restoration of our fisheries and nearshore habitats. These restoration projects include:

- Protected Giant Sea Bass, we conducted the first successful spawning and rearing of baby giants. (CSUN Dr. Larry Allen's Giant Sea Bass Acoustic Study)
- Endangered White Abalone, the first release of White Abalone on the PV Shelf. (The Bay Foundation)
- Red Abalone, we are actively facilitating the reintroduction of this valuable fishery species. (The Bay Foundation)
- Lease holder for the construction of the first offshore restoration rocky reef in California's history. (Palos Verdes Restoration Reef Project)
- CA-CESU Project: The Environmental Status of Artificial Structures Offshore California-partnered with Cal Poly Pomona and The Vantuna Research Group (BOEM)



Vantuna Research Group @ Occidental College

We are dedicated to studying long-term and large spatial scale ecological processes in the Southern California Bight.

Expertise:

- Biological Monitoring of Kelp Forest and Rocky Reef Ecosystems
- Artificial Reef Ecology
- Fisheries Studies
- Water Quality Monitoring
- Nearshore Habitat Restoration
- Side Scan Sonar and Bathymetric Surveys
- Ichthyoplankton Studies
- Fish Life History Studies
- ROV/Stereo-video Surveys

Current CA-CESU Projects:

- Behavioral Response of Rock Crabs to the EMF of Subsea Cables and Potential Impact to Fisheries (BOEM)
- Safety Zone Kelp Forest Monitoring at San Clemente Island (U.S. Navy)
- The Environmental Status of Artificial Structures Offshore California - partnered with Cal Poly Pomona and Southern California Marine Institute (BOEM)



Mission:

- Support the conservation of marine mammal species and populations through scientific research
- Promote the development, improvement, and use of technologies to support our research and to make these tools accessible to the greater scientific community



Examples of Current Research Projects:

- Southern Resident Killer Whale – habitat use, prey consumption, health (NOAA, Rose Foundation)
- Cook Inlet Beluga – data management and catalog development/Photo-ID matching for aerial and vessel (NOAA)
- Tag Development (ONR, LMR, Fleet, NOAA)
- Harbor porpoise surveys in the Northwest Training Range Complex (Hood Canal, WA)- WA CESU (NAVSEA)
- Demographics, Behavior, Effects from military activities in SoCAL and at Guadalupe Island (ONR, LMR, Fleet)

CA CESU Project (NAVFAC):

- Cuvier's Beaked Whale and Fin Whale Surveys at the Southern California Anti-submarine Warfare Range (SOAR)
1. What is the seasonal occurrence and abundance/density of beaked whales and ESA-listed baleen whales within the Navy's Southern California Range Complex?
 2. Does exposure to sonar or explosives impact the long-term fitness and survival of individuals or the population, species, or stock (with focus on blue whale, fin whale, humpback whale, Cuvier's beaked whale, and other regional beaked whale species)?
 3. What are the baseline population demographics, vital rates, and movement patterns for a Cuvier's beaked whales and fin whales?

Contact Info: Greg Schorr, President and Principal Investigator, gschorr@marecotel.org



Research Activities in/about California – 2021

Administrative contact: Karen Otiji, ospmail@si.edu, 202-633-7111



Long term research on genetic structure and predation in desert tortoises

Dr. Robert Fleischer and Dr. Jesus Maldonado study genetic structure, non-invasive assessment of predation by canids and ravens, and conservation strategies for threatened desert tortoises in the California region.



San Joaquin kit foxes research in collaboration with BLM (& Working Dogs for Conservation)

Dr. Katherine Ralls has conducted research on endangered and threatened species in California, including southern sea otters, San Joaquin kit foxes, island foxes, and California condors. She focuses on non-invasive survey methods and DNA analysis, and previously utilized radiotelemetry collars to monitor animal behavior. Dr. Ralls serves as genetics advisor to the California Condor Recovery Program.



