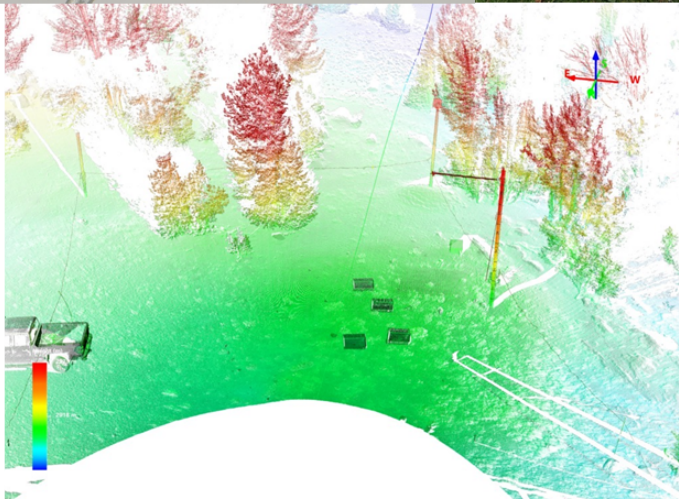
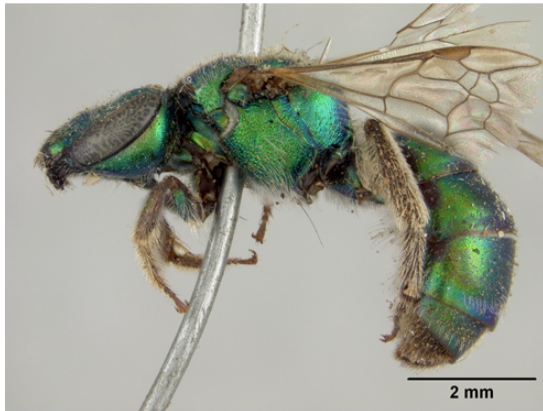




UC SANTA BARBARA

Earth Research Institute

Annual Report
Fiscal Year 2021-2022



Credit: Robin Matoza

Table of Contents

Mission Statement	3
Overview	4
Executive Summary	7
Cheadle Center Director's Report	10
Organization Chart	13
Advisory Committee, Administrative, and Technical Staff	14
Directors	14
ERI Advisory Committee	14
ERI Administrative and Technical Staff	14
Statistical Summary	16
Principal Investigators	18
Postdoctoral Researchers, Graduate and Undergraduate Students	23
External Participation	25
Other Projects and Activities	26
Proposal and Award Administration	29
Space	30

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. Professor Alex Simms is the Interim Director of the unit having taken over for Kelly Caylor in August of 2022. More than seventy independent research groups conduct and administer their research using the facilities and resources of the Institute. ERI supports fourteen administrative employees and three computer system administrators, all from university resources. 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. New administrative software (e.g. CONCUR) has brought an added burden to both staff and PI's. Nevertheless, ERI has taken some steps to help with those concerns including: 1) continuing to support business process feedback software (GUS) utilized to manage awards and provide PIs with real-time financial information; and 2) providing online training tutorials for ERI researchers trying to navigate the new administrative controls on campus. 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.

Over the past year, ERI had a slight increase in the number of awards issued compared with 2020-2021 (87 versus 83), despite a small decline in the number of proposals submitted (129 versus 145; Fig. 1). However, even with the fewer number of awards submitted, the total value of funds requested was up more than 20% (\$54.6 million versus \$44.2 million) and at the highest level of the past 6 years. In addition, the value of awards funded was also up by nearly 10% compared to 2020-2021 (\$12.4 million versus \$11.3 million) but within the range awarded over the last 6 years. As a result of the large increase in number of awards issued over the last 2 years, ERI experienced a large increase in the number of projects administered bringing this number to an all-time high of 87 projects (Figure 1) representing over \$61 million (Figure 2) USD in funding.

Figure 1: Proposals Submitted, Awards Issued and Projects Administered | FYs 2017-2022

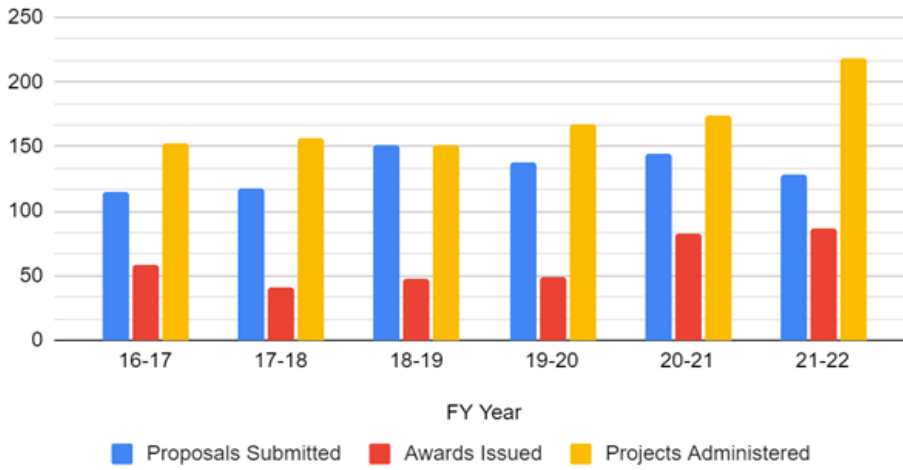
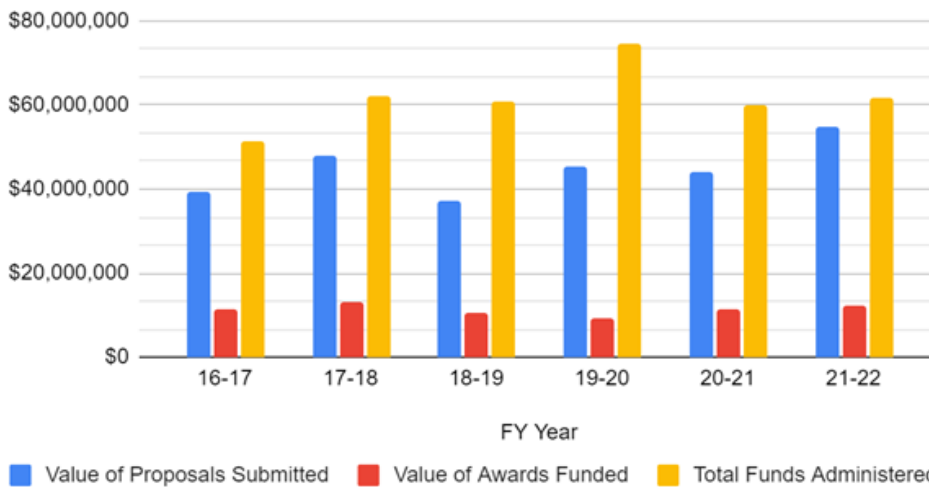


