



UC SANTA BARBARA

Earth Research Institute

Annual Report
Fiscal Year 2023-2024



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Mission Statement

The mission statement for the Earth Research Institute (ERI) is “**Supporting research and education in the sciences of our solid, fluid, and living Earth**”. This mission reflects the union of several academic emphases and their symbiotic interactions, in particular:

- **Natural Hazards** - Impacts of Earth processes on society: earthquakes, tsunamis, volcanic eruptions, landslides, floods, droughts, storms, wildfires, erosion, and other natural processes.
- **Human Impacts** - Impacts of humankind on Earth: pollution assessment and remediation, land use and land-cover change; food and freshwater security; anthropogenic forcing of climate changes, erosion, and fire; biodiversity conservation; and natural resource management (forestry, fisheries, etc.).
- **Earth System Science** - The science of Earth's subsystems (atmosphere, hydrosphere, lithosphere/mantle, cryosphere, biosphere and anthroposphere) and their interactions.
- **Earth Evolution** - Evolutionary mechanisms and history of Earth's tectonics, climate, and biota from Earth's formation to the present.
- **Environmental Data** - Integrated digital “collaboratory” where data, models, metadata resources, etc., are shared among investigators within ERI, across campus, and with colleagues throughout the world.

Overview

The Earth Research Institute (ERI) is an organized research unit of the University of California Santa Barbara dedicated to supporting extramurally-funded research within the broad area of Earth Science. ERI is currently led by Interim Director Alex Simms but a search is underway for a permanent director. Within the institute, more than 34 faculty, 20 professional researchers, 22 postdoctoral scholars, 172 graduate and undergraduate students, and 65 other technical and research staff are supported in their research duties by 14 administrative staff and 3 computing staff. ERI fulfills its mission in three primary ways. First, it provides research support through shared facilities, including computational facilities for intensive simulation modeling and for terabyte scale data storage and access; staging facilities and dry laboratories for readying equipment for field deployments; and access to a wide variety of satellite and aircraft remote-sensing data. Second, ERI provides contract and grant support from proposal preparation through close-out and strives to reduce administrative burden in order to allow PIs to focus on research. Third, ERI is home to the Cheadle Center for Biodiversity and Restoration (CCBER), which fulfills the UC Santa Barbara mission of research, education, and public service through stewardship and restoration of campus lands, preservation and management of natural history collections, and through learning experiences and programs that offer unique opportunities for students of all ages.

Figure 1: Proposals Submitted, Awards Issued and Projects Administered | FYs 2017-2023

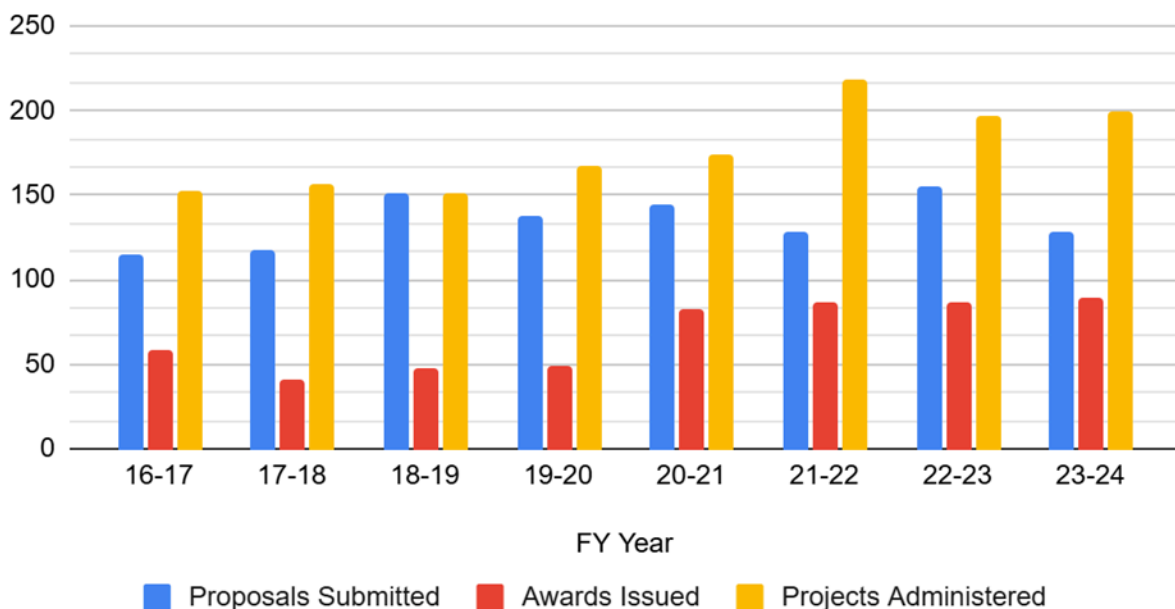
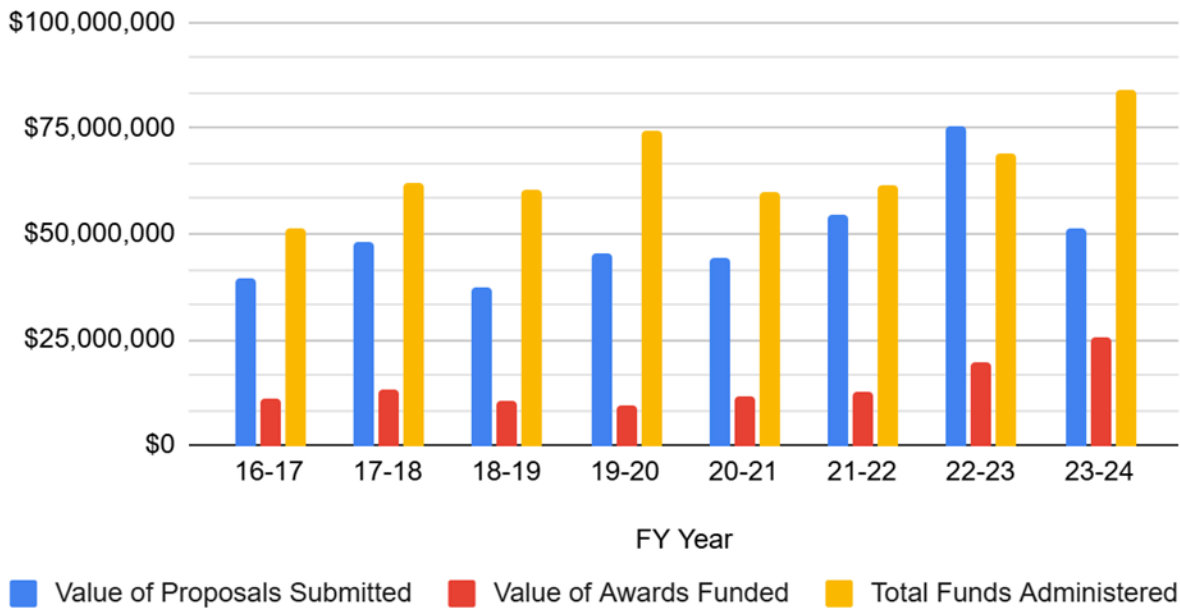


Figure 2: Value of Proposals Submitted, Value of Awards Funded and Total Funds Administered | FYs 2017-2023



Despite a decrease in the number of proposals and the value of the proposals submitted over the past year, ERI saw a small increase in the number of awards issued but a significant 31% increase in the value of new awards (Figs. 1 and 2). This growth sustained what was thought to be a large one-time increase in the value of awards last year (Fig. 2). This increase in the value of new awards is the second largest in ERI history (2022-2023 was the largest). Similar to last year, the value of the funds administered increased by ~22% to over \$84 million (Fig. 2) in funding, making the funds administered during 2023-2024 the highest ever for ERI.

