



ANNUAL REPORT OF THE UCSB NATURAL RESERVE SYSTEM TO THE UCSB OFFICE OF RESEARCH

FY 2022-2023

PREPARED BY:

John Cottle, Ph.D.

Professor, Department of Earth Science
Interim Director, UCSB Natural Reserve System
&

Laurie Cussalli, M.S.
UCSB Natural Reserve System Business Officer

For further information, please contact:
John Cottle, cottle@geol.ucsb.edu or x7315

Table of Contents

A. Mission Statement.....	3
B. Overview.....	3
C. Executive Summary.....	4
1. Accomplishments and Impacts.....	4
2. Five-Year Projection of Natural Reserve System Plans.....	6
D. Organizational Chart.....	7
E. Advisory Committee, Administrative, and Technical Staff.....	8
F. Statistical Summary.....	9
G. Principal Investigator List.....	13
H. Names of Graduate and Undergraduate Students.....	14
I. External Participation.....	17
J. Other Projects and Activities (Instructional Activities Support).....	25
1. Courses Facilitated.....	25
2. Graduate & Undergraduate Student Support Provided by the UCSB NRS.....	25
<i>Graduate Education Support</i>	25
<i>Graduate Student Financial Support Provided by the UCSB Natural Reserve System</i>	26
<i>Undergraduate Education Support</i>	26
<i>Course Offerings</i>	27
<i>Internships and Docent Programs</i>	27
K. Required Supplementary Materials.....	28
1. Fiscal information.....	28
2. Space.....	28

A. Mission Statement

The mission of the University of California Natural Reserve System (UC NRS) is to contribute to the understanding and wise stewardship of the Earth and its natural systems by supporting university-level teaching, research, and public service at protected natural areas throughout California.

B. Overview

In 1965, the UC Board of Regents established the UC NRS to provide protected environments representing California’s natural habitats for research, education, and public service. In the over 50 years since its formation, the UC NRS has grown from seven to 41 Reserves that encompass over 850,000 acres under UC NRS management. The UC NRS protects California’s natural heritage for the public trust and provides protected natural areas for research and teaching to contribute to the understanding and wise management of the Earth and its natural systems. The ecosystems and facilities offered by the 41 Reserves are available to scientists, humanists, educators, students, and the public from throughout the world. The Reserves also serve as a gateway to more than a million acres of public lands. The UC NRS is a UC-wide program that serves the overall UC Academic Affairs. The UC-wide UC NRS, based in the UC Office of the President, supports core initiatives across campuses, such as the California Heartbeat Initiative, the Climate Monitoring Network, the California Ecology and Conservation Course, and a UC President’s Catalyst Initiative on climate change (Institute for the Study of Ecology & Evolutionary Climate Impacts, or ISEECI). Each Reserve is assigned to one of nine UC campuses for administration.

UC Santa Barbara (UCSB) manages seven of the 41 UC NRS Reserves, the most of any UC campus. The seven sites within the UCSB NRS offer a unique assemblage of protected wildlands throughout Central and Eastern California. UCSB’s Reserves encompass many of the State’s major ecosystems preserved in as undisturbed a condition as possible to support University-level research and teaching programs. The ecosystems and facilities offered by each Reserve are available to faculty, researchers, and students from all UC campuses, and to users from other institutions, public or private, throughout the world. In FY22-23 across all seven of UCSB’s Reserves, there were 11,051 users and 46,294 user days, with use distributed across multiple types including research, university-level classes, and public service (Figure 1, left). Relative to FY21-22, this represents a greater than 36% increase in usage. This significant increase in use is attributed to the departure from the UCSB Research shutdown and continuing recovery from the COVID-19 pandemic.

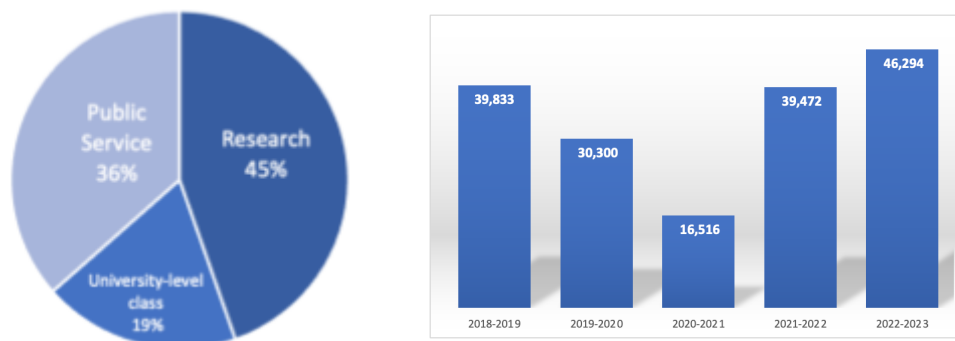


Figure 1. Left: FY 2022-2023 Use of all UCSB Natural Reserve System sites. The categories represented include (1) Research (Research), (2) Classes (University-Level Classes), (3) Public Service (which includes administrative, government or agency, and other use types; Volunteers (people who support reserve operations and programs); K-12 (Students and instructors), and others. Right: UCSB NRS Total User Days, FY2018-2019 to FY22-23

Most UCSB Reserve sites are managed by a dedicated Reserve Director and associated support staff. An exception is the Valentine Eastern Sierra Reserve, whose Reserve Director along with staff manages two sites: the Sierra Nevada Aquatic Research Laboratory (SNARL) and the Valentine Camp Reserve. The Reserve Directors live onsite (with the exception of the Carpinteria Salt Marsh, which has no overnight accommodations or residential facilities) and manage the day-to-day operations, facilitate research, University-level coursework, and public service goals of the UC NRS. The tasks of the Reserve Directors are wide-ranging and include, but are not limited to, grant writing, fundraising, land management, budget management, employee supervision, database management, restoration, outreach and education, vehicle maintenance, interacting with and facilitating researchers, and research use of the facilities, and stakeholder engagement. The Reserve Directors are supported centrally by the UCSB NRS administrative office, located in the Marine Science Research Building on the UCSB campus.

C. Executive Summary

UCSB manages seven of the 41 UC-wide NRS Reserves under the UCSB Office of Research. The administration of the seven Reserves is the responsibility of the UCSB NRS Campus Office. Since 1970, when Coal Oil Point Reserve (COPR), located on UCSB's West Campus, became the first of seven Reserves managed by UCSB, the UCSB NRS has continued to excel in providing top-tier researchers, university-level classes, and other public and private users a means by which to access California's environmental resources and utilize facilities and other assets available at Reserve sites.