Figure 2: Value of Proposals Submitted, Value of Awards Funded and Total Funds Administered | FYs 2017-2022



ERI researchers have done remarkable things with the research funding they garnered. They consistently publish 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*, *Geophysical Research Letters*, etc.). ERI research provides important insights into societally relevant problems ranging from food and water security to volcanic hazards. CCBER's activities help 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, the National Center for Ecological Analysis and Synthesis, Chemistry & Biochemistry, Computer Science, Anthropology, Environmental Studies, Chemical Engineering, Mechanical Engineering, Economics, the Natural Reserve System, and Physics. ERI was joined by 12 new PIs this year, some new to the university, others have been on campus for quite some time but submitting proposals through ERI for the first time. 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. This past year, yet another of our faculty members, professor emeritus Richard Church, was elected into the U.S. National Academy of Sciences joining existing NAS members Roberta Rudnick, Galen Stucky, David Tilman, and emeriti Doug Burbank and Thomas Dunne). Thirteen of our faculty 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. Five ERI faculty (Doug Burbank, Brad Hacker, Ed Keller, Francis Macdonald, and Roberta Rudnick) are Fellows of the Geological Society of America and eight (Craig Carlson, Richard Church, Frank Davis, Jeff Dozier, Thomas Dunne, John Melack, Galen Stucky, and David Tilman) are Fellows of AAAS. A sixth member of our faculty, Anna Trugman, was elected as a fellow of the Ecological Society of America joining current PI fellows Carla D'Antonio, Frank Davis, Douglas McCauley, Josh Schimel, and David Tilman. 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). Our PIs also serve in high-visibility positions in their profession (e.g., Roberta Rudnick, President of the Geochemical Society). This excellence continues to our early career researchers with 6 currently holding NSF Early Career Awards including Zachary Eilon, Scott Jasechko, Ashley Larsen, Robin Matoza, Kristi Morell, and Samantha Stevenson.

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 129 proposals requesting over \$54 million in funding in which 87 new awards in the amount of \$12.4 million were awarded. ERI also welcomed new staff members, received the recommendations of an external review, accommodated new administrative changes, and continued to support excellent Earth Science research. Major awards and activities during the last year include:

- **Professor Patricia Holden (Bren School)** received a major research award of nearly \$2 million (\$1,999,191) from the California Bureau of Cannabis Control entitled, “Surface Water Emissions from Cannabis Cultivation Sites: Quantity, Quality, Toxicity, and Relationships to Farmers’ Practices”. This award was made through a major state-funded initiative to better understand the impacts of the newly legalized Cannabis industry on the state of California. Prof. Holden’s research group will study the environmental impacts of this new industry on our state. The multi-institutional group will examine how different farming practices, including pesticide use, impact water and sediment quality in Santa Barbara County.
- **Assistant Professor Zachary Eilon (Earth Science)** received an NSF CAREER Award, “New imaging of mid-ocean ridge systems at the Galapagos triple junction” (\$692,302). This new project will use ocean-bottom seismometers to “peer” beneath the long string of underwater mountains, known as mid-ocean ridges, where new Earth’s crust is formed to determine the deep structure of these features. Dr. Eilon becomes our sixth active NSF CAREER awardee.
- **Associate Professor Vamsi Ganti and Postdoctoral Scholar Sam Brooke (Geography)** published a paper in the journal *Science* showing that rivers can avulse (shift course) much further upstream than previously thought. This finding outlines a much larger area of flood risk than previously thought across our globe.
- **Associate Professor Robin Matoza (Earth Science)** was interviewed by the BBC after publishing a paper in the journal *Science* on the infrasound created by the January 15th, 2022 eruption of the underwater Unga Tonga-Hunga Ha’apai volcano. It was the largest such event ever recorded using modern instruments and comparable to the infamous 1883 eruption of Krakatau.

This has been the first year in which things have felt anything close to normal since the COVID-19 pandemic started over 2.5 years ago. However, the pandemic has brought some changes that will likely be part of the “new normal.” For ERI, some of those changes build upon policies and arrangements initiated before the pandemic. Most staff work some sort of

hybrid schedules, with a few that remain almost exclusively remote. Nevertheless, it has been good to see people in person again. For those working hybrid schedules, on campus work schedules are staggered such that most days at least one person is available on site. In addition, most administrative interactions are conducted via email or through software portals and, with the hybrid schedule, staff are still available during the week for an in-person meeting if needed.