ERI researchers continue to use that funding to conduct groundbreaking and novel research. They published in the best general science journals (e.g. *Science*, *Nature*, *Proceedings of the National Academy of Sciences*) as well as the top journals in their fields (e.g. *Nature Geoscience*, *Nature Sustainability*, *Ecology*, *Nature Water*, *Geophysical Research Letters*, etc.). This research tackles many societally-relevant and fundamental science topics ranging from the availability of water, energy, and biodiversity resources to the chemistry of mantle plumes. CCBER not only conducts groundbreaking (literally) research but helps the university fulfill its conservation mandates. The proven track record of ERI researchers assures that it will continue to provide answers to important fundamental and applied science questions in the future.

The great span of research accomplishments in ERI is due to the diversity and quality of its faculty and researchers. ERI includes PIs from the Bren School, Ecology, Evolution, and Marine Biology (EEMB), Earth Science, Geography, the Marine Science Institute, Computer Science, the National Center for Ecological Analysis and Synthesis, and Environmental Studies. As ERI has grown over the past decade, our research has grown well beyond Earth Sciences, with faculty working across the entire suite of domains in Earth and Environmental Sciences.

The strength of ERI faculty members and researchers is reflected in the awards and accolades they have garnered. Six of our faculty are members of the U.S. National Academy of Sciences (Roberta Rudnick, Richard Church, Galen Stucky, David Tilman, and emeriti Doug Burbank and Thomas Dunne). Fourteen of our faculty, including Naomi Tague who was voted in this year, are Fellows of the AGU, the largest Earth Science organization in the world (Matt Jackson, John Melack, Francis MacDonald, Dar Roberts, Roberta Rudnick, David Siegel, Toshiro Tanimoto, and emeriti Ralph Archuleta, Douglas Burbank, Jeffrey Dozier, Thomas Dunne, Brad Hacker, and Bruce Luyendyk). Seven ERI faculty (Doug Burbank, John Cottle, Brad Hacker, Ed Keller, Francis Macdonald, Susannah Porter, and Roberta Rudnick) are Fellows of the Geological Society of America while six of our faculty are fellows of the Ecological Society of America (Anna Trugman, Carla D'Antonio, Frank Davis, Douglas McCauley, Josh Schimel, and David Tilman). Eight of our faculty (Craig Carlson, Richard Church, Frank Davis, Jeff Dozier, Thomas Dunne, John Melack, Galen Stucky, and David Tilman) are Fellows of AAAS. Faculty members have been honored with many additional awards from academic societies over the past years, including John Cottle (Fellow, Mineralogical Society of America; GSA Early Career Award, Mineralogy, Geochemistry, Petrology, & Volcanology Division); Matt Jackson (the Geochemical Society's Clarke Award; AGU's Kuno Award); Scott Jasechko (GSA Kohout Early Career Award); Susannah Porter (Fellow, Paleontological Society); Roberta Rudnick (AGU Hess Medal); and Frank Spera (Fellow, Mineralogical Society). Just this year, Leander DL Anderegg was awarded AGU's Global Environmental Change Early Career Award. This excellence continues to our early career researchers with 8 currently holding NSF Early Career Awards including Zachary Eilon, Scott Jasechko, Ashley Larsen, Robin Matoza, Kristi Morell, Samantha Stevenson, Interim Associate ERI director Holly Moeller, and new this year Andrew MacDonald.

Executive Summary

The mission of the Earth Research Institute (ERI) is to support research and education in the sciences of our solid, fluid, and living Earth. In the past fiscal year, ERI-affiliated faculty and researchers from across campus submitted 128 proposals requesting \$51 million in funding in which 90 new awards in the amount of \$25.7 million were awarded, the largest dollar amount in our history. ERI also welcomed new staff members, accommodated ever changing new administrative and student contracts, applied to new funding organizations, prepared for a large upcoming software change, and continued to support excellent Earth Science research. Major awards and activities during the last year include:

- **Professor Tim Devries (Geography)** received a major research award of almost \$1.2 million (\$1,190,228) from the nonprofit Schmidt Sciences LLC to better understand how carbon dioxide enters and exits the ocean. Research supported by this award will provide new insights into the role the ocean plays in global climate change.
- **Assistant Professor Andrew MacDonald (BREN)** received ERI's largest NSF CAREER Award to date, "Does the early bird get the bug? The role of phenological mismatch and climate refugia in the ecology of infectious disease under global change" (\$977,779). This new project will work with local mosquito control districts to examine the impact of climate and land use on the spread of West Nile virus in California's Central Valley. Dr. MacDonald becomes our eighth active NSF CAREER awardee.
- **Professor Ashley Larsen and colleagues (BREN)** published a paper in the journal *Science* that investigated how organic farming practices impacted pesticide use in neighboring farms. They found that clustering organic fields in Kern County, California reduced the use of pesticides for both traditional and organic farming.
- **Professors Scott Jasechko (BREN) and Debra Perrone's (Environmental Studies)** work on aquifers was highlighted by the Los Angeles Times. Their news story discussed the global decline in aquifer levels including locally here in California.

We continued our post-COVID resurrection of our "Rooftop Research Reception" to allow our researchers to meet in person again. We also prepared for the reinstatement of our brown-bag series, which commenced in October of 2024.

Like many other departments on campus retaining staff and filling staff vacancies remains a challenge. Fortunately, we were successful at filling a new staff vacancy this year by welcoming Margarita Bergquist. This new staff member brought our cohort back up to 17 (inclusive of GRIT). We also continued to weather a few staff leaves this year, but thanks to herculean efforts by other staff and preparation by those on leave we made it through these periods of reduced staff.

We were successful in our FTE request for a new director this year. That search paired with a volcanologist/petrologist in Earth Science is ongoing and we hope to welcome a new director this upcoming fall.

As we enter 2024-2025, we look forward to new directions and new collaborations in our quest to better understand our Earth System from a variety of perspectives. Although our planet and society continues to face new challenges every year, we are confident that ERI scientists are contributing to a better understanding of not only these challenges but potential solutions ranging from better water policies to a better understanding of the natural hazards we are subject to. This annual report provides a snapshot of some of these activities that took place within the Earth Research Institute in 2023-2024.



UC SANTA BARBARA

Cheadle Center for Biodiversity & Ecological Restoration

Cheadle Center Director's Report

Katja Seltmann, Katherine Esau Director's Annual Report, Vernon and Mary Cheadle Center for Biodiversity and Ecological Restoration, January 6, 2025

Reporting Period: July 1, 2023 - June 30, 2024

1. Mission Statement

Our mission at UC Santa Barbara's Vernon and Mary Cheadle Center for Biodiversity and Ecological Restoration is to lead the way in biodiversity research, conservation, and ecological restoration. We strive to preserve and enhance our natural heritage by combining stewardship of campus lands, preservation of natural history collections, and research and education about biodiversity.