1. Accomplishments and Impacts

RESERVE USE & IMPACT

- **Number of Users:** Each year, thousands of users from around the world conduct field research in the protected landscapes of UCSB's Reserves. Over the period FY22-23, the seven sites of the UCSB NRS totaled 11,051 users, which is similar to FY18-19, indicating that the number of individuals using the Reserves is returning to pre-COVID-19 pandemic levels.
- **Number of User days:** User days, defined as the sum of the number of days spent on Reserves across all users, is another metric of Reserve use that is reported by the UC NRS to UCOP. During FY22-23 the UCSB NRS totaled 46,294 user days, which is 16% less than FY18-19.
- **Faculty Use:** Faculty use at UCSB Reserves increased significantly in FY22-23, totaling 427 unique individuals over 3,210 user days. Individual faculty members utilizing UCSB Reserves originated from multiple institutions, including UCSB, and non-UCSB UC campuses, as well as from California State University, Community Colleges, other California university-level institutions, and U.S. or international University level institutions outside of California.
- **Research Projects:** The UCSB NRS Reserves host a wide variety of research projects carried out by individuals originating from UCSB, national and international institutions. In FY22-23 there were 217 research projects carried out at UCSB NRS Reserves.
- **Publications:** Each year, a number of publications are based on the use or access to amenities and natural resources associated with UCSB Reserves. In 2022, there were a total of 177 publications, and in 2023 there were a total of 130 publications¹. Represented disciplines included: biology,

¹ Publication data for 2023 through 11/1/23

ecology, physiology, evolution, hydrology, anthropology, archeology, atmospheric science, toxicology, geology, geography, geophysics, endocrinology, microbiology, history, earth science, and others.

- **University Level Instruction:** In FY22-23 there were 86 University-level instruction (classes) that used the 7 UCSB Reserves. This use included 2,194 users over 8,734 user days compared to 1,798 users over 6,586 user days in 2021-22. The majority of university-level class use of UCSB Reserves was by UCSB and UC students and instructors. The UCSB Reserves also service: other UC Campuses, California State Universities, Community Colleges, other California Colleges/Universities, international Universities or Colleges, and nongovernmental organizations (NGO)/Non-Profit Entities and Governmental Agencies in support of University level instruction.

FACILITIES AND CAPITAL IMPROVEMENTS

- In FY22-23 there were several ongoing or new capital projects occurring on behalf of UCSB Natural Reserve facilities and infrastructure. These additions were funded through a combination of UCSB NRS donor support, California State Bond Measure funds (Proposition 68), the UC NRS (UCOP), and grants (intramural and extramural). The following is a list of UCSB NRS Capital Projects in FY22-23:
 - Carpinteria Salt Marsh Reserve Education and Outreach Project – Solar equipped shed and class tables (Grant and UCSB NRS funded)
 - Coal Oil Point Reserve – Ongoing maintenance and repair of fences, signs, and trails (UCSB NRS funded)
 - Sedgwick Reserve Barn Renovation/Maintenance (Donor Funded)
 - Santa Cruz Island Reserve Infrastructure project – Planning stages (Proposition 68 and UCSB NRS donor-funded)
 - Sierra Nevada Aquatic Research Laboratory – Aspen House ADA improvements (Proposition 68, UCSB ACCA Committee, UCOP, and Donor Funded)

FUNDING

- **Grants** are a major and necessary source of funding for capital improvements, maintenance, land management, and programmatic needs at the UCSB Reserves. Each Reserve Director expends significant effort to identify and apply for grant funding from external or UCSB sources in order to support the operations and programs at Reserves. In FY2022-2023 the UCSB NRS successfully utilized or newly acquired \$711,678 in grant funding from the California Wildlife Conservation Board (Proposition 68), National Science Foundation, and UCSB TGIF and UCSB Associated Students Coastal Fund to carry out: strategic planning efforts, educational programming, and to add research and educational infrastructure to Reserve sites, manage forests and vegetation, and improve energy efficiency and sustainability at Reserves.
- **Gifts and Donor Support:** In FY2022-2023 the UCSB NRS received a total of 237 gifts totaling \$498,541 in donor support as new gifts. This is a decrease of 54.6% relative to FY21-22, due to almost half a million dollars in major gifts given in FY21-22 for specific projects. Included in the FY22-23 gifts are the new Edwin P. Pister Memorial Fund, the GauchoBoost campus campaign for student support at Santa Cruz Island Reserve, and a \$75,000 pledge over five years for the Coal Oil Point CORE Diversity Program for Student Internships.

2. Five-Year Projection of Natural Reserve System Plans

The UCSB Natural Reserve System envisions a transformative five-year plan aimed at enhancing infrastructure and bolstering staffing capabilities. The primary objective is to establish robust data and network support, creating an environment conducive to world-class research and university-level teaching. By strengthening these foundations, the UCSB NRS aspires to extend the reach and significance of its sites, ensuring their broader impact and increased utility. Over the next five years, there are a number of plans specific to each Reserve as well as the unit overall. The following provides a brief description:

- The UCSB Natural Reserve System can only achieve its mission with full and permanent funding for critical staff. At present, only Rancho Marino Reserve, which is majority privately funded, has satisfied this goal. The UCSB NRS would like to work collaboratively with the Office of Research to develop a long-term sustainable plan for permanent funding for UCSB NRS critical staff to deliver on the core mission of the UC NRS.
- Philanthropic fundraising provides over 60% of the UCSB NRS operating budget. The UCSB NRS cannot operate at its current level without donor support. Fundraising activities will continue to be a major activity of the UCSB NRS over the next five years, including achievement of the following goals: (1) working to build the Sedgwick Operating endowment to \$7.5M, (2) increasing Valentine Eastern Sierra Reserve Endowments, (3) gaining core staffing and programmatic support for COPR, (4) acquiring research support for CSMR, (5) gaining major infrastructure, operations, research and education support for Santa Cruz Island Reserve (\$16M).
- Improvement of information technology, network, data resources, and staffing is urgently needed. Technical infrastructure and the expertise to support this are sparse and inadequate for the UCSB NRS. This year NRS hired a data manager as part of a 2-year grant with 20% FTE allocated to UCSB-NRS data management. This is a step forward for continuity and collaboration between our seven sites but has underscored the need for long-term centralized data management and coordination in leveraging the great potential of research at UCSB-managed reserves. Over the next five years, the UCSB NRS seeks to improve this by acquiring funds for and hiring a Director of Information Technology to assist with field communications infrastructure, database management, research data coordination, and other environmental observation/research technologies.
- With its proximity to campus and the Santa Barbara community, Coal Oil Point Reserve is the local representation of the UCSB NRS to the UCSB campus and the public. The delicate balance of protecting the reserve resources and projects and managing public use for recreation has always been central to the reserve's management plan. Over the next five years, the UCSB NRS plans to implement the recommendations of the COPR Advisory Committee to solve issues of unauthorized use that were detrimental to the reserve's resources. COPR is also diversifying and increasing its support for undergraduate students seeking field experience in research, conservation, and restoration.
- The Valentine Eastern Sierra Reserves, SNARL, and Valentine Camp represent the UCSB NRS' two sites with the greatest amount of infrastructure (a total of 26,421 sq ft. and 10,666 sq ft., respectively), K-12 programming, and User Day/User ratios (indicating heavy and impactful use of facilities and staff time), relative to any other UCSB Reserve. Further, the high elevation and extreme

snow conditions increase costs and staff time to maintain these facilities and programs. Increased staff support is significantly needed at VESR and fundraising and recruitment to support these needs will be a major objective around those Reserves.