Like many other departments on campus, filling staff vacancies has been a challenge. Fortunately, we were successful at recruiting two new staff members to fill open positions. These new staff members brought our cohort back up to 17 (inclusive of GRIT). Three staff members will be on leave for portions of the next year but fortunately, most of these positions have some sort of redundancy but the staff shortage may result in some delays. We also look forward to welcoming a new associate director in the coming months.

Our 5-year external review was completed in late 2021. The external review panel recognized the strength of ERI's administrative staff, ERI's leadership, and the broad portfolio of research funding running through ERI channels. They recognized some opportunities for growing ERI, in particular a call to catalyze more interdisciplinary research and education, be more engaged in faculty hires, and promote the better integration of our research scientists into other ERI activities. We are working on ways to implement these opportunities into future activities. The review panel also noted some of the challenges faced by ERI including the scarcity of lab space available for ERI use (and across the entire campus), the changing funding landscape (which brings a broader set of administrative needs), and the already (and increasing) heavy workload on ERI staff.

One of the largest administrative difficulties encountered this year has been the implementation of CONCUR software for all travel. This problem was compounded by turnover within that staff position. Nevertheless, the new staff member has quickly learned the new system and already become an important asset to the ERI community.

As we enter 2022-2023, we are excited to continue our efforts to support world-class research. We know our research community is tackling some of the most important fundamental and applied research for meeting the challenges of our changing world. Many exciting directions and initiatives are coming and we feel ERI is positioned to take advantage of these in the coming years. This annual report provides a snapshot of the Earth Research Institute in 2021-2022, the research we do, and the impact of these efforts.

CCBER Director's Report



UC SANTA BARBARA

Cheadle Center for Biodiversity & Ecological Restoration

Katherine Esau Director's Annual Report, Vernon and Mary Cheadle Center for Biodiversity and Ecological Restoration, Katja C. Seltmann, Period: 7/1/21-6/30/22

The Cheadle Center for Biodiversity and Ecological Restoration fulfills the UC Santa Barbara mission of research, education, and public service through stewardship and restoration of campus lands, preservation and management of the UCSB Natural History Collections, and programs that offer unique educational opportunities for students of all ages.

The Cheadle Center expanded its footprint by about 3000sq/ft to include new collection and office space near the close of this year. We want to thank Joe Incandella and the Office of Research for their support and facilitating the smooth transition into the new rooms. Cheadle Center is presently working with UCSB Design & Construction to develop renovation plans that would improve the functionality of the space and significantly expand our capacity for collections-based biodiversity research. In addition, we are working closely with the UCSB Office of Public Affairs to rebrand our iconography and messaging to follow UCSB guidelines. We look forward to all of these changes as we move into 2023.

Cheadle Center's Collections & Biodiversity program

The **UCSB Natural History Collections** are in the middle of a digital revolution in specimen digitization and research. Over the past six years, the National Science Foundation and the Institute for Museum and Library Services have supported the near-complete digitization of Invertebrate Zoology, Seaweed, and Vascular Plant collections. Recent extramural funding to Cheadle Center researchers and associated faculty indicate that federal agencies support the continued digitization of biodiversity collections and view the Cheadle Center as a center for collections-based research. Since 2020 Cheadle Center faculty and staff received over **2M** in federal funds for research to be conducted in the UCSB Natural History Collections housed at the Cheadle Center. The new federal funding includes support for Ph.D. Research Scientists, Postdoctoral Scholars, and new imaging tools for understanding species evolution and distributions over space and time. These projects are for new camera trap technology, including methods for using museum specimens to train systems for automated species recognition; 3D imaging all of the world's agriculturally important bee species (ca. 5000 species); measuring environmental conditions responsible for declining bee populations; examining the drivers of flowering time using a dataset of >1M digitized herbarium sheets; and discovering the effects of warming oceans on the movement of invasive algae in California.

The Cheadle Center is a **specimen data publisher**. Our digitized collections are shared via the [Global Biodiversity Information Faculty \(GBIF\)](#), and through GBIF, our digital specimen records have been cited **476** times since 2016. **362** of these citations are in peer-reviewed publications. Digital citations are tracked from GBIF, and each dataset is identified similarly to a

published dataset. Authors include those identified citations in their subsequent research products, creating a traceable link to our digitized specimen data. Cheadle Center collection researchers have contributed to this list of publications this year, with an additional 3 published articles, 1 book chapter, and 4 articles under review.



The Cheadle Center's [Big-Bee](#) project studies traits driving bee species decline via imaging.

Cheadle Center's Ecological Restoration & Management program

The 136-acre **North Campus Open Space (NCOS)** restoration project is finalizing all major contracts this year, and the focus of the project is now shifting to endowment fundraising education and outreach. On May 14, 2022, UCSB hosted a Chumash-led ceremony celebrating the opening of the Mesa Trail on North Campus Open Space and the 5th and final year of implementation funding. The parking lot, Carlton-Duncan Visitor Plaza, Duttenhaver Outdoor Classroom, and most signs are now complete on the site. NCOS is valuable to our Santa Barbara/Goleta community. We recorded visitation this year, and NCOS has an average of 30 visitors/hour and more than 109,000 hours of visitation per year, not including educational/academic use. The year four NCOS monitoring and restoration report is available via Cheadle Center's [UCescholarship archive](#). The community can stay connected with the project through [NCOS News](#).



May 14, 2022, opening ceremony at North Campus Open Space

The continued efforts on the site include habitat augmentation and introduction or protection for several endangered species (ca. 7 species). We are building an endowment to support staff to manage the site and provide exceptional educational experiences for our UCSB and surrounding communities. This year we received **5** significant donations totaling **\$1,600,000**

towards the North Campus Open Space endowment bringing us up to \$3.2M, which is about half of our total endowment goal.