The Cheadle Center is a UCSB Center operating under the Office of Research, currently comprising 11 staff members and 5 academic positions. Our administrative home is housed within the Earth Research Institute.

2. Research Projects and Findings

Ecological Restoration & Management Program Overview

The Cheadle Center manages over 340 acres of open space between Ellwood Mesa and Goleta Slough, dedicated to protecting and enhancing the region's ecosystems through habitat conservation, upland restoration, wetland creation, and sustainable stormwater management. These areas on Goleta and UCSB's campus feature diverse environments like oak woodlands, coastal sage scrub, grasslands, and wetlands, contributing to the region's high biodiversity. By integrating with local watersheds and surrounding natural areas, the management areas create important corridors and refuges for wildlife, ensuring the long-term preservation of natural resources. The Restoration team focuses on understanding ecological processes to better support plants and animals, involving several graduate students in their Master's and PhD research. Their work includes studying rare and endangered plants through greenhouse and field experiments, exploring how soil characteristics affect plant growth, examining carbon sequestration in wetlands to help ecosystems adapt to sea level rise, monitoring wildlife use of restored habitats, evaluating vegetation management techniques like prescribed fire and grazing for biodiversity benefits, and conducting surveys of natural area users to improve communication and protect the environment from activities like dog walking and trespassing.

North Campus Open Space (NCOS) continues to expand its mitigation efforts to conserve and monitor threatened and endangered species. A key project this year involved collaborating with the U.S. Fish & Wildlife Service to outplant the salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*; Fig. 1), a state and federally endangered plant. Although native to Southern California salt marshes from Carpinteria to Northern Baja, it had not been found in the Goleta or Devereaux sloughs. Seeds from the nearby Carpinteria salt marsh were introduced to NCOS in spring 2023 across several experimental sites. This initial trial with 5,000 seeds identified the sandy zone at NCOS as the most successful area. Building on these results, over 50,000 seeds were distributed in winter and spring 2024, and thousands of seedlings are now being monitored for natural and augmented regeneration. The seedlings bloomed last summer and are expected to continue thriving this summer.

This project is one of several rare plant collaborations between the Cheadle Center and the U.S. Fish & Wildlife Service that involve growing, researching, and outplanting plant species of conservation importance. Located in a critically endangered habitat, UCSB requires mitigation for construction activities. Building on these mitigation efforts, the Cheadle Center is now leading initiatives toward the conservation and monitoring of numerous threatened and endangered species, including Ventura marsh milk-vetch, marsh sandwort, Coulter's goldfields, miniature lupine, *Brodiaea jolonensis*, *Bloomeria crocea*, Santa Barbara honeysuckle, southern tarplant, and *Sesuvium ventricosum*.



Fig. 1. Salt marsh birds beak growing at North Campus Open Space.

The Ellwood Marine Terminal (EMT) Restoration project, led by Lisa Stratton, the Cheadle Center's Director of Ecosystem Management, and her team, spans a 17.45-acre site and includes two crude oil storage containers. The restoration efforts involve creating new woodland, restoring wetlands, establishing a freshwater pond, grassland, and coastal sage habitats. Demolition was completed in Spring 2024. A time-lapse video of the tank removal is available on YouTube [here](#). This site is contiguous with the Cheadle Center's 136-acre North Campus Open Space (NCOS) restoration project and Coal Oil Point Reserve. Since May 2023, the Cheadle Center and Strategic Earth have been conducting an outreach program to design and develop a framework for public access at the Ellwood Marine Terminal site (Fig 2). Strategic Earth is a consulting firm specialized in linking science and policy with community outreach and engagement. This outreach included three site tours with Chumash listening sessions and public surveys, an open invitation for one-on-one discussions with the Chumash community, and a Chumash listening round table to explore cultural opportunities at the site. A public webinar followed, accompanied by an additional engagement survey available online. We are still accepting public feedback at ncos@ccber.ucsb.edu. Stay connected with EMT and all of our restoration projects through the [Restoration Register Newsletter](#).

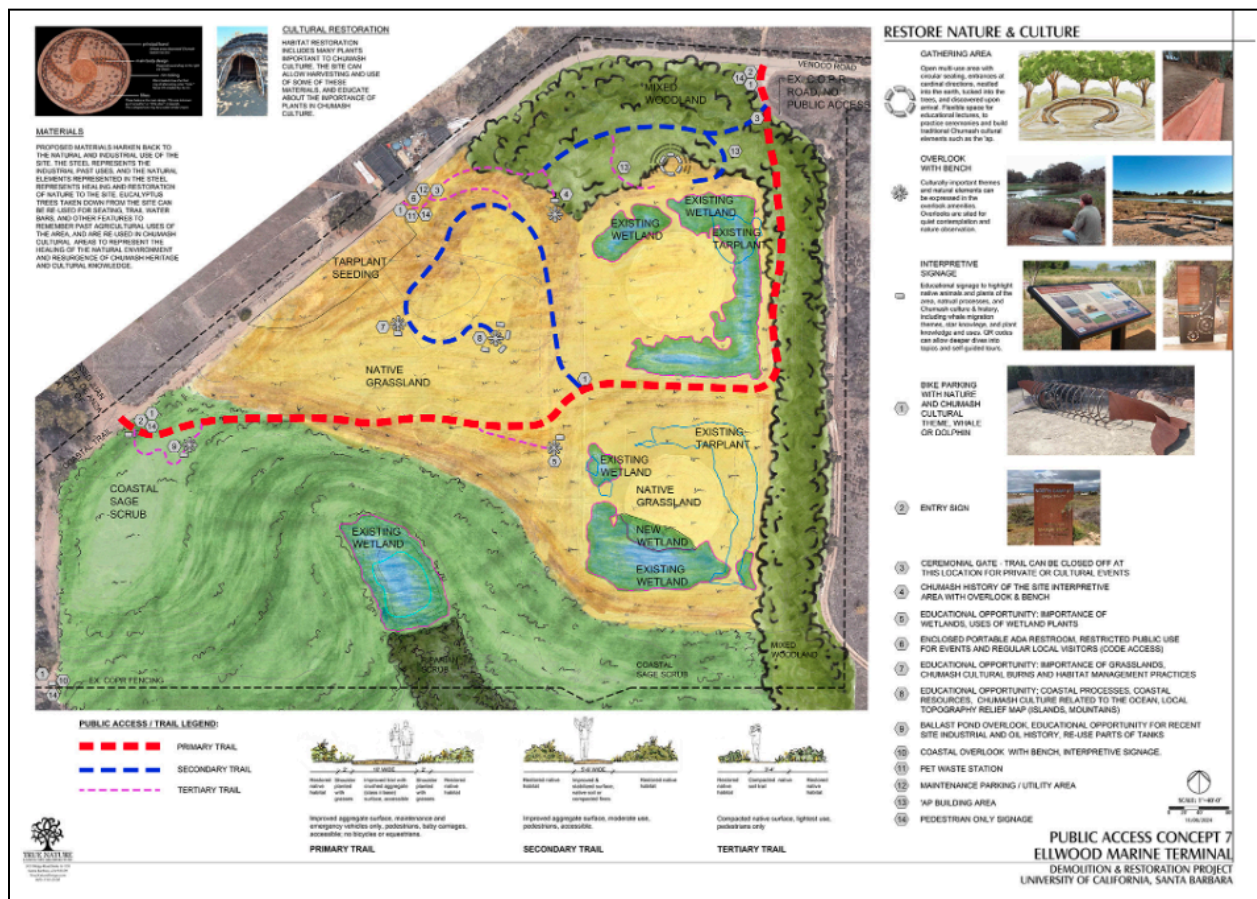


Fig. 2: Public access for EMT site plans co-developed with UCSB Design and Construction, Strategic Earth consulting and the Chumash communities.