- Sedgwick Reserve is becoming a hub for prescribed burn and fire ecology research, with key linkages to CA State initiatives that address wildfire mitigation, meet prescribed burn acreage targets, and train a knowledgeable workforce. Sedgwick's 10-year prescribed burn vegetation management plan and associated annual fire fighting training exchanges are fostering collaborations and increasing use. However, Sedgwick still experiences regular communications and infrastructure failures which are contrary to fire safety requirements. Within 5 years, Sedgwick will convert to a sustainable solar system, maintain battery and diesel backup power systems, install a satellite and radio communications system, and repair the aging and labyrinthine plumbing.
- Rancho Marino Reserve historically had trailers and tent cabins to provide additional protected housing for visiting researchers and classes but has recently lost part of this infrastructure. Rebuilding vitally needed accommodation capacity is a key priority.
- The Carpinteria Salt Marsh Reserve is engaging in several activities designed to increase the visibility and usability of the Reserve. Planned infrastructure improvements include installing solar panels and storage batteries, construction of an outdoor meeting area, production of educational signage, and landscaping. The Reserve continues to work with outside agencies to fund restoration and conservation activities including the removal of highly invasive, non-native plants and re-introduction of the endangered Ridgeway's Rail. The Reserve Director has begun revising the Reserve's Management Plan with the goal of finalizing the document before the Reserve's 50th anniversary in 2027.
- The Santa Cruz Island Reserve is the major recipient of Proposition 68, Wildlife Conservation Board-administered, infrastructure funding. Facilities improvements, including two new staff housing units, will be built on the Island with these funds. Funds have been received on campus and planning continues with UCSB Design and Construction Services and Budget & Planning. Included in this planning were two visits by the US Marines airlift group which will be transporting parts of the housing units to the island.

D. Organizational Chart

The UC NRS Systemwide operates under the general leadership of its Executive Director, Dr. Steven Monfort. For FY22-23 UCSB NRS was led by the UCSB NRS Executive Director, Marion Wittmann, and Faculty Director, Prof. Patricia Holden. Wittman and Holden also served as members of the University-wide NRS Advisory Committee. The Executive Director is responsible for the day-to-day operation and management of the 7 UCSB Reserves. The UCSB NRS is managed under the supervision of the UCSB Office of Research (Figure 2). The executive director, Dr. Marion Wittmann, departed UCSB in August 2023, and, as of November 2023, recruitment for this position is underway. Prof. Holden stepped down as Faculty Director in June 2023 and was replaced by interim Director Prof. John Cottle in August 2023.

The UCSB NRS Campus Office is responsible for the management of the financial resources of the UCSB NRS and assists Reserves with administrative functions. The Office acts as the link between the remote

reserves and UCSB campus departments. In addition to the UCSB NRS Director, the Office staff includes the Executive Director, Business Officer, and Financial Analyst. The UCSB Office of Development's Directorship of Ecological and Environmental Sciences includes the UCSB NRS in its portfolio. The UCSB NRS Campus Office is located in the Marine Science Research Building.

UCSB Natural Reserve System Organizational Chart 2022-2023

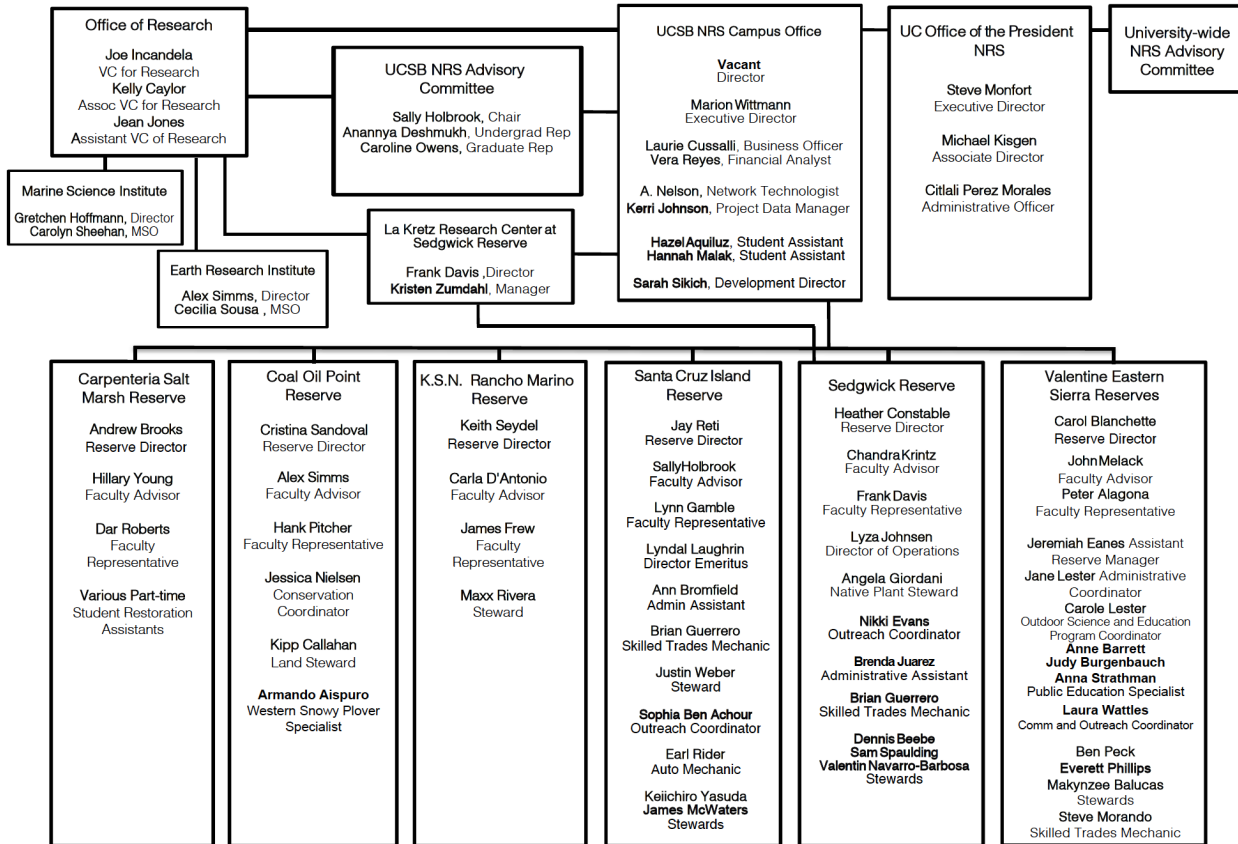


Figure 2. UC Santa Barbara Natural Reserve System Organizational Chart, 2022-2023. Names in bold indicate positions added in FY 22-23.