UCSB-Smithsonian Scholars Program work on PANAMEX project -Santa Barbara Harbor

Dr. Mark Torchin conducts experiments in marine sciences in the Santa Barbara region. His primary research compares species interactions and invasions across latitudes, as well as studying marine invasions in the Channel Islands, marine protected areas, and other habitats on the outer coast of California. Dr. Torchin has also conducted research examining parasites and disease dynamics in California estuaries, including work on aquaculture species and commercial shellfish, such as oysters and mussels.



Ecology/conservation of land birds on California Channel Islands (Island Scrub-Jay)

Dr. Scott Sillett, Dr. Jesus Maldonado and Dr. Robert Fleischer are part of multiple projects involving ecological and genomic research, including archaeogenomics and the genetic monitoring of birds and mammals in the Channel Islands. In addition to these collaborative projects, Dr. Maldonado also conducts genetic research on San Joaquin foxes and ornate shrews.



Research on invasive species and native species habitat restoration

In collaboration with San Francisco State University's Estuary & Ocean Science Center at the Romberg Tiburon Campus, Dr. Andrew Chang conducts extensive research in the San Francisco Bay Area. His work includes studying the impact of climate change on invertebrate communities in San Francisco Bay and surrounding areas, such as how changes in storms, droughts, and heat waves may affect invasions and workings of underwater communities. Dr. Chang also does work for the California Department of Fish and Wildlife surveying California waters for invasive species, as well as testing Living Shorelines-based approaches to shoreline strengthening in the face of climate change.



Smithsonian Digital Infrastructure - Biodiversity Heritage Library

The Smithsonian, in collaboration with many partners, continues to build online biodiversity information resources, including the Biodiversity Heritage Library (60 million pages freely available), and digitizing collections (we are currently finishing imaging the entire herbarium).

Steve Blumenshine: Interim Executive Director of CSU-WATER (a CSU System Affinity Group)

(sblumens@csufresno.edu)

FRESNO STATE

California Water Institute



The **California Water Institute** mission is to engage the San Joaquin Valley, California, and the world with university faculty, staff, students, and external partners to pursue sustainable water resource management solutions through outreach, research, and education.

CWI & partner expertise ranges from engineering, biology, ag, education, hydrogeology, chemistry, among others.



CSU-WATER

(Water Advocacy Towards Education & Research)

The California State University is helping change the way California manages water. Founded in 2008 and composed of more than 650 water experts from throughout its 23 campuses, CSU-WATER is addressing water management solutions through research, partnerships, education and training in conjunction with community, agency, and industry partners.



Protecting California's environment and economy from invasive plants

[Home](#) [About](#) [Plants](#) [Resources](#) [Solutions](#) [Join, Renew or Donate](#)



Cal-IPC works to stop the spread of invasive plants across California...





Community-based Participatory Research

Contact: Jeff Lauder, Executive Director, jeff@sierrastreamsinstitute.org



RESEARCH

Long-term monitoring and bioassessment

Community Health Impacts of Mining Exposure (CHIME)

Influence of forest structure on burn severity

RESTORATION

Riparian floodplain, wetland, and vegetation restoration

Brownfields contaminated site remediation

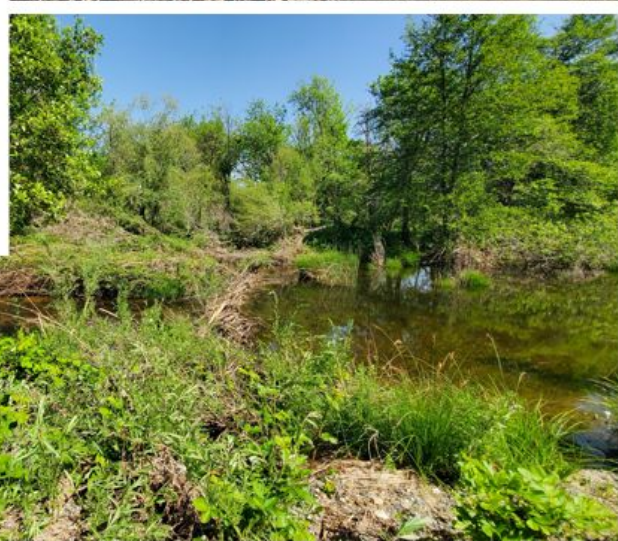
CA CESU Project: Beale Air Force Base Dry Creek Riparian Restoration and Management