Elsewhere on campus, Lisa Stratton, the Cheadle Center's Director of Ecosystem Management, has begun restoration efforts on Campus Point and fundraising for the restoration of East Storke Wetland (near the intersection of Storke & El Colegio roads) and Ellwood Marine Terminal (adjacent to NCOS). Although none of these projects are as large as North Campus Open Space (the largest is ca, 5 acres), they will be significant projects and continue to demonstrate UCSB's commitment to our environment.

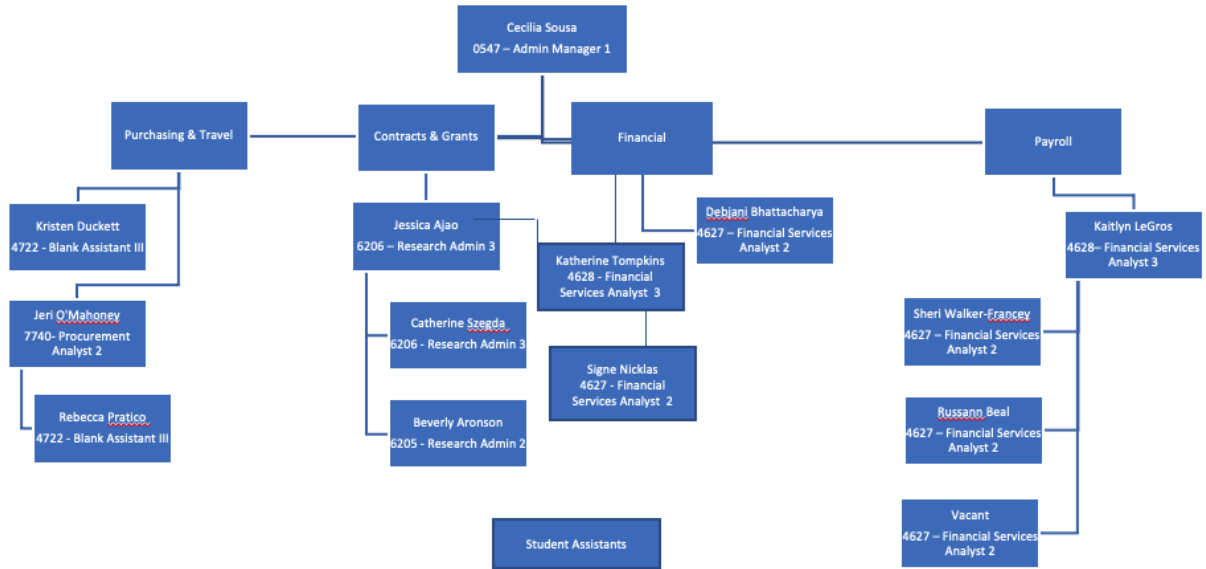
Contributions to Education

The Cheadle Center staff and researchers contribute significantly to the education mission of ERI and the campus. During this fiscal year, we provided research and education internships for 110 UCSB undergraduate students. 54 in our Collections and Biodiversity program, 42 in our Restoration and Ecology program, and 22 in our Kids in Nature environmental education program. Also during this year, Center staff and researchers **taught 8 courses**, including Restoration Seminar, Environmental Education Practicum (ENVS 191), Collection Curation (ENVS/EEMB 96), Restoration Skills (ENVS 95), Vertebrate Ecology and Evolution (EEMB 113), Principles of Evolution (EEMB 131), Ethnobotany (ANTH 197EB), California Flora and Vegetation (EEMB 103A).

One remarkable outreach effort from last year was the certification of Campus as a Xerxes Society [Bee Campus USA](#). Chancellor Yang approved our inclusion in the program centered on a commitment to support pollinators. The Bee Campus initiative is supported by the Cheadle Center and the Landscape and Biotic Environment Change Agent Team of the Chancellor's Campus Sustainability Committee. The certification demonstrates a continued commitment to environmental stewardship, creates pollinator habitats, and increases course offerings.

With all of our success, we have many people to thank. The Cheadle Center Director's Council continues to connect our communities and us. Many members of the Director's Council have made generous gifts to our operations this year and have continued to promote the Cheadle Center. Many thanks to Ed and Sue Birch, Bill and Mary Cheadle, Joseph Cheadle, James Markham, Suzanne and Duncan Mellichamp, Greg and Dale Stamos, Larry Friesen, Jennifer Thorsch, Shirly Tucker, and Sharon Metsch. We are grateful for the benefit of collaborative efforts through the North Campus Open Space Scientific Advisory Committee, the Director's Council, the Cheadle Center Advisory Committee, the Earth Research Institute, the UCSB Office of Research, the UCSB Office of Development, and our Cheadle Center Research Affiliates.

Organization Chart



Advisory Committee, Administrative, and Technical Staff

Directors

Kelly Caylor, Director

Susannah Porter, Associate Director

ERI Advisory Committee

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

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

Dr. Robin Matoza, Associate Professor, Earth Sciences

Dr. Robert Miller, Researcher, Marine Science Institute and ERI

Dr. Roberta Rudnick, Professor, Earth Sciences

Dr. Joshua Schimel, Professor, EEMB and Environmental Studies

Dr. Katja Seltmann, Director of the Cheadle Center for Biodiversity & Ecological Restoration

Dr. Kelly Caylor, Professor, Geography and Bren School (ex officio - ERI Director)

Dr. Susannah Porter, Professor, Earth Sciences (ex officio - ERI Associate Director)

Michael Colee, Director of Computing (ex officio)

Cecilia Sousa, Management Services Officer (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