E. Advisory Committee, Administrative, and Technical Staff

UCSB Natural Reserve System Advisory Committee

The UCSB Natural Reserve System is guided by an Advisory Committee comprised of UCSB faculty, undergraduate and graduate student representatives, and external advisors from non-UCSB organizations. The UCSB NRS Advisory Committee met via Zoom four times during the 2022-2023 academic year. The meetings were well attended, and a number of important issues were discussed. Prior to each meeting, quarterly summary reports from UCSB's seven Reserves were circulated to the committee, and these provided background on progress and activities at each Reserve, as well as a foundation for committee discussions. The FY 2022-2023 UCSB NRS Advisory Committee included:

Sally Holbrook	Committee Chair; Ecology, Evolution, and Marine Biology
Patricia Holden	Director (ex-officio); Bren School of Environmental Science and Management
Marion Wittmann	Executive Director (ex-officio); Natural Reserve System

Carpinteria Salt Marsh Reserve

Hillary Young Faculty Advisor (ex-officio); Ecology, Evolution, and Marine Biology
Dar Roberts Faculty Representative; Geography

Coal Oil Point Reserve

Alex Simms Faculty Advisor (ex-officio); Earth Science
Hank Pitcher Faculty Representative; College of Creative Studies

Kenneth S. Norris Rancho Marino Reserve

Carla D'Antonio Faculty Advisor (ex-officio); EEMB, Environmental Studies
James Frew Faculty Representative; Bren School

Santa Cruz Island Reserve

Sally J. Holbrook Faculty Advisor (ex-officio); Ecology, Evolution, and Marine Biology
Lynn Gamble Faculty Representative; Anthropology

Sedgwick Reserve

Chandra Krintz Faculty Advisor (ex-officio); Computer Science
Frank Davis Faculty Representative; Bren School

Valentine Eastern Sierra Reserves

John Melack Faculty Advisor (ex-officio); Ecology, Evolution & Marine Biology, Bren School
Peter Alagona Faculty Representative; History, Environmental Studies

Community Representatives

John Randall Lead Scientist, California Chapter, The Nature Conservancy
Meredith Hendricks Executive Director, Land Trust of Santa Barbara County

UCSB Student Representatives

Anannya Deshmukh Undergraduate Representative; Associated Students
Caroline Owens Graduate Representative; Graduate Student Association

UCSB NRS Administrative and Technical Staff

- Marion Wittmann, Executive Director
- Laurie Cussalli, Business Officer
- Deby Puro, Financial Services Analyst 3
- Fukiko Miyazaki/Vera Reyes, Financial Analyst
- Fernanda Flores, Work-study, Undergraduate student
- Hannah Malek, Work study, Undergraduate student
- Hazel Aguiluz, Work study, Undergraduate student
- Anthony Nelson, Communications Technician and Specialist

F. Statistical Summary

The following is a summary of the Reserve use statistics for the 7 UCSB Natural Reserve System sites for FY22-23. The UCSB Natural Reserve System's seven sites offer a unique assemblage of protected wildland

sites throughout Central and Eastern California. UCSB's Reserves encompass many of the State's major ecosystems preserved in as undisturbed a condition as possible to support University-level research and teaching programs. The ecosystems and facilities offered by each Reserve are available to faculty, researchers, and students from all University of California campuses, and to users from other institutions, public or private, throughout the world. In FY22-23 there were 46,294 user days at all 7 of the UCSB NRS sites with the highest use category being Research (45%) (Figure 1; Table 1). The UCSB NRS is *the* most utilized of the 41-site system across the University of California, with UCSB's reserves accounting for 25% of the total number of users visiting all UC Reserves, and 32% of all user days.

Data Used in this Report

The UC Natural Reserve System tracks Reserve use with its online Reserve Application Management System (RAMS). Those wishing to visit a Reserve provide information about their role, their reason for visiting, and other data via the online application. Reserve staff grants permission for use that is deemed appropriate. Most Reserves are closed to the public, except for guided public service events. RAMS is a user-driven system, with the majority of data provided by users themselves. Due to differences in Reserve operations and facilities, the methods used to collect and compile the data may vary among Reserves. The metrics collected via RAMS correspond to metrics required by the National Science Foundation infrastructure programs, and they are commonly used across national and international field stations. The metrics presented here are those most commonly collected by Reserves by RAMS and are the measures that are well suited to demonstrate the utilization of UC NRS Reserves.

For nearly all Reserves, permission to use a Reserve is granted on the basis of information provided via RAMS applications. Coal Oil Point Reserve has a unique use category due to its public accessibility in certain areas of the Reserve. Due to the nature of this public access without restrictions or application requirements, there are numerous users who engage in passive recreation at Coal Oil Point Reserve (via beach access, trail use, and other access points). These small portions of Coal Oil Point Reserve which have had historic public access remain open. The following statistics describing NRS use and facilities were generated using RAMS data collected during FY22–23 unless otherwise noted. For all Reserves, including Coal Oil Point Reserve, use volume is tracked in two ways:

1. *Users* — the number of unique individuals who visited a Reserve
2. *User days* — the number of days that users spent at a Reserve

The type of Reserve use falls into one of three categories:

1. *Research* – For the purpose of carrying out field or laboratory-based research applications.
2. *University-level class* – For the purposes of university-level instruction.
3. *Public Service* – Other uses, including K–12 classes, docents, volunteers, and agency use.

Users

Users, or the number of unique individuals who visit a Reserve, is an important indicator for the volume of unique exposures to Reserve sites and of the characteristics of the use. "User" is a metric required by the National Science Foundation infrastructure support programs (e.g., the Field Stations and Marine Laboratories, or FSML, program) for proposals and for evaluating the success of programmatic and infrastructure support.

Each year, thousands of users from around the world conduct field research in the protected landscapes of UCSB's Reserves. The UC NRS, as a whole, averages approximately 44,000 users per year. In FY22-23,

the UCSB NRS facilitated 11,051 users (Table 1) – almost 3,000 more than FY20-21 (with 8115 users), again, with the difference due to continued recovery from the COVID-19 pandemic.

The NRS draws investigators for many reasons: the natural landscapes represent a living library of California's diverse ecosystems; Reserve lands are protected for the long term, enabling researchers to conduct experiments without fear of the land or their equipment being disturbed; data archives enable scientists to build on decades of previous research; overnight accommodations, laboratories, reference collections, internet access, and other amenities make field work more comfortable and productive.