EDUCATION

NSF Our Forests program: 3rd-5th grade curriculum and field investigations

California Naturalists

www.sierrastreamsinstitute.org





- Long history of collaboration with Federal natural resource agencies
 - NPS Cooperative Parks Study Unit; California Node -- National Biological Information Infrastructure
- All 7 current projects under the CESU MOU are with DOI agencies (budget \$8.7M)

+ A22-2070	Amanda Finger	Developing SNP Panels for lahontan cutthroat trout	DOI United States Fish and Wildlife Service (USFWS)	\$163,145.00	09/01/2021	08/31/2023
+ A22-1455	Ann Dillner	Research and Development to Support the Interagency monitori...	DOI National Park Service	\$1,087,827.00	08/01/2021	02/28/2025
+ A21-3995	Alexander Forrest	Deployment of in situ sensors for adaptive management of alg...	DOI Bureau of Reclamation	\$50,260.00	07/01/2021	08/01/2022
+ A21-1423	Steven Grodsky	Impacts of solar energy development on desert wildlife and e...	DOI Bureau of Land Management (BLM)	\$402,453.05	09/01/2020	08/31/2023
+ A20-3049	Tien-Chieh Hung	Conservation Hatchery Operation for Delta Smelt Refuge Popul...	DOI Bureau of Reclamation	\$6,093,444.00	03/01/2020	02/28/2025
+ A18-1850	Ann Dillner	Research and Development to Support the Interagency Monitori...	DOI National Park Service	\$648,039.36	01/31/2018	01/31/2019
+ A17-0208	Ann Dillner	Research and Development to Support IMPROVE	DOI National Park Service	\$264,236.39	09/13/2016	12/31/2017

- Concentrated new investments in climate, wildfire, biodiversity impacts, and watersheds

Contact– Jim Quinn, Environmental Science and Management – jfquinn@ucdavis.edu



California State University Los Angeles



- ~26K enrolled students
 - 55% First generation students
 - 75% Latinx, Black or Native American
 - Consistently ranked highest for student economic mobility
- Dedicated to engagement, service, and the public good
- Research and graduate programs in Biological Sciences, Geosciences, Anthropology, Hydrology, Environmental Engineering, Environmental Science, Environmental Chemistry
- Newly established Center for Urban Ecology
- Looking for new collaborations in urban ecology, conservation genomics, geosciences, anthropology
 - Contact: Andres Aguilar - aaguil67@calstatela.edu

University of California, Riverside (UCR)

Center for Conservation Biology

- The Center for Conservation Biology (CCB) is a UCR center, whose mission is to assist in the conservation and restoration of species and ecosystems by facilitating the collection, evaluation, and dissemination results.
- Desert Southwest Cooperative Ecosystems Studies Unit works on research in desert ecosystems, and
- Californian Cooperative Ecosystems Studies Unit does research in Californian ecosystems (all except deserts)



Federal Partners



A look back at 2022

- Internal awareness of CA CESU agreement and the benefits
- One new agreement with Angeles NF

Planning for 2023

- More internal roadshows
- Coordination with WO and other networks
- Connecting with potential partners
- Supporting the renewal of the cooperative agreement as appropriate

Contemporary Partnership Ideas/Needs*

- Wildfire effects, fuel treatment effectiveness, post-fire management effects
- Invasive species, macroinvertebrates
- Tools using remotely sensed data
- Climate change
- Mutually beneficial work support to increase our pace and scale of restoration

US Forest Service Contact

- Stephanie Coppeto, Regional Monitoring Planner, stephanie.coppeto@usda.gov



USGS Mission Areas:

Core Science
Systems

Ecosystems

Energy and
Minerals

Natural Hazards

Water Resources

USGS Science Centers (CA)

- California Water Science Center (CAWSC)
- Geology, Mineral, Energy, and Geophysics Science Center (GMEG)
- Earthquake Science Center (ESC)
- Pacific Coastal and Marine Science Center (PCMSC)
- Western Ecological Research Center (WERC)
- Western Geographic Science Center (WGSC)