Collections & Biodiversity Program Overview

The Cheadle Center's Collections & Biodiversity program continues to advance our understanding and conservation of Earth's diverse life forms through multidisciplinary research encompassing evolution, systematics, ecology, genetics, and conservation biology. Our main focuses include preserving and describing different species and their habitats, maintaining and using historical records and specimens for research and education, studying how the environment and evolution affect the physical traits of bees, amphibians, and plants, and developing new tools such as camera traps and 3D imaging to improve our research and conservation efforts.

Wild Bee Health and Conservation: Bees play a pivotal role in supporting a significant portion of worldwide food production and in pollinating many wild and cultivated plants (Fig. 3). However, they are facing a reduction in their populations and diversity. To decipher the causes behind this decline, Katja Seltmann, the Director of the Cheadle Center, along with partners from 13 institutions across the United States, are spearheading the creation of tools designed to analyze bee characteristics from photographs. This initiative aims to compile extensive datasets of bee traits and images, utilizing specimens from natural history collections to track and understand changes over time. We are in the last year of a three-year NSF project, which has to date produced **nine** peer-reviewed publications and funded two postdocs and one GSR at UCSB. The project is also responsible for the specimen digitization of nearly half a million museum records of bees in the US and the development of large, openly available bee trait datasets, which provide a missing link about the natural history of bees needed for conservation.



Fig. 3: A *Melissodes tepidus* bee from the UCSB Lagoon is yellow with pollen after visiting a flower. This native, wild bee is one of the many bees supported through the Cheadle Center's restoration and research program. Photo by Jeremiah Bender.

Under the leadership of Greg Wahlert, Cheadle Center's Collection Manager, a project is underway in **Colombia's biodiverse Mesenia Reserve**, nestled in the Andes and a junction of two biodiversity hotspots. Despite its rich and unique flora, the region's study was long hindered by conflict. Now, with improved conditions, the project aims to extensively catalog the Reserve's flora, collaborating with both American and Colombian institutions. This effort has already uncovered new plant species, underscoring the area's untapped botanical diversity and the urgency to document it amidst rapid economic changes.

At the Cheadle Center, Researcher Chris Evelyn is investigating the role downed wood plays in supporting wildlife ecosystems. His research involves the **development of cost-effective and transferable tools** (e.g., camera traps) for assessing the benefit of downed wood to amphibian and reptile populations (Fig. 4). By examining the interactions between downed wood and wildlife, Evelyn's work sheds light on the importance of these natural elements in maintaining biodiversity and ecosystem health. This was the last year of a three year USDA Conservation Innovation Grant funded project on this topic. Evelyn's results demonstrate that leaving downed wood in California forests (as opposed to removal of the wood to mitigate fire risk) is important for species diversity as the wood shelters many reptiles, amphibians and insects.



Fig. 4: Using innovative camera trap technology developed by Cheadle Center researchers, uncommon and elusive wildlife such as this skink can now be surveyed more effectively.

3. Research and Data Products

During this reporting period, Cheadle Center staff and researchers published **seven** peer-reviewed papers, presented **25** posters, and delivered over **ten** talks at professional conferences (Fig. 5).

The Cheadle Center leverages multiple online platforms to track research outputs and provide data access. Since 2020, we have been using [UC's eScholarship platform](#) to archive and monitor our research products. During this period, our posters have been viewed or downloaded over **9,000** times, demonstrating that the digital access to these products are having an impact. Additionally, the Cheadle Center remains committed to the online access of specimen data. Our digitized collections are shared through the Global Biodiversity Information Facility (GBIF), and our digital specimen records have been cited **1,164** times via GBIF, which is an increase from 740 citations last year.



Fig. 5: In May 2024, Cheadle Center staff, along with associated graduate and undergraduate students, presented their research at the California Society for Ecological Restoration Conference. Presentations included topics such as the integration of prescribed fire and grass-specific herbicides in annual wildfire restoration efforts, as well as bee-centric restoration practices.

4. Funding and Grants

This year, the Cheadle Center received a total of **\$9,058,239** in new funding and **\$119,000** in endowment payouts. Below is a description of these funding sources.

- **Extramural Funding 23/24:** The Cheadle Center was awarded **\$8,067,239** in extramural funds this year. Funding sources included the National Science Foundation, California Institute for Biodiversity, The Nature Conservancy, Cachuma Resource Conservation District, California Department of Transportation, California Wildlife Conservation Board, and the California Coastal Conservancy. Of these funds, \$7 million is allocated to the Ellwood Marine Terminal Restoration, \$45,000 to environmental education programs, \$20,000 to collections care, \$348,000 to collections-based research on bees, and \$404,000 to the West Storke Wetland Restoration.

- **Intramural Funding 23/24:** The Cheadle Center received **\$131,000** in intramural funding from the UCSB Associated Students Coastal Fund. Awarded by the student committee, the Coastal Fund significantly supports undergraduate student involvement at the Cheadle Center. Examples of grants funded this year include “Bee Campus,” a student-led bee conservation education group; “Coastal Ecology Connection for Early Childhood Education and Pre-K Nature-Based Education at North Campus Open Space,” which provides funding for school field trips; and “Providing Undergraduate Curation Work Experience in the UCSB Natural History Collections at the Cheadle Center,” which offers paid internships for curatorial interns in the collections.
- **Recharge:** Although a smaller part of our funding portfolio, the Cheadle Center received approximately **\$190,000** in recharges this year from campus clients. Examples include consultation services with the City of Goleta for the Monarch Grove/Ellwood Restoration. Since 2012, over \$7 million in funding has been received through this recharge program.
- **Donor Contributions 23/24:** The Cheadle Center received **\$670,000** in donations, primarily supporting the North Campus Open Space (\$507,000). Additional contributions were directed to Cheadle Center operations (\$9,000), the Cheadle Center Endowment (\$11,000), and the collections, particularly in support of the collection manager position (\$130,000).
- **Endowments 23/24:** The NCOS endowment produced \$93,000 in payout funds this year. The other Cheadle Center endowments collectively account for \$26,000. The other Cheadle Center endowments support the Harder Offices infrastructure, collections curation, and Collection Manager position. The NCOS endowment supports multiple restoration staff and maintenance of restoration properties and buildings.