More than 75 undergraduate courses from UCSB, across the UC and CSU and Community College systems in California, the U.S., and abroad, visit UCSB NRS Reserves in each typical year. Class subjects range from botany to zoology, archaeology to environmental planning, and public health to the performing and visual arts. In the field, students learn by doing. They readily absorb concepts difficult to teach in a traditional classroom, such as how to identify, quantify, and observe biota and physical features in the field using professional standards. Their direct observations enrich lectures and textbook readings.

The NRS is committed to public service on many levels. From elementary school field trips to courses on botanical illustration to scientific lecture series, Reserves host a range of learning opportunities for the general public. As authorities on regional ecosystems, NRS personnel inform and improve wildland planning and management efforts. As stewards of thousands of acres of marine and terrestrial protected areas, Reserves help ensure the continued health of California State ecosystems. Finally, the NRS influences conservation and land management practices well beyond State borders by participating in a broad array of international biodiversity and training programs.

Table 1. UCSB Natural Reserve System Users (the number of unique individuals who visited a Reserve) in FY22-23. CSMR = Carpinteria Salt Marsh Reserve; COPR = Coal Oil Point Reserve, KNRM = Kenneth S. Norris Rancho Marino Reserve, SCIR = Santa Cruz Island Reserve, SEDG = Sedgwick Reserve, SNARL = Sierra Nevada Aquatic Research Laboratory, VALC = Valentine Camp Reserve

Reserve	Research	University-Level Class	Public Service	Housing	Total
CSMR	126	284	241	0	651
COPR	219	540	772	0	1531
RMR	89	354	101	14	558
SCIR	99	235	444	0	778
SEDG	332	317	2971	12	3632
SNARL	185	386	1989	0	2560
VALC	100	78	1163	0	1341
Total	1150	2194	7681	26	11051

User Days

User days represent the number of days that the above-reported number of Users were onsite at each Reserve. User days can vary by activity and need for utilizing the site and include any 24-hour or less utilization of a Reserve or its amenities. Each year, there are many thousands of user days at UCSB's Reserves. In FY22-23, the UCSB NRS facilitated 46,294 user days (Table 2).

Table 2. UCSB Natural Reserve System User Days (the number of days users spent at a Reserve) in FY22-23. CSMR = Carpinteria Salt Marsh Reserve; COPR = Coal Oil Point Reserve, KNRM = Kenneth S. Norris Rancho Marino Reserve, SCIR = Santa Cruz Island Reserve, SEDG = Sedgwick Reserve, SNARL = Sierra Nevada Aquatic Research Laboratory, VALC = Valentine Camp Reserve

Reserve	Research	University-Level Class	Public Service	Housing	Total
CSMR	895	295	549	0	1739
COPR	3823	893	4737	0	9453
RMR	371	1246	200	39	1856
SCIR	451	1366	1746	0	3563
SEDG	2163	908	3968	12	7051
SNARL	11142	3624	3441	0	18207
VALC	1795	402	2228	0	4425
Total	20640	8734	16869	51	46294

Use by Faculty

In FY 22-23, faculty research use at UCSB Reserves totaled 427 unique individuals over 3,210 user days (Table 3). Faculty members utilizing UCSB Reserves have originated from multiple institutions, including UC campuses. Of overall faculty use at UCSB NRS sites, 53% originated from UCSB. Other faculty users originated from California State Universities, Community Colleges, Other California university-level institutions, U.S. University level institutions outside of California, international institutions, and others.

Table 3. Faculty Use of UCSB Reserves. UCSB Natural Reserve System Faculty Users and User Days. These include UC Faculty, UCSB Faculty, and Faculty from all institutions of higher learning in FY22-23. CSMR = Carpinteria Salt Marsh Reserve; COPR = Coal Oil Point Reserve, KNRM = Kenneth S. Norris Rancho Marino Reserve, SCIR = Santa Cruz Island Reserve, SEDG = Sedgwick Reserve, SNARL = the Sierra Nevada Aquatic Research Laboratory, VALC = Valentine Camp Reserve

Reserve	All Faculty	
	Users	User Days
CSMR	16	28
COPR	156	414
KNRM	29	128
SCIR	38	173
SEDG	103	316
SNRL	75	2057
VALC	10	94
Total	427	3210

Publications

Each year, a number of publications are published based on the ability to access the Reserve’s amenities. Here we report on publications from calendar years 2022 and 2023², in which there were a total of 177 publications in 2022 and 130 in 2023. General topics addressed by the suite of publications included but were not limited to biology, ecology, physiology, evolution, hydrology, anthropology, archeology, atmospheric science, toxicology, geology, geography, geophysics, endocrinology, microbiology, history, earth science, and others. Please see the following for the breakdown of publications by Reserve (Table 4). All Reserve Bibliographies are centrally stored in a publicly accessible [Zotero database](#).

Table 4. Numbers of Publications in Calendar Years 2022 and 2023² that utilized Reserve habitats, facilities, or environmental resources made accessible by UCSB Reserve. CSMR = Carpinteria Salt Marsh Reserve; COPR = Coal Oil Point Reserve, KNRM = Kenneth S. Norris Rancho Marino Reserve, SCIR = Santa Cruz Island Reserve, SEDG = Sedgwick Reserve, SNARL = Sierra Nevada Aquatic Research Laboratory, VALC = Valentine Camp Reserve

Reserve	# of Peer-reviewed Publications	
	2022	2023 ²
CSMR	11	12
COPR	16	10
KNRM	2	1
SCIR	76	64
SEDG	13	4
SNRL	50	32
VALC	9	7
Total	177	130

G. Principal Investigator List

The staff of the UCSB NRS are very active in submitting and receiving funding from intra- and extramural sources in support of the UCSB Reserves. The following are the PIs of the UCSB NRS staff who have submitted Reserve enhancement or UCSB NRS-related programmatic proposals or who have similar active awards and relevant award information (Table 5):

- Blanchette, Carol A. Director, Valentine Eastern Sierra Reserves, Natural Reserve System
- Brooks, Andrew J., Director, Carpinteria Salt Marsh Reserve, Natural Reserve System
- Constable, Heather, Director, Sedgwick Reserve, Natural Reserve System
- Laughrin, Lyndal, Director, Santa Cruz Island Reserve, Natural Reserve System
- Wittmann, Marion E., Executive Director, Natural Reserve System
- Sandoval, Cristina, Director, Coal Oil Point Reserve

Table 5. Award information for Natural Reserve System Principal Investigators (PIs), FY22-23

Record #	PI	Agency	Title	Award Begin	Award End	Total Award
20211118	Wittmann, M. E.; Reti, J. S.	CA Wildlife Conservation Board	Santa Cruz Island Infrastructure Project	6/29/21	10/31/25	\$1,250,000