2022 CA-CESU agreements

- 13 agreements totaling \$2,145,000 (includes ongoing agreements)
- 6 with UC Santa Cruz via Pacific Coastal and Marine Science Center
- 1 with UC Berkeley via Pacific Coastal and Marine Science Center
- 2 with UC Santa Barbara via International Program
- 3 with UC Davis via Western Ecological Research Center
- 1 with SFSU via Western Geographic Science Center

CESU contact: Miguel Villarreal, mwillarreal@usgs.gov



U.S. Fish and Wildlife Service

Pacific Southwest Region (Legacy Region 8)



- 5 Main Natural Resources Programs:
 - Ecological Services; Refuges; Fish and Aquatic Conservation; Migratory Birds; Science Applications
- Existing CESU Projects (w/CA CESU & Other CESUs):
 - Variety of value-added collaborations totalling over \$1-2 mil/year
- Pressing Research Needs Include:
 - At-Risk, Listed, and Other Species, e.g.
 - Pollinators, sage grouse
 - Landscape Scale Science, e.g.
 - Fire-Related Science (e.g. forest/fuels and wildlife; fire/invasives cycle in sagebrush)
 - Water-Related Science (e.g. Klamath Basin and California Water)



Contact Information:

Cesar Blanco, Ph.D., Fish & Aquatic Conservation (cesar_blanco@fws.gov)

Ben Becker

National Park Service Science Advisor and CESU lead

bbecker@berkeley.edu

- National Park Service
 - 420+ parks nationwide, 27 in California
- Themes:
 - Salmonids, eDNA, Monitoring, Joshua Trees, Film Preservation, Amphibians, Condors, Spotted Owls, Fire planning, Abalone, Oral Histories, Field Stations
- ~\$3.7m in FY22 (36 Projects)
- New and Ongoing Projects with:
 - Chico State
 - Sac State
 - Sonoma State
 - CSU Monterey Bay
 - Cal Poly SLO
 - Cal Poly Humboldt
 - UC Berkeley
 - UC Davis
 - UC Santa Cruz
 - UC Merced
 - UC Santa Barbara
 - UC Riverside
 - UCLA
 - UC San Diego
 - Institute for Bird Populations
 - Institute for Wildlife Studies
 - Desert Botanical Garden
 - Outside CA (UGA, Colorado State, TAMU, Bat Cons. Int'l, Cornerstone)





Endangered and sensitive species

Climate change

Desert Restoration

Coastal Ecology

FY2022 \$1,376,463 with CA-CESU Partners

CSU Cal Poly Humboldt	Northern Elephant Seal Monitoring at the King Range National Conservation Area
CSU Cal Poly Humboldt	Impact of Larval Newt Predation on California Red-Legged Frogs
UC Santa Barbara	Endangered Species Prey Items
UC Davis	DNA Metabarcoding Tools of the Endangered Blunt-nosed Leopard Lizard
UC Davis	Size-Dependent Survival and Impact of Ravens on Head-Started Desert Tortoises
UC Davis	Genetic Diversity Study of Rare and Common Flannelbush in the Sierra Foothills
CSU Monterey Bay	Ensuring Native Plant Success and Future Conservation Leaders
UC Davis	Restoration of Desert Wetlands to Support a Source Population of Endangered Amargosa Voles
California Botanical Garden (Rancho Santa Ana Botanical Garden)	Taxonomic Study of Zeltnera namophila (Gentianaceae) and its Closest Relatives
CSU Cal Poly Humboldt	Student Opportunities to Support Native Seed Collection and Habitat Restoration in Northern California