Porfirio Buendia, Personnel Analyst

Kris Duckett, Travel Assistant

Kaitlyn LeGros, Personnel Supervisor

Signe Nicklas, CCBER Financial Coordinator

Jeri O'Mahoney, Purchasing Analyst

Rebecca Pratico, Purchasing Assistant

Annual Report - Fiscal Year 2021-2022
Earth Research Institute

Catherine Szegda, Contracts & Grants Analyst
Katherine Tompkins, Financial Research Analyst
Sheri Walker-Francey, Personnel Analyst

Michael Colee, Director of GRIT
Aaron Martin, Systems Administrator
Darla Sharp, Information Systems Analyst

Statistical Summary

Personnel Engaged in Research (head count)	
Faculty	30
Professional Researchers (inc Visiting)	20
Project Scientists	3
Specialists	7
Postdoctoral Scholars	21
Graduate Students	75
Undergraduate Students	123
Technical & Research Staff	90
TOTAL	369

Unit Operational Staff (# of FTE):	
Administrative	13
Computing	3
Technical & Service (eg recharge personnel, lab managers)	1
TOTAL	17

Sponsored Research	
Number of Principal Investigators*	127
Proposals Submitted (#)	131
Proposals Submitted (\$ value)	\$54,656,690
Awards issued (#)	87

Awards issued (\$ value)	\$12,481,189
Extramural awards administered during year (#)**	219
Extramural awards administered during year (\$ value)**	\$61,662,861
Costshare funds managed during year (\$ value)**	\$1,800,748
Awarding agencies dealt with (#)***	92

*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 (#)	1
Other projects administered (#)****	80
Other projects administered (\$ value)****	\$2,178,643
Intramural support administered (\$ value)**	\$333,164

****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	\$765,810
Total assigned square footage	18,497

Principal Investigators

Name	Title	Home Department
Andrea Adams	Assistant Researcher	ERI
Peter Alagona	Associate 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
Thomas Bell	Assistant Researcher	ERI
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	Associate Professor	Bren School
Douglas Burbank	Professor Emeritus	Earth Science
Elizabeth Carlisle	Assistant Professor	Environmental Studies
Craig Carlson	Professor	EEMB
Leila Carvalho	Professor	Geography
Kelly Caylor	Professor	Geography and Bren School
Richard Church	Professor	Geography
John Cottle	Professor	Earth Science
Jorge Crempien	Assistant Researcher	ERI
Carla D'Antonio	Professor	Environmental Studies
Frank Davis	Professor	Bren School
Oliver Deschenes	Professor	Economics
Ranjit Deshmukh	Associate Professor	Environmental Studies

Timothy DeVries	Associate Professor	Geography
Qinghua Ding	Associate Professor	Geography
Peter Downs	Researcher	ERI
Jeffrey C. Dozier	Professor Emeritus	Bren School
Thomas Dunne	Professor Emeritus	Bren School
Nathalie Eegholm	Graduate Student	Geography
Zachary Eilon	Assistant Professor	Earth Science
Erika Eliason	Assistant Professor	EEMB
Chris Evelyn	Assistant Researcher	ERI
Damien Farrant	Graduate Student	Bren School
Erica Fleishman	Researcher	ERI
Joan Florsheim	Researcher	ERI
James Frew	Associate Professor	Bren School
Steve Gaines	Professor / Dean	EEMB / Bren School
Vamsi Ganti	Assistant Professor	Geography
Bradley Hacker	Professor	Earth Science
Lee Hannah	Lecturer	Bren School
Barbara Herr-Harthorn	Professor	Anthropology
Paul Hegarty	Senior Development Engineer	ERI
Robert Heilmayr	Assistant Professor	Environmental Studies
Joao Hespanha	Professor	ECE / Mechanical Engineering / CCDC
Laura Hess	Researcher Emeritus	ERI
Patricia Holden	Professor, Director of NRS	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

Edward Keller	Professor	Earth Science
Jennifer King	Professor	Geography
Roland Knapp	Research Biologist	ERI
Kenneth Kosik	Professor	MCDB
Chandra Krintz	Professor	Computer Science
Ashley Larsen	Assistant Professor	Bren School
Hunter Lenihan	Professor	Bren School
Gen Li	Assistant Professor	Earth Science
Lorraine Lisiecki	Professor	Earth Science
Bruce Luyendyk	Professor Emeritus	Earth Science
Andrew MacDonald	Assistant Researcher	ERI
Francis MacDonald	Professor	Earth Science
Sally MacIntyre	Professor	EEMB
Stéphane Maritorena	Researcher	ERI
Robin Matoza	Associate Professor	Earth Science
Marc Mayes	Associate Specialist	ERI
John Melack	Professor	Bren School and EEMB
Joel Michaelsen	Professor Emeritus	Geography
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
Nicholas Nidzieko	Associate Professor	Geography
Roger Nisbet	Professor Emeritus	EEMB
Michael Nowicki	Graduate Student	Geography
Michelle O'Malley	Professor	Chemical Engineering

Ryoko Oono	Associate Professor	EEMB
Isaac Park	Project Scientist	EEMB
Nicol Parker	Graduate Student	Bren School
Uta Passow	Researcher	MSI
Debra Perrone	Assistant 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	Assistant Professor,	Earth Science
Daniel Reed	Research Biologist	MSI
Matthew Rioux	Lecturer	Earth Science
Karl Rittger	Associate Researcher	ERI
Dar Roberts	Professor	Geography
Leonel Romero	Associate Researcher	ERI
Dylan Rood	Assistant Researcher	ERI
Roberta Rudnick	Professor	Earth Science
Alyson Santoro	Associate Professor	EEMB
Joshua Schimel	Professor	EEMB
Katja Seltsmann	Katherine Esau Director of CCBER; Assistant 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
Samantha Stevenson	Assistant Professor	Bren School
Timothy Stillinger	Assistant Researcher	ERI