² 2023 Publication Data provided up to 11/1/23

Record #	PI	Agency	Title	Award Begin	Award End	Total Award
20211114	Wittmann, M.E.; Blanchette, C.A.	CA Wildlife Conservation Board	Sierra Nevada Aquatic Research Laboratory Facilities Enhancement Project	6/29/21	10/31/25	\$320,000
	Hoffmann, G Blanchette, C.A.	National Science Foundation	FUERTE: Field-based Undergraduate Engagement through Research, Teaching and Education	6/29/22	6/30/27	\$2,400,000
Intramural award	Wittmann, Marion; Blanchette, Carol	UCOP	UC NRS Env IT Strategic Planning	10/1/21	6/30/24	\$50,000
Foundation	Reti, Jay	Marisla Foundation	Santa Cruz Island Reserve Educational Outreach and Student Teaching Support Program	10/1/22	6/30/23	\$25,000
Foundation	Reti, Jay	Anonymous Foundation	Chumash Outreach Program at Santa Cruz Island Reserve	10/1/21	6/30/23	\$25,000
Foundation	Reti, Jay	Marisla Foundation	Santa Cruz Island Reserve Educational Outreach and Student Teaching Support Program	9/25/23	6/30/23	\$25,000
Intramural award	Blanchette, Carol	Measure U	Valentine Eastern Sierra Reserves Outdoor Science Education Program	7/1/22	6/30/23	\$10,000
Intramural award	Blanchette, Carol	Measure U	Valentine Eastern Sierra Reserves Outdoor Science Education Program	7/1/23	6/30/24	\$10,000
Intramural award	Sandoval, Cristina	UCSB Coastal Fund	Coal Oil Point Reserve Conservation Education and Restoration	6/30/22	7/1/23	\$57,505
Intramural award	Sandoval, Cristina	UCSB TGIF	COPR Electrification and Expansion Project	4/19/22	6/5/23	\$9,577
Intramural award	Seydel, Keith	UCSB TGIF	Kenneth S. Norris Rancho Marino Refrigerator Efficiency Project	12/2/22	6/5/23	\$1,000
Intramural award	Laughrin, Lyndal	UCSB TGIF	9.72 kW Solar Array for Santa Cruz Island Infrastructure Project	4/1/22	6/30/23	\$20,846
Intramural award	Blanchette, Carol	UCSB TGIF	Sustainable Drinking Water Solutions	4/1/22	6/30/23	\$6,138
Intramural award	Brooks, Andrew	UCSB TGIF	Solar Array to Support Research and Education at the Carpinteria Salt Marsh Reserve	4/7/23	6/7/24	\$2,775
Intramural award	Seydel, Keith	UCSB TGIF	Sustainability through Equipment Efficiency at Rancho Marino Reserve	4/7/23	6/7/24	\$1,900
Intramural Award	Blanchette, Carol	UCSB TGIF	SNARL Dormitory Energy Efficiency	4/14/23	6/7/24	\$14,895

H. Names of Graduate and Undergraduate Students

In FY2022-2023 there were 93 student participants (undergraduate and graduate) at UCSB Reserves (Table 6 and Section J2 in this report). Their experiences ranged from field research, writing internships, docent work, administrative support, graduate student awardees, graduate student researchers, and website internships. These do not include all names of student researchers but rather include students

who are either on the NRS payroll or are recipients of NRS awards, including fellowships or internships funded by the UCSB NRS or other UCSB sources such as donor support or the UCSB Coastal Fund.

Table 6. Names of Undergraduate students directly contributing to the NRS who are on the NRS' payroll, participate through assistantships, fellowships, or traineeships, or are otherwise involved with the UCSB NRS' work. COPR = Coal Oil Point Reserve.

No.	First	Last	Reserve	Role	Funding Source	Year
1	Michelle	Moreno	COPR	Data Analysis	CORE	22-23
2	Jay	Miranda	COPR	CORE	CORE	22-23
3	Kaytlin	Troxler	COPR	CORE	CORE	22-23
4	Sarah	Wagner	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
5	Jose	Torres Salgado	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
6	Kevin	Tessier	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
7	Ivy	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
8	Cody	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
9	Ella	Markley	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
10	Makena	Hanson	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
11	Sasha	Holland	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
12	Tiberius	Hernandez	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
13	Andy	Estrada	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
14	Shelly	Chen	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
15	Parker	Abt	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
16	Sophia	Cameron	COPR	Camera Trapping Intern	UCSB Coastal Fund	22-23
17	Lauren	Jennings	COPR	Natural History	UCSB Coastal Fund	22-23
18	Matthew	Yoo	CSMR	Invasive Plant Removal	UCSB NRS Support	22-23
19	Sergio	Saucedo	CSMR	Invasive Plant Removal	UCSB NRS Support	22-23
20	Megan	Norman	CSMR	Invasive Plant Removal	UCSB NRS Support	22-23
21	Joelle	CantoAdams	COPR	Snowy Plover Program	Snowy Plover Prg Support	22-23
22	Kaytlin	Troxler	COPR	CORE	CORE	22-23
23	Daira	Chavez-Hernandez	COPR	CORE	CORE	22-23
24	Oscar	Martinez Saldivar	COPR	CORE	CORE	22-23
25	Jay	Miranda	COPR	CORE	CORE	22-23
26	Jose	Torres Salgado	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
27	Kevin	Tessier	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
28	Natalie	Tarbox	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
29	Ivy	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
30	Cody	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
31	Ella	Markley	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
32	Tiberius	Hernandez	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
33	Kiley	Beart	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
34	Parker	Abt	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
35	Kacie	Hanke	COPR	Camera Trapping Intern	UCSB Coastal Fund	22-23
36	Noah	Linde	COPR	Land Steward Intern	UCSB Coastal Fund	22-23
37	Drew	Churning-sibert	COPR	Land Steward Intern	UCSB Coastal Fund	22-23
38	Joelle	CantoAdams	UCSB NRS	UCSB NRS Henry W. Offen Intern	UCSB NRS Endowment	22-23