California Botanical Garden (Rancho Santa Ana Botanical Garden)	Seed Banking Threatened, Endangered, and Sensitive Species in the BLM California Desert District
CSU Monterey Bay	Return of the Natives and Graduate Student Assistants' Help to Restore Fort Ord National Monument
CSU Cal Poly Humboldt	Management of an Invasive Fish Species in the Eel River to Recover Federally Listed Salmon and Steelhead
CSU Cal Poly Humboldt	Elephant Seal and Harbor Seal Population Baseline and Disturbance Monitoring in King Range National Conservation Area
Santa Barbara Botanical Garden	Monitoring California Jewelflower Demography in the Context of Pollinator Networks
Santa Barbara Botanical Garden	Conservation Seed Banking for BLM Special Status Plant Species in the Central California District
CSU Cal Poly San Luis Obispo	An Integrated Population Model for Giant Kangaroo Rats
UC Davis	Current Rangeland Status and Habitat Affiliations of the Blunt-Nosed Leopard Lizard
CSU Cal Poly San Luis Obispo	Projecting impacts of climate change on blunt-nosed leopard lizards
CSU Fresno	Repatriation and Preservation of Blunt-Nosed Leopard Lizards (<i>Gambelia sila</i>) in the Panoche Hills, CA
UC Merced	Reproduction of Blunt-Nosed Leopard Lizards in Wild and Captively Managed Populations

RECLAMATION

Managing Water in the West

2022 Project Overview & Future Research Direction



Jobaid Kabir



U.S. Department of the Interior
Bureau of Reclamation

FY22 US Bureau of Reclamation CA-CESU Projects



Cal Poly SLO	Ag Water Conservation Program
UC Davis	Drivers of Delta SMelt Health and Growth
UC Davis	Smelt Genetic ID Project
UC Davis	Salmonid Otolith Study
CSU Chico	Wildfire and retardant nutrient effects
CSU Stanislaus	Tulare Basin End Species Surveys
UC Davis	Delta Smelt Hatchery
UC Merced	Delta-Mendota sub-basin groundwater models
UC Davis	Food-temp models for reservoirs
UC Santa Cruz	Chinook mortality
UC Davis	Delta Smelt Health and reproduction
UC Merced	Cyber-infrastructure for real-time WQ management
UC Santa Cruz	Fisheries Life cycle modeling



Bureau of Reclamation: Potential Future Projects

- Fisheries Mitigation
- Salinity Management
- Forest Fire Impact and Forecasting
- Climate Change Impact Analysis

Contact: jkabir@usbr.gov

BOEM-Funded Research with Californian CESU Partners – Fiscal Year 2022

10 Studies by 7 CESU Partners in FY 2022 (\$8.8 Million Cumulative Funding)

Cal Poly San Luis Obispo:

- Scenarios for Offshore Renewable Energy along the Central California Coast

Humboldt State University:

- Offshore Wind Generation and Load Compatibility Assessment with Emphasis on Electricity Grid Constraints, Mitigation Measures and Associated Costs

Occidental College:

- Supplemental Data Regarding the Behavioral Response of Rock Crabs to the EMF of Subsea Cables and Potential Impact to Fisheries

San Diego State University:

- Archaeological and Biological Assessment of Submerged Landforms off the Pacific Coast

Southern California Marine Institute:

- The Environmental Status of Artificial Structures Offshore California

UC Santa Barbara:

- A Demonstration Marine Biodiversity Observation Network (BON) for Ecosystem Monitoring
- Net Environmental Benefit Analysis of Pacific Platform Decommissioning Scenarios
- Understanding Biological Connectivity Among Offshore Structures and Natural Reefs
- Using Outcomes from Marine Protected Area Implementation to Infer Potential Socioeconomic Consequences of Offshore Energy Development to Commercial Fisheries

UC Santa Cruz:

- BOEM-MARINE (Multi-Agency Rocky Intertidal Network)

BOEM's Mission:

Manage development of U.S. Outer Continental Shelf energy and mineral resources in an environmentally and economically responsible way.

<https://www.boem.gov>

BOEM's Environmental Studies Program Mandate:

Conduct studies that will provide the information needed to **assess and manage impacts on the human, marine, and coastal environments** from offshore energy and marine mineral development.

<https://www.boem.gov/environmental-studies>

BOEM's Highest-Priority Information Needs in Pacific Region:



Environmental effects of **wind energy development** offshore California, Oregon, Washington, and Hawaii



Environmental effects of **oil and gas decommissioning** offshore California

<https://www.boem.gov/Invitation-Pacific-Study-Ideas-FY202>

4