5. Educational & Outreach Contributions

The Cheadle Center provided research and education internships for **117** UCSB undergraduate students across various programs, including **76** in Collections and Biodiversity, **21** in Restoration and Ecology, and **20** in Kids in Nature Environmental Education. Additionally, center staff and researchers taught five courses: Restoration Seminar (EEMB 188RE), Collection Curation (ENVS/EEMB 96), Restoration Skills (ENVS 95), Ethnobotany (ENVS/ANTH 197EB), and California Flora and Vegetation (EEMB 103A). Between Spring 2023 and Spring 2024, the Center supported over **30** students through independent study projects (EEMB 84, EEMB 184, EEMB/ENVS 99, EEMB/ENVS 199). The Restoration Seminar, Collection Curation, and Restoration Skills courses are fully funded by the Cheadle Center, serving approximately 150 students annually. Additionally, the Center provides campus-wide support, benefiting an estimated **35** classes and over **6,000** students each year through guest lectureships, tours, data provision, teaching assistant training, and facility usage. Cheadle Center worked with **5** UCSB graduate students last year on research projects.



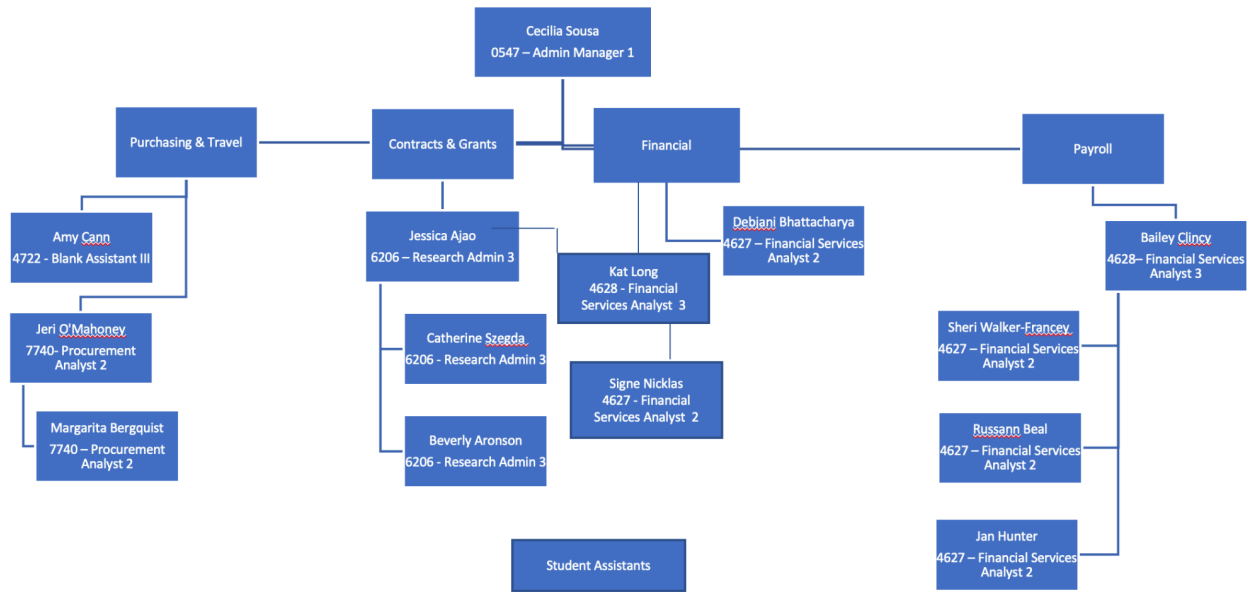
Fig. 6: Cheadle Center's Andy Lanes shows a gopher snake to students on a recent field trip.

Community outreach is a major focus of the Cheadle Center. The broader impacts of fostering goodwill on campus through public access to our restoration sites are difficult to quantify. Ongoing community outreach includes trail creation and management, managing transients, signage, porta-potty management, dog off-leash enforcement, and trash cleanup on UCSB campus lands post-restoration. However, through our staffed programs, such as the Kids in Nature environmental education program, we facilitated fourteen K-12 visits to North Campus Open Space (NCOS; Fig. 6) or the UCSB Lagoon, involving 413 students and ten teachers. Additionally, we organized sixty-five pre-kindergarten classroom field trips to NCOS, accommodating twelve students and six adults each. We also launched a new collaboration with The Nature Conservancy (TNC) to conduct ten Dangermond Field trips, reaching a total of 251 students and twenty-six adults. In total, these programs engaged approximately **1,444** students, highlighting our commitment to engaging the community and providing valuable educational experiences through our restoration and conservation efforts.

We thank the Cheadle Center Director's Council as they continue to connect us to a broader donor community. Many members of the Director's Council have made generous gifts to our operations this year and have continued to promote the Cheadle Center including funding our undergraduate and postdoctoral research programs. The Council is Ed and Sue Birch, Bill

and Mary Cheadle, Joseph Cheadle, James Markham, Suzanne and Duncan Mellichamp, Greg and Dale Stamos, Larry Friesen, Jennifer Thorsch, and Sharon Metsch. We are also grateful for the benefit of collaborative efforts through the North Campus Open Space Scientific Advisory Committee, the Cheadle Center Advisory Committee, the Earth Research Institute, the UCSB Office of Research, the UCSB Office of Development, and our many Cheadle Center Research Affiliates.

Organization Chart



Advisory Committee, Administrative, and Technical Staff

Directors

Dr. Alex Simms, Interim Director

Dr. Holly Moeller, Interim Associate Director

ERI Advisory Committee

Dr. Tim DeVries, Professor, Department of Geography (Chair)

Dr. Leila Carvalho, Professor, Department of Geography

Dr. Ashley Larsen, Associate Professor, Bren School of Env. Science & Mgmt.

Dr. Robin Matoza, Associate Professor, Earth Sciences

Dr. Morgan Raven, Associate Professor, Earth Sciences

Dr. Leander Love-Anderegg, Assistant Professor, EEMB

Dr. Andrea Adams, Assistant Researcher, Earth Research Institute

Dr. Alex Simms, Professor, Earth Science (ex officio - ERI Interim Director)

Michael Colee, Director of Computing (ex officio)

Cecilia Sousa, Management Services Officer (ex officio)

Dr. Katja Seltmann, Director of the Cheadle Center for Biodiversity & Ecological Restoration (ex officio)

ERI Administrative and Technical Staff

Cecilia Sousa, Management Services Officer

Jessica Ajao, Contracts & Grants Manager/Financial Coordinator

Bev Aronson, Contracts & Grants Analyst

Rustie Beal, Personnel Analyst

Debjani Bhattacharya, Financial Analyst

Amy Cann, Travel Assistant

Bailey Clincy, Personnel Supervisor

Kat Long, Financial Research Analyst

Signe Nicklas, CCBER Financial Coordinator

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Jeri O'Mahoney, Purchasing Analyst

Yitian Moreno, Personnel Analyst

Rebecca Pratico, Purchasing Assistant (replaced midyear by Margarita Bergquist)