No.	First	Last	Reserve	Role	Funding Source	Year
39	Kaytlin	Troxler	COPR	CORE	CORE	22-23
40	Daira	Chavez-Hernandez	COPR	CORE	CORE	22-23
41	Oscar	Martinez Saldivar	COPR	CORE	CORE	22-23
42	Jay	Miranda	COPR	CORE	CORE	22-23
43	Joelle	CantoAdams	COPR	Snowy Plover Support	UCSB Coastal Fund	22-23
44	Kevin	Tessier	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
45	Natalie	Tarbox	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
46	Ivy	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
47	Cody	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
48	Ella	Markley	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
49	Sasha	Holland	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
50	Tiberius	Hernandez	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
51	Kiley	Beaart	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
52	Kacie	Hanke	COPR	Mammal Monitoring	UCSB Coastal Fund	22-23
53	Sophia	Cameron	COPR	Mammal Monitoring	UCSB Coastal Fund	22-23
54	Noah	Linde	COPR	Land Steward	UCSB Coastal Fund	22-23
55	Jessi	Boswell	COPR	Land Steward	UCSB Coastal Fund	22-23
56	Sasha	Holland	COPR	Land Steward	UCSB Coastal Fund	22-23
57	Jana	Belsito	COPR	Land Steward	UCSB Coastal Fund	22-23
58	Cody	Quach	COPR	Land Steward	UCSB Coastal Fund	22-23
59	Drew	Churning-Sibert	COPR	Land Steward	UCSB Coastal Fund	22-23
60	Tess	Edwards	COPR	Land Steward Assistant	UCSB Coastal Fund	22-23
61	Noah	Linde	COPR	Land Steward Assistant	UCSB Coastal Fund	22-23
62	Sasha	Holland	COPR	Land Steward	UCSB Coastal Fund	22-23
63	Drew	Churning-Sibert	COPR	Land Steward	UCSB Coastal Fund	22-23
64	Ryan	Bayliss	COPR	Photography	UCSB Coastal Fund	22-23
65	Kylie	Malone	COPR	Insect	UCSB Coastal Fund	22-23
66	Hannah	Lacaste	COPR	Restoration/Plant	UCSB Coastal Fund	22-23
67	Francesca	Fee	COPR	Water Quality	UCSB Coastal Fund	22-23
68	Gabriel	Ramirez	COPR	Mammal Monitoring	UCSB Coastal Fund	22-23
69	Alex	Zetterberg	COPR	Mammal Monitoring	UCSB Coastal Fund	22-23
70	Kacie	Hanke	COPR	Mammal Monitoring	UCSB Coastal Fund	22-23
71	Joelle	CantoAdams	COPR	Water Quality	UCSB Coastal Fund	22-23
72	Elizabeth	Willis	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
73	Minh	Tri Ngo	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
74	Daira	Torres	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
75	Natalie	Tarbox	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
76	Ivy	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
77	Cody	Quach	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
78	Abbey	Lee	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
79	Jimmy	Le	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
80	Fionnuala	LaTourrette	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23

No.	First	Last	Reserve	Role	Funding Source	Year
81	Stacey	Kawabata	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
82	Tiberius	Hernandez	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
83	Isabella	Genovese	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
84	Felipe	De Costa Lima	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
85	Kai	Burke	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
86	Kiley	Beaart	COPR	Snowy Plover Docent	UCSB Coastal Fund	22-23
87	Kaytlin	Troxler	COPR	CORE	CORE	22-23
88	Daira	Chavez-Hernandez	COPR	CORE	CORE	22-23
89	Oscar	Martinez Saldivar	COPR	CORE	CORE	22-23
90	Jay	Miranda	COPR	CORE	CORE	22-23
91	Hazel	Aguiluz	UCSB NRS	Work Study - UCSB Admin	UCSB NRS Admin Support	22-23
92	Hannah	Malak	UCSB NRS	Work Study - UCSB Admin	UCSB NRS Admin Support	22-23
93	Fernanda	Flores	UCSB NRS	Work Study - UCSB Admin	UCSB NRS Admin Support	22-23

I. External Participation

The following tabular summaries show the uses of all UCSB NRS Reserve External Participation, by Reserve. Of the UCSB's Natural Reserve System's 11,051 **Users** in FY22-23, 1,698 (15%) were UCSB faculty, researchers, post-docs and students. Of the 46,294 **User Days**, 11,615 (25%) were UCSB faculty, researchers, postdocs, and students. All others, both Users and User Days, were from non-UCSB organizations, including other UC campuses, non-UC universities and colleges, Governments, NGOs, businesses, K-12 groups, and others. The following shows a Reserve-by-Reserve breakdown of the use.

Carpinteria Salt Marsh Reserve	UCSB		UC Other		CSU System		CA Comm College		Other CA College		Out of State College		Int'l University		Government		NGO/Non-Profit		Profit Business		K-12 School		Other		Total			
	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs
	UNIVERSITY- LEVEL RESEARCH																											
Staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	3	3
Faculty	2	2	2	2	1	4	0	0	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	12	
Research Scientist/Post Doc	3	4	2	62	0	0	0	0	1	1	1	60	0	0	6	6	4	8	0	0	0	0	0	0	17	141		
Research Assistant (non-student/faculty/postdoc)	7	454	0	0	5	32	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	13	490			
Graduate Student	9	19	8	22	3	5	0	0	0	0	1	1	0	0	0	1	2	0	0	0	0	0	0	22	49			
Undergraduate Student	5	5	5	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	35			
Professional	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	3	21	3	10	0	0	1	2	8	40			
Other	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	22	22	0	0	0	0	4	4	30	30			
Volunteer	2	6	0	0	1	5	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	12	80	16	95			
SUBTOTAL	29	497	21	120	10	46	0	0	2	2	3	64	0	0	9	9	32	61	3	10	0	0	17	86	126	895		
UNIVERSITY - LEVEL INSTRUCTION (CLASS)																												
Faculty	0	0	1	1	2	5	1	2	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12			
Graduate Student	5	5	2	2	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13			
Undergraduate Student	71	71	13	13	92	92	50	50	18	18	0	0	0	0	0	0	0	0	0	0	0	0	244	244				
Other	1	5	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	26				
SUBTOTAL	77	81	16	16	100	103	72	73	19	22	0	0	0	0	0	0	0	0	0	0	0	0	284	295				
OTHER																												
Faculty	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	4	4		
Research Scientist/Post Doc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	31	0	0	0	0	0	0	0	31	31			
Graduate Student	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
Undergraduate Student	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4			
K-12 Instructor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	3	3			
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	35	0	0	35	35			
Professional	14	14	0	0	0	0	0	0	0	0	0	0	0	1	13	3	5	58	345	0	0	16	16	92	393			
Other	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	26	28	0	0	0	0	41	41	68	70			
Docent	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1				
Volunteer	1	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3	4	5	7			
SUBTOTAL	18	22	1	1	0	0	0	0	0	0	1	1	0	0	32	44	29	33	58	345	42	42	60	61	241	549		
TOTAL	124	600	38	137	110	149	72	73	21	24	4	65	0	0	41	53	61	94	61	355	42	42	77	147	651	1739		