Lisa Stratton	Research Biologist	ERI
Sangwon Suh	Professor	Bren School
Samuel Sweet	Professor	EEMB
Christina (Naomi) Tague	Professor	Bren School
Toshiro Tanimoto	Professor	Earth Science
Jennifer Thorsch	Project Scientist	CCBER
David Tilman	Professor	Bren School
Anna Trugman	Assistant Professor	Geography
Greg Wahlert	Assistant Researcher	ERI
Ian Walker	Professor	Geography
Zhengming Wan	Researcher Emeritus	ERI
Libe Washburn	Professor	Geography
Ember Waters	Graduate Student	Geography
Marion Wittmann	Executive Director of Natural Reserve System	NRS
Grace Wu	Assistant Professor	Environmental Studies
Xifeng Yan	Professor	Computer Science

Postdoctoral Researchers, Graduate and Undergraduate Students

Postdoctoral Scholars

Agic, Heda
Alessio, Paul
Artiga-Purcell, James
Bagnell, Aaron
Brown, Alexandra
Chamanara, Sanaz
Chowdhury, Kamal
GebreMichael, Merhaw
Madhavan, Midhun
Ostwald, Madeline
Pfab, Franz
Quetin, Gregory
Riedman, Leigh Anne
Roshan, Saeed
Scaff Fuenzalida, Maria L
Seto, Daisuke
Smith, Colleen
Stephens, Brandon
Thaw, Melissa
Thompson, Callum F
Walker, Kendra
Zhou, Wencai

Graduate Student

Researchers

Anderson, Olivia
Anttila, Eliel
Apen, Francisco E
Bagnell, Aaron C
Bai, Ruixia
Baik, Jiwon
Baxter, Ian
Brande, Kailli
Brunsvik, Brennan R
Burke, William D
Capece, Lena
Castillo Guerra, Silvana

Coello, Merissa L
Das, Debsmita
Daum, Kristofer
De Negri, Rodrigo
De Orla-Barile, Marian
Divola, Claire
Gellman, Jacob
Graup, Louis J
Green, Rachel
Greenberg, Evan
Griessbaum, Niklas F
Hardardottir, Sunna
Harrichhausen, Nicolas
Harris-Gavin, Juniper
Heckman, Christopher J
Hilton, Annette
Hobart, Bethany
Horton, Elizabeth
Kefela Araya, Timnit
Kibler, Christopher
Kim, JiHyun
Kramer, Sasha
Li, Weiwei
Li, Zhe
Maher, Sean
McElroy, Mary
McMahon, Conor
Medri, Elisa
Morgan, Bryn
Moser, Amy
Mu, Ye
Nowicki, Michael
Ochoa, Maximilian
Ortiz, Hugo
Paul, Nicola
Penserini, Brian
Petruska, Jon
Pfleger, Cali

Pu, Judy
Reynolds, Rebecca
Ringwood, Mary
Romanelli, Elisa
Rose, Kaelynn
Runte, Gabe
Salas, Cristhian
Sanderson, Richard
Sten, Michaela
Tasistro-Hart, Adrian
Torres, Rachel
Valera, Jose
Varga, Kevin C
Xiao, Han
Yamamoto, Kana
Zhao, Feifei

Undergraduate Students

Albert, Alexa
Allen, Jean
Anaya, Christopher
Anggreni, Putu "Saoirse"
Arrigoni, Emily F
Azadpour, Elmera
Baez, Carlos
Bailey, Melea
Banerjee, Priyanka
Barbaglia, Gina S
Baxter, Ethan
Brokaw, Richard
Brown, Meagan
Burkey, Dylan
Cadogan, Mary
Clava, Lindsey
Cardanini, Emily
Castillo Guerra, Silvana
Cavoli, Nicholas
Celebrezze, Josephe

Chaves, Hernandez, Celeste
Cheng, Teresa
Coello, Merissa
Chang, Helen
Contreras, Krystal M
Darwell, Jade
Dave, Sara
De Orla-Barile, Marian
Deng, Tiffany
Dextre, Andre
Dickison, Cole
Do-Linh, Halina
Dobson, Alistair
Egg, Erika
Elkouby, Malik
Fea Ruiz, Sofia
Foxfoot, Iris
Frazer, Seth
Fuss, Nolan
Garcia, Aylin V
Gilliam, Peyton
Gonzalez, Martha
Gundu, Rishit
Hacker, Allison
Harris, Lauren
Hernandez, Devin
Huitema, Justin
Huy, Mattieu
Johnson, Avery
Johnson, Hazel
Jolish, Jacob
Jones, William
Jurgensen, Emma
Kerstan, Daniel
Kollar, Cameron

Komessar, Emily
Kopp, Emily
Kousba, Hagar
Kracha, Christopher
Lamb, Brandee
Le, Tuan
Lee, Lauren
Leslie, Mika
Lewin, Grace
Li, Lena
Li, Zhe
Mazariegos, Aran
McKernan, Bailey
Meyers, Max
Mills, Jackson
Mu, Ye
Nash, Deanna
Nava, Perla R
Nguyen, Roger
Nichols, Shauna
O'Brien, Molly
Parkinson, Anne-Marie
Pastore, Sydney
Perry, Daniel
Peyton, Aaron
Pinhas, Vered
Quintero, Jerry
Radliff, Rikki
Rathbone, Vanessa
Reinhart, Sophie
Rivers, Marie
Roberts, Max
Robles Olague, Griselda
Roque, Lucas
Ruggeri, Rayna
Sandig, Kimiko