Catherine Szegda, Contracts & Grants Analyst

Sheri Walker-Francey, Personnel Analyst

Michael Colee, Director of GRIT

Matthew Key, Systems Administrator

Darla Sharp, Information Systems Analyst

Statistical Summary

Personnel Engaged in Research (head count)	
Faculty	34
Professional Researchers (inc Visiting)	20
Project Scientists	6
Specialists	7
Postdoctoral Scholars	22
Graduate Students	64
Undergraduate Students	108
Technical & Research Staff	65
TOTAL	326

Unit Operational Staff (# of FTE):	
Administrative	14
Computing	3
TOTAL	17

Sponsored Research	
Number of Principal Investigators*	121
Proposals Submitted (#)	128
Proposals Submitted (\$ value)	\$51,425,725
Awards issued (#)	90
Awards issued (\$ value)	\$25,763,000

Extramural awards administered during year (#)**	200
Extramural awards administered during year (\$ value)**	\$84,222,538
Costshare funds managed during year (\$ value)**	\$1,004,726
Awarding agencies dealt with (#)***	77

*Number of PIs, Co-PIs and Proposed PIs

**If the award was open during FY, it's included

***Each agency counted once (includes agencies to which proposals have been submitted)

Other Projects & Programs	
Seminars, symposia, workshops sponsored (#)	4
Other projects administered (#)****	34
Other projects administered (\$ value)****	\$2,018,029
Intramural support administered (\$ value)**	\$296,382

****Other projects, such as donation, presidential awards, fellowships, anything that isn't core budget, extramural, or intramural

Budget & Space	
Total base budget for the year	\$844,397
Total assigned square footage	18,477

Principal Investigators

Name	Title	Home Department
Elizabeth Ackert	Associate Professor	Geography
Andrea Adams	Assistant Researcher	ERI
Peter Alagona	Professor	Environmental Studies
Leander Anderegg	Assistant Professor	EEMB
Sarah Anderson	Professor	Bren School
Ralph Archuleta	Professor Emeritus	Earth Science
Ned Bair	Associate Researcher	ERI
Kathy Baylis	Professor	Geography
Carol Blanchette	Research Biologist and Valentine Eastern Sierra Reserves Director	NRS
Derek Booth	Researcher, ERI	ERI
Mark Brzezinski	Professor	EEMB
Cherie Briggs	Professor	EEMB
Mark Buntaine	Professor	Bren School
Douglas Burbank	Professor Emeritus	Earth Science
Craig Carlson	Professor	EEMB
Leila Carvalho	Professor	Geography
Kelly Caylor	Professor	Geography and Bren School
Scott Cooper	Professor	EEMB
John Cottle	Professor, Director of NRS	Earth Science
Carla D'Antonio	Professor	Environmental Studies
Frank Davis	Professor	Bren School
Ranjit Deshmukh	Associate Professor	Environmental Studies
Timothy DeVries	Professor	Geography
Qinghua Ding	Associate Professor	Geography
Peter Downs	Researcher	ERI

Jeffrey C. Dozier	Professor Emeritus	Bren School
Joan Dudney	Assistant Professor	Bren School
Thomas Dunne	Professor Emeritus	Bren School
Nathalie Eegholm	Graduate Student	Geography
Zachary Eilon	Associate Professor	Earth Science
Chris Evelyn	Associate Researcher	ERI
Erica Fleishman	Researcher	ERI
Steve Gaines	Professor / Dean	EEMB / Bren School
Phil Gans	Professor	Earth Science
Vamsi Ganti	Associate Professor	Geography
Summer Gray	Associate Professor	Environmental Studies
Bradley Hacker	Professor	Earth Science
Lee Hannah	Lecturer	Bren School
Danielle Harlow	Professor	GGSE
Paul Hegarty	Senior Development Engineer	ERI
Robert Heilmayr	Associate Professor	Environmental Studies
Laura Hess	Researcher Emeritus	ERI
Patricia Holden	Professor	Bren School
Matthew Jackson	Professor	Earth Science
Scott Jasechko	Associate Professor	Bren School
Christopher Jerde	Assistant Researcher	MSI
Chen Ji	Professor	Earth Science
Charles Jones	Professor	Geography
Arturo Keller	Professor	Bren School
Jennifer King	Professor	Geography
Roland Knapp	Research Biologist	ERI
Petra Kransfelder	Assistant Professor	MCDB
Ashley Larsen	Associate Professor	Bren School
Gen Li	Assistant Professor	Earth Science
Karin Lohwasser	Associate Professor	GGSE

Andrew MacDonald	Assistant Researcher	ERI
Francis MacDonald	Professor	Earth Science
Sally MacIntyre	Professor	EEMB
Stéphane Maritorea	Researcher	ERI
Robin Matoza	Professor	Earth Science
Susan Mazer	Professor	EEMB
John Melack	Professor	Bren School and EEMB
Robert J. Miller	Researcher	ERI
Holly Moeller	Assistant Professor	EEMB
Noah Molotch	Associate Researcher	ERI
Kristin Morell	Associate Professor	Earth Science
Max Moritz	Researcher	ERI
Alan Murray	Professor	Geography
Norm Nelson	Researcher Emeritus	ERI
Erica Newman	Assistant Researcher	ERI
Nicholas Nidziko	Associate Professor	Geography
Michelle O'Malley	Professor	Chemical Engineering
Isaac Park	Project Scientist	ERI
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Debra Perrone	Associate Professor	Environmental Studies
Andrew Plantinga	Professor	Bren School
Susannah Porter	Professor, Chair of Earth Science	Earth Science
Simone Pulver	Associate Professor	Environmental Studies
Morgan Raven	Associate Professor	Earth Science
Daniel Reed	Research Biologist	MSI
Matthew Rioux	Lecturer	Earth Science
Karl Rittger	Associate Researcher	ERI
Dar Roberts	Professor	Geography

Dylan Rood	Assistant Researcher	ERI
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Cris Sandoval	Coal Oil Point Reserve Director	NRS
Alyson Santoro	Professor	EEMB
Joshua Schimel	Professor	EEMB
Katja Seltmann	Katherine Esau Director of Cheadle Center; Associate Researcher	ERI
David Siegel	Professor	Geography
Alexander Simms	Professor, ERI Interim Director	Earth Science
Rachel Simons	Project Scientist	ERI
Michael Singer	Researcher	ERI
Tom Smith	Assistant Researcher	ERI
Frank Spera	Professor	Earth Science
Jamison Steidl	Researcher	ERI
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Lisa Stratton	Research Biologist, Cheadle Center	ERI
Samuel Sweet	Professor	EEMB
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Toshiro Tanimoto	Professor	Earth Science
David Tilman	Professor	Bren School
Anna Trugman	Associate Professor	Geography
Greg Wahlert	Museum Scientist, Cheadle Center	ERI
Libe Washburn	Professor	Geography
Xifeng Yan	Professor	Computer Science

Postdoctoral Researchers, Graduate and Undergraduate Students

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Hariharan, Anant
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Ostwald, Madeline
Reitz, Zachary
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Riedman, Leigh Anne
Seto, Daisuke
Shanebeck, Kyle
Smith, Colleen
Song, Se-Yong
Stevens, Bethany
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Walsman, Jason
Xue, Aoyun
Zhou, Wencai

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Boving, Indra
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Castillo Guerra, Silvana
Cunningham, James
Cwikiel, Sadie
Das, Debsmita
De Negri, Rodrigo
Deweese, Shane L
Divola, Claire

Eden, Ryan
English, Chance
Francoeur, Jeremy
Garvey, Kelly
Gellman, Jacob
Godana, Keneni
Gomez, Atahualpa
Green, Rachel
Greenberg, Evan
Han, Pengyuan
Hardardottir, Sunna
Hilton, Annette
Horton, Elizabeth
Huffman, Emily
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Laub, Kaylee
Li, Zhe
Lin, Yizi
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Morgan, Bryn
Mu, Ye
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Beahrs, Erik
Beckett, Emily
Bermudez, Evelyn
Bhattarai, Sujun
Boas, Eva
Boser, Anna
Brokaw, Ricky
Brown, Meagan
Campbell, Morgan
Carbo Mestre, Pol
Coggshall, Jacob
Contreras, Krystal M
Coronado, Belen
Covarrubias, Taj
Craigien, Kayle
Crosby, Owen
Dextre, Andre
Edwards, Conner
Elliott, Sarah
Fehringer, Lea M
Ferreira, Lillian
Figueroa, Tania
Fischer, Alexander
Fuentes, Amelia
Garvey, Kelly

Gomez, Atahualpa
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Gundu, Rishit
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Herschenfeld-Catalan, Luna
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Holcomb, Haley
Holcomb, Haven
Huynh, Phuong (Jess)
Jantz, Benjamin
Jochum, Madison R
Kaare-Rasmussen, Jakob
Kaminaga, Josephine
Kassir, George
Kaur, Parinder
Kayhan, Cyrus
L Etoile-Goga, Amelie
Lagunas, Roxana
Leal Ibarra, Hector
Lebedeff, Jessica
Lee, Jessilin
Leppones, Avery
Liu, Fan
Lovegreen, Piper B
Loving, Sam H
Lucero, Stephanie A
Lund, Paige
Maggart, Trevor
Malone, Kylie R

Marcus, Emma
Martin-Chales, Miriam
Mauffet-Smith, Scott
McGrath, Coleman
McManus, Nickolas
Mezic, Mariana
Mills, James J
Mirrashidi, Sophia
Mohler, Madeline (Maddie)
Mohr, Michelle
Moya, Katheryn
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O'Connor, Michael
Orndahl, Cara
Ortner, Sophia
Patel, Mansi
Pease, Eliza M
Peralta, Gabby
Perry, Daniel
Phan, Vivian
Pike, Jacob
Puchkova, Isabella
Pusch, Kira
Quigg, Molly
Rackmil, Jordan D
Ramirez, Isabella

Ramos, Emily C
Rennie, Zoe
Rolland, Emily
Ruggeri, Rayna
Sandoval, Rebecca
Sayre, Emma
Schmahl, Brian
Seaway, Nathan W
Serafin, Leslie
Sevilla, Diego
Shahin, Dahlia S
Sheu, Alan
Solgi, Mohammad (Ryan)
Sorenson, Emily
Sten, Michaela G
Strange, Lily
Sullivan, Jonathan C
Takahashi, Camryn
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Tessier, Kevin
Toomey-Cordeiro, Ava
Villasenor, Vicente
Walker, Marian
Wilmot, Talula
Young, Samantha
Zelinka, Collin J

External Participation

Archibald, Kevin
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Barbosa, Pedro
Bell, Thomas
Bodwitch, Hekia
Chamanara, Sanaz
Chasteen, Manda
Clark, Ryan
Cole, Shelly
Cortes Cortes, Alicia
Dean, Ellen
Dimmerling, Tim
Dobson, Alistair
Downs, Peter
Engle, Diana
Feraud, Marina
Fernandes Amaral, Joao
Fisher, George
Fleishman, Erica
Florsheim, Joan
Forsberg, Bruce
Gimmel, Matthew
Gonzalez, Victor

Gordon, David
Hegarty, Paul
Helbig, Nora
Henderikx Freitas,
Fernanda
Holmgren, Mark
Keeling, Ralph
Kung, Giar-Ann
Kwak, Jinil
Luo, Rui
Luong, Justin
Macdonald, Francis
Michaelides, Katerina
Miller, JT
Mitarai, Satoshi
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Mortimer, Monika
Naesborg, Rikke
Newman, Erica
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O'Hirok, Bill
Ohlmann, Carter
Orr, Michael
Ortiz, Hugo

Parkinson, Anne-Marie
Poelen, Jorrit
Roehrdanz, Patrick
Romanelli, Elisa
Rood, Dylan
Scheidemen, Kathy
Schwefel, Robert
Smith, Colleen
Speer, Kevin
Stoimenov, Peter
Thompson, Will
Thrift, Charlie
Topal, Dani
Turpin, Ethan
Wallace, Brendan
Wan, Zhengming
Wang, Youwei
Wilson, Houston
Zanna, Laure
Zhang, Qian
Zhang, Yingxian
Zhou, Wencai