Santos, Julia
Schaberg, Emma
Schattle, Elizabeth
Schmahl, Brian
Schmidt, Kylie
Siegler, Rebecca
Silberstein, Ian T
Sipin, Terrell
Smith, Shelby
Stec, Victoria
Stein, Jack
Swigart, Phoebe A
Tessier, Kevin
Thompson, Julia
Thrift, Charlie
Tofft, Jackson
Trebesch Heberlein, Evan
Tyson, Dakota
Umsted, Lyndsey
Van Dyck, Pablo
VanBrocklin, Seth
Varga, Kevin
Walker, Marian
Wang, Alice
Wang, Jo
Waters, Ember
Weinstein, Haley
White, Elisia
Winter, Matthew
Woo, Adam
Wu, Yixuan
Xie, Henry
Yang, Haozhe
Yang, Kaifeng
Young, Samantha

External Participation

Allen, James	McLaren, Lynn
Bart, Ryan	Mitarai, Satoshi
Bell, Thomas	Mitchell, Jonathan
Bodwitch, Hekia	Montesanto Shirley, Anita
Catlett, Dylan	Mortimer, Monika
Che, Tao	Murphy, Fionnuala
Clark, Ryan	Naesborg, Rikke
Cole, Elizabeth	Niemeyer, Ryan
Cortes Cortes, Alicia	Norris, Jesse
Crempian, Jorge	Novo, Evlyn
Dariel, Laurine	Ohlmann, J C
De Figueiredo Ribeir, Fernanda	Pelletier, Lisa
De Lima, Fabio	Poelen, Jorrit
Dudney, Joan	Qin, Lei
Eggen, Michael	Resch, Franz-Josef
Engle, Diana	Romero, Leonel
Fang, Yingfei	Rood, Dylan
Feng, Xiaofang	Roshan, Saeed
Feraud, Marina	Rudorff, Conrado
Fernandes Amaral, Joao Henrique	Sabathier, Romy
Fisher, George	Sanderson, Richard
Florsheim, Joan	Scaff Fuenzalida, Maria
Forsberg, Bruce	Sousa, Dan
Ge, Yuan	Stella, John
Gimmel, Matthew	Stoimenov, Peter
Gonzalez, Victor	Sun, Xiating
Hao, Xiaojie	Thrift, Charlie
Holmgren, Mark	Tucker, Shirley
Horsley, Pamela	Uhda, Antije
Huang, Huilin	Wan, Zhengming
Kamal-Heikman, Shithi	Warter, Maria
Kennedy, Daniel	Wilson, Houston
Kostadinov, Tihomir	Zhang, Fan
Kung, Giar-Ann	Zigner, Katelyn
Love-Anderegg, Leander	

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.

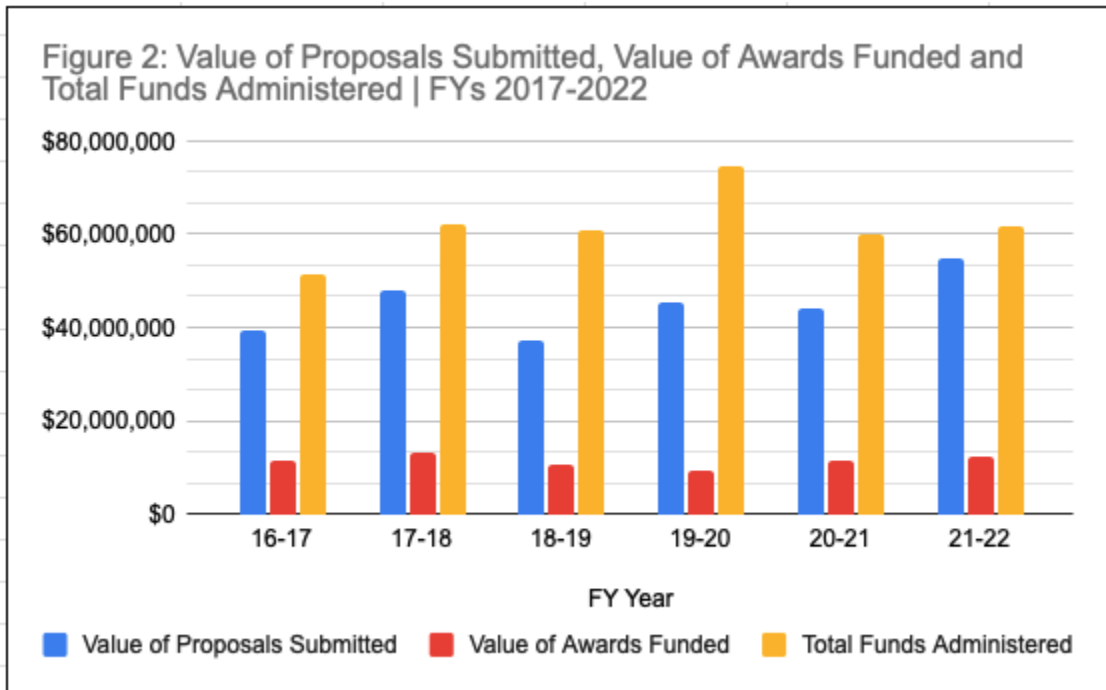
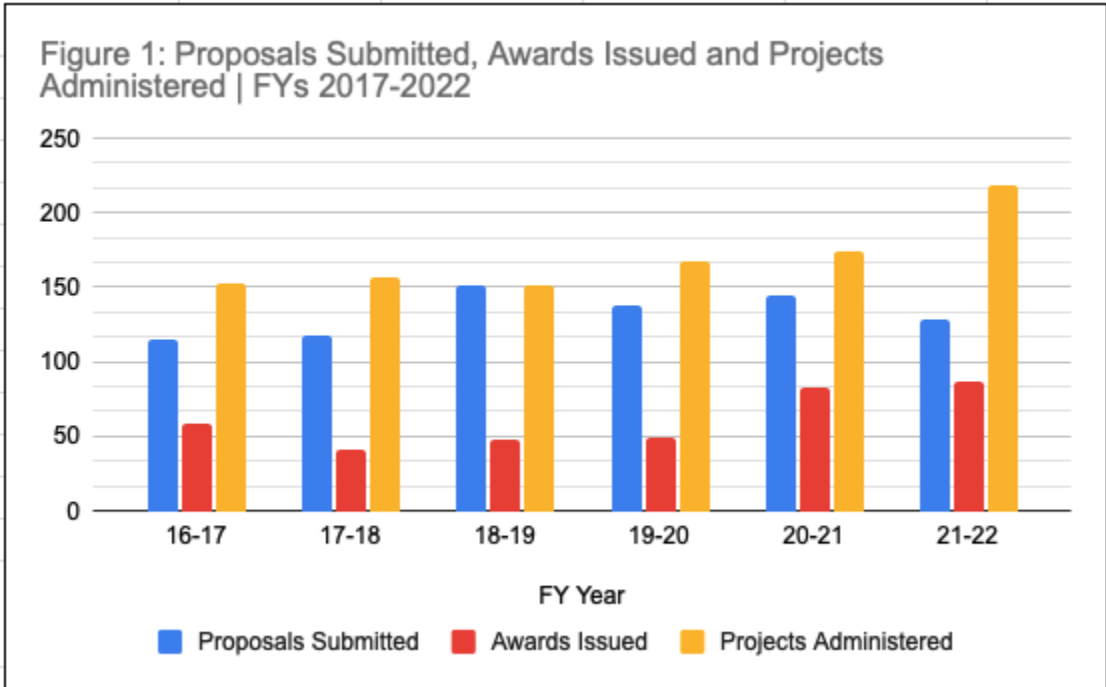
Associated Students Coastal Fund Awards:

PI(s)	Title
DeVries	UCSB Nearshore Wave Forecasting System
Evelyn	Behavioral and Disease Ecology of an Island Endemic Amphibian
Evelyn, Seltmann	Supplemental travel funds, Behavioral and Disease Ecology of an Island Endemic Amphibian
Holden	Wastewater Surveillance of SARS-CoV-2 for the Santa Barbara Region
Holden	Keeping Microplastics Out of Santa Barbara's Ocean
Lee, Seltmann	The proof is in the pollen: using pollen metabarcoding techniques to monitor native pollinator communities on the UCSB campus and restored coastal areas
Nidziko	UCSB Ocean Report
King, Pagenkopp, Stratton	Greenhouse Gas Fluxes of an Intermittently Tidal Salt Marsh
King, Pagenkopp, Stratton	Greenhouse Gas Fluxes of an Intermittently Tidal Salt Marsh(2)
Schimel	Soil amendments in coastal grassland restoration for carbon sequestration
Schimel	Climate - Root Feedbacks on Terrestrial C stocks via Triggering and Enzyme Synthesis, Two Mechanisms of Priming.
Schimel	Investigating effects of organic amendments on inorganic carbon stocks in coastal grasslands
Joyner, Seltmann	A Sweet Deal: understanding plant-pollinator interactions in coastal ecosystems around the UCSB campus through the lens of nectar quality
Seltmann	Santa Cruz Island Trips for Undergraduate Bee Researchers
Seltmann	Conversations with Collections: Documenting Coastal Change

	and Ecology through Photography
Seltmann	CCBER Junior and Community Scientists
Seltmann	Plan Bee
Seltmann	Funding Undergraduate Research Experiences in Invertebrate Zoology Collections and Curation
Seltmann	Kids in Nature Peer-Peer Environmental Education Program Internships
Seltmann	Algae and Art, creating a STEAM student collaborative interpretive display exploring the history, science, and art of seaweed using the Cheadle Center of Biodiversity and Ecological Restoration Seaweed Collection (CCBER).
Stratton	Coastal Ecology Connection for Early Childhood Education and Pre-K Nature Based Education at North Campus Open Space
Stratton	Coastal Ecology Connection for Early Childhood Education and Pre-K Nature Based Education at North Campus Open Space
Stratton	Establishing the endangered Marsh Sandwort
Stratton	Campus Lagoon 2022: Building on Success
Love, Stratton	Return of the Wetland
Stratton	Restoration Internship Program 2022
Stratton	North Campus Open Space Grand Opening Community Day
Stratton	Restoration Interns: Fall 2019, Winter & Spring 2020
Stratton	UCSB Campus Lagoon Restoration
Stratton	Coastal Ecology Literacy for Early Childhood Education and Pre-K Nature Based Education at North Campus Open Space
Love, Stratton	NCOS Impact Video and Long Film Filming/Post Production
Stratton	Coastal Biodiversity and Restoration Research and Monitoring Internships
Stratton	Restoring a Unique Coastal Seep to UCSB
Stratton	Campus Lagoon Restoration and Transformation 2021
Stratton	Assessing E-DNA as a Restoration Tool
Stratton	CCBER Plant Habitat Book - Revision & Re-issue
Wahlert	Inventory of the Seaweeds of Santa Rosal Island, Santa Barbara County, California

Wahlert	Providing student training and work experience in the Cheadle Center's natural history museum: Furthering our mission to document the biodiversity and ecological conditions of the Santa Barbara region.
Wahlert	Coralline Calling Chronus: An Oceanic Resurrection Through Time Measuring Calcium Carbonate

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 17 spaces which are a mix of research offices and Herbarium/Natural History Collection space totalling 4,048 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)