Other Projects and Activities

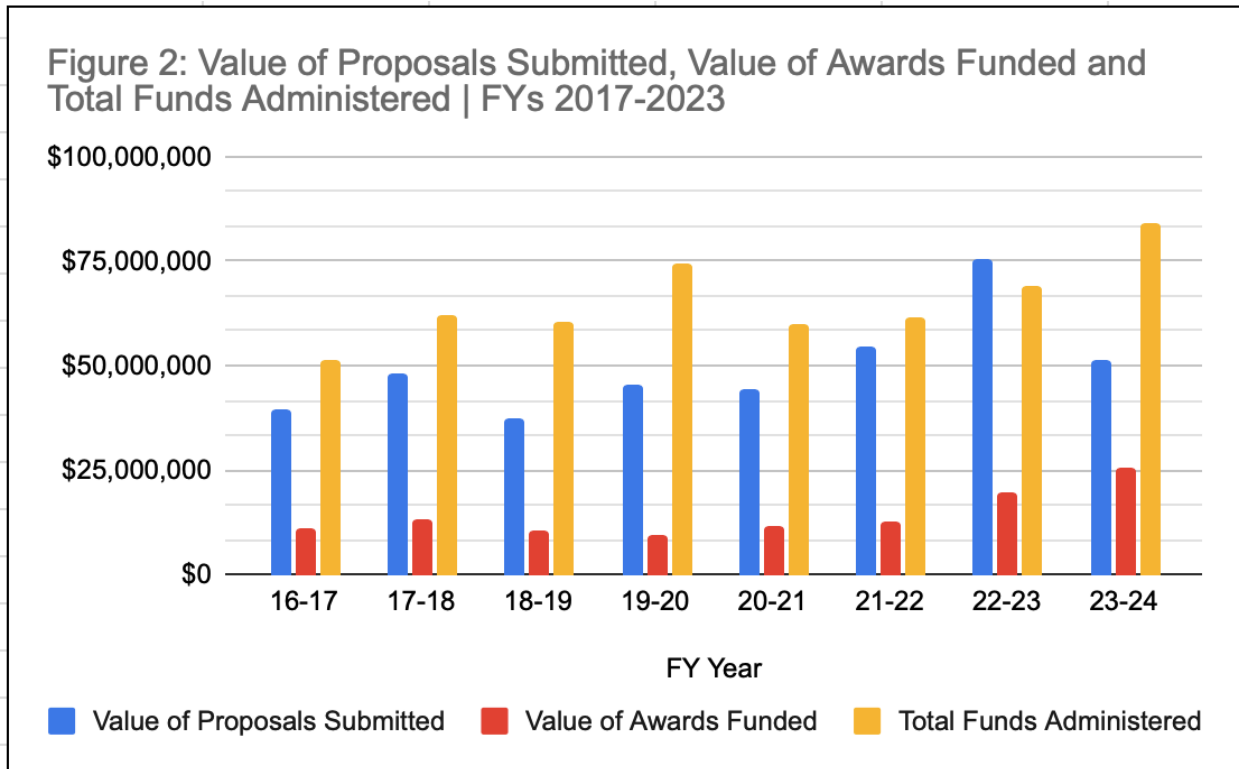
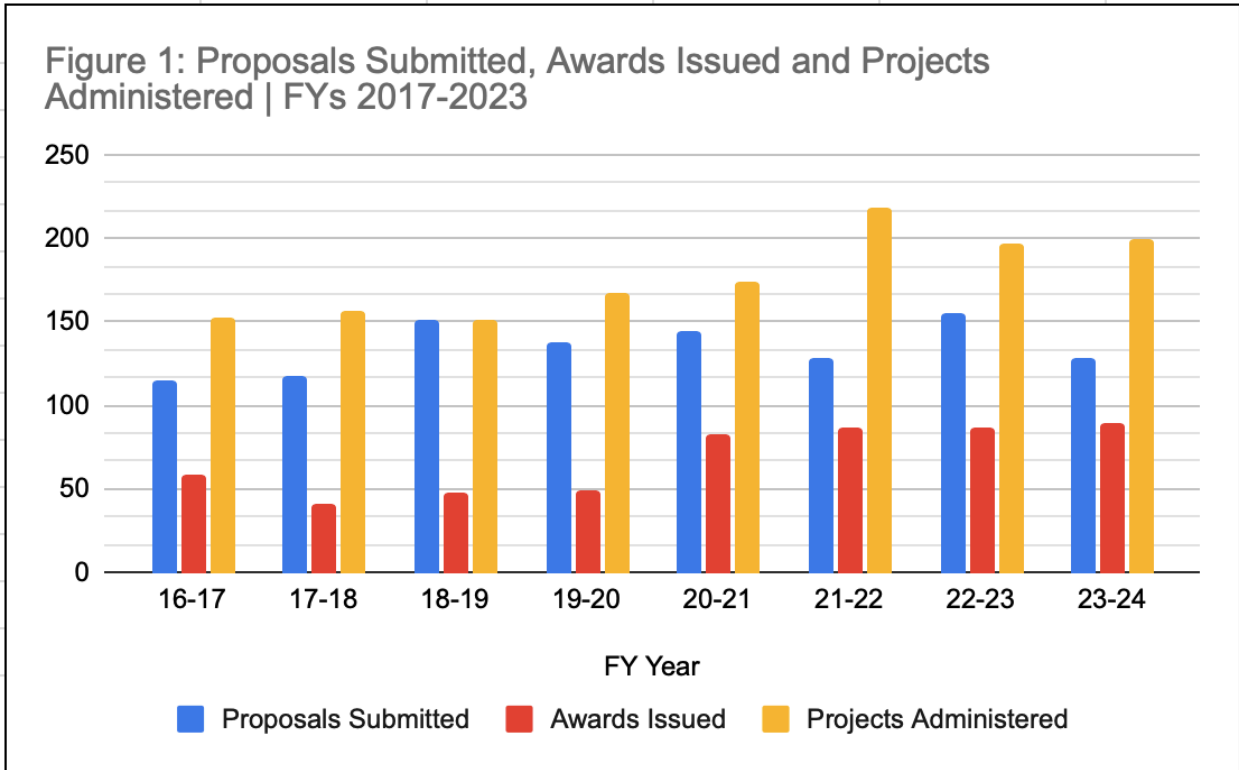
CCBER and ERI have benefited from support from the **Associated Students** via **The Coastal Fund** and **The Green Initiative Fund**. We are grateful for the support over the years and for the support of these projects during this fiscal year.

Associated Students Coastal Fund Awards:

PI(s)	Title
Evelyn	Is California's island endemic salamander in decline?
Seltmann	Plan Bee
Seltmann	Pollinators at the California Nature Art Museum
Seltmann	Bee Campus
Seltmann	California Native Bee Climate Tolerance
Seltmann	Santa Cruz Island Trips for Student Bee Researchers
Stratton	Song Sparrow abundance and use of habitat in the range of the endangered Belding's Savannah Sparrow
Stratton	From Burning to Herbicides: How do California's Coastal Plant Communities Respond to Different Restoration Techniques
Stratton	Restoration Intern Cheadle Center 2024
Stratton	Campus Point Restoration and Trail alignment
Stratton	Campus Lagoon 2024 Restoration
Stratton	Continuation of Nutrient Uptake by Floating Wetlands in Brackish Waters
Stratton	Coastal Ecology Connection for Early Childhood Education and Pre-K Nature Based Education at North Campus Open Space
Stratton	Campus Lagoon 2022: Building on Success
Stratton	UCSB Campus Lagoon Restoration 2022: Transformation in Progress
Stratton	Documentary about Ellwood Ecological Restoration and Oil Tank Removal
Stratton	Coastal Research and Monitoring Mentorship Program
Stratton	UCSB Campus Lagoon Restoration
Stratton	Restoring a Unique Coastal Seep to UCSB
Stratton	Campus Lagoon Restoration and Transformation 2021
Stratton	Coastal Biodiversity and Restoration Research and Monitoring Internships

Wahlert	Providing undergraduate curation work experience in the UCSB Natural History Collections at the Cheadle Center
Wahlert, Seltmann	Continuing support for the Cheadle Center's Student Museum Curator program
Stratton	Reducing Energy Use and Sensory Overload on UCSB Campus

Proposal and Award Administration



Space

ERI currently occupies the top floor of Ellison Hall and a wing of Girvetz Hall. In Ellison we have 35 research offices, 6 administrative offices and 4 conference rooms. The square footage totals 7,945. Ellison Hall is where our administrative team sits and many of our soft money funded researchers, along with postdocs, visitors, etc. We have several conference rooms which are available within Ellison for group meetings.

In Girvetz we have 10 research labs and two research offices totalling 4,210 square feet. This space is currently used for ground-floor field staging by at least 5 research groups. The research groups utilizing the Girvetz space remain active and are growing; the need for the first floor space has not decreased.

Cheadle Center currently occupies one wing of Harder Stadium. Their staff and students are using the 31 spaces which are a mix of research offices and Herbarium/Natural History Collection space totalling 6,322 square feet. They are also occupying the Gator Barn out at North Campus Open Space.

(Reference - [Facilities Space Data](#) and [Ellison Floor Plan](#) with names)