Coal Oil Point Reserve	UCSB		UC Other		CSU System		CA Comm College		Other CA College		Out of State College		Int'l University		Government		NGO/Non-Profit		Profit Business		K-12 School		Other		Total			
	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs
UNIVERSITY- LEVEL RESEARCH																												
Staff	6	67	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	72
Faculty	7	187	3	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	216	
Research Scientist/Post Doc	8	54	1	1	0	0	0	0	0	0	0	0	1	1	5	30	4	7	1	2	0	0	0	0	0	20	95	
Research Assistant (non-student/faculty/postdoc)	7	12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2	12	17		
Graduate Student	12	71	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	13	73		
Undergraduate Student	130	2984	1	1	0	0	0	0	0	0	1	1	0	0	0	3	299	0	0	0	0	0	0	0	135	3285		
Professional	9	10	2	15	0	0	0	0	0	0	0	0	0	0	1	6	1	3	3	5	0	0	0	0	16	39		
Other	3	24	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4	25		
Volunteer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1		
SUBTOTAL	182	3409	10	52	0	0	0	0	0	0	1	1	1	1	6	36	13	315	4	7	0	0	2	2	219	3823		
UNIVERSITY - LEVEL INSTRUCTION (CLASS)																												
Staff	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
Faculty	13	18	0	0	0	0	23	28	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	47		
Graduate Student	25	64	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	66		
Undergraduate Student	329	633	0	0	0	0	111	111	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	447	751		
K-12 Student	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7		
Other	0	0	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21		
SUBTOTAL	375	723	2	2	0	0	155	160	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	540	893		
OTHER																												
Staff	18	278	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	20	280		
Faculty	85	94	3	15	0	0	0	0	5	10	16	32	0	0	0	0	0	0	0	0	0	0	0	0	109	151		
Research Scientist/Post Doc	4	73	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	74		
Graduate Student	16	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	18		
Undergraduate Student	149	1253	0	0	0	0	0	0	0	0	0	0	0	0	0	5	48	0	0	0	0	0	0	0	154	1301		
K-12 Instructor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	2	2			
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	24	0	0	24	24			
Professional	34	62	0	0	0	0	0	0	0	0	0	0	0	0	95	97	39	45	0	0	0	0	0	168	204			
Other	12	16	0	0	0	0	0	0	0	0	0	0	0	0	20	20	2	3	0	0	5	5	155	1645	194	1689		
Docent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	984	70	984		
Volunteer	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	5	5	10	10			
SUBTOTAL	319	1795	4	16	0	0	0	0	5	10	16	32	0	0	115	117	53	103	0	0	30	30	230	2634	772	4737		
TOTAL	876	5927	16	70	0	0	155	160	13	18	17	33	1	1	121	153	66	418	4	7	30	30	232	2636	1531	9453		

Kenneth S. Norris Rancho Marino Reserve		UCSB		UC Other		CSU System		CA Comm College		Other CA College		Out of State College		Int'l University		Government		NGO/Non-Profit		Profit Business		K-12 School		Other		Total		
		Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users
UNIVERSITY- LEVEL RESEARCH																												
Staff	0	0	6	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	14
Faculty	2	20	2	20	4	16	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	9	60	
Research Scientist/Post Doc	1	6	5	17	0	0	0	0	0	0	0	0	0	0	1	5	2	16	0	0	0	0	0	0	0	9	44	
Research Assistant (non-student/faculty/postdoc)	2	4	11	62	2	8	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	16	78	
Graduate Student	3	6	4	18	7	24	0	0	0	0	1	4	0	0	1	4	0	0	0	0	0	0	0	0	0	16	56	
Undergraduate Student	0	0	10	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	51	
K-12 Instructor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0	2	5	
Professional	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	5	5	0	0	0	0	0	0	0	7	13	
Other	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	2	3	
Volunteer	1	2	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	39	12	47
SUBTOTAL	9	38	43	189	13	48	0	0	0	0	3	12	0	0	5	19	7	21	0	0	2	5	7	39	89	371		
UNIVERSITY - LEVEL INSTRUCTION (CLASS)																												
Staff	0	0	6	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	66	
Faculty	0	0	5	32	4	9	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	48	
Graduate Student	6	12	9	18	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	33	
Undergraduate Student	50	100	135	720	87	117	42	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	314	1063	
Other	1	2	1	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	24	
Volunteer	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	4	12
SUBTOTAL	57	114	156	858	93	132	45	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	354	1246	
OTHER																												
Staff	0	0	5	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	20	
Faculty	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	2	5	
Research Scientist/Post Doc	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	
Research Assistant (non-student/faculty/postdoc)	0	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	
Graduate Student	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	
Undergraduate Student	39	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	88	
Professional	4	11	19	22	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	36	
Other	0	0	24	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	29	
Volunteer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	2	8
SUBTOTAL	46	107	51	80	1	3	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2	8	101	200	
HOUSING																												
Faculty	2	4	1	2	0	0	0	0	0	0	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	6	15	
Research Scientist/Post Doc	1	5	0	0	0	0	0	0	0	0	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	4	14	
Graduate Student	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
Undergraduate Student	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
Other	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	
SUBTOTAL	3	9	4	10	1	2	0	0	0	0	6	18	0	0	0	0	0	0	0	0	0	0	0	0	0	14	39	
TOTAL	115	268	254	1137	108	185	45	133	0	0	9	30	0	0	5	19	8	23	0	0	2	5	12	56	558	1856		

Santa Cruz Island Reserve	UCSB		UC Other		CSU System		CA Comm College		Other CA College		Out of State College		Int'l University		Government		NGO/Non-Profit		Profit Business		K-12 School		Other		Total			
	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs
UNIVERSITY - LEVEL RESEARCH																												
Staff	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
Faculty	2	6	2	21	1	10	0	0	1	5	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	50
Research Scientist/Post Doc	2	2	2	26	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	5	31
Research Assistant (non-student/faculty/postdoc)	0	0	6	33	1	14	0	0	3	12	5	7	0	0	1	5	0	0	1	5	0	0	0	0	0	17	76	
Graduate Student	1	5	5	20	2	19	0	0	0	0	3	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	55	
Undergraduate Student	4	16	1	6	0	0	6	21	4	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	63	
Professional	3	20	2	7	0	0	0	0	1	5	0	0	0	0	4	28	4	29	0	0	0	0	0	1	3	15	92	
Other	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	2	15	0	0	0	0	0	21	48	24	68	
Volunteer	0	0	1	3	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	2	10	
SUBTOTAL	14	55	19	116	4	43	6	21	10	47	10	26	0	0	7	43	6	44	1	5	0	0	22	51	99	451		
UNIVERSITY - LEVEL INSTRUCTION (CLASS)																												
Staff	2	44	4	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	76	
Faculty	6	42	3	9	0	0	5	15	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	15	71	
Research Assistant (non-student/faculty/postdoc)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	2	9		
Graduate Student	20	119	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	126	
Undergraduate Student	50	540	71	314	0	0	46	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	60	179	1052		
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	17	5	17	
Professional	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	1	3	
Other	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	4	12	
SUBTOTAL	81	754	81	362	0	0	51	153	0	0	1	5	0	0	0	0	2	6	0	0	0	0	19	86	235	1366		
OTHER																												
Staff	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	14	0	0	0	0	11	24		
Faculty	7	26	3	17	0	0	0	0	0	0	2	6	3	3	0	0	0	0	0	0	0	0	0	0	0	15	52	
Research Scientist/Post Doc	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	9	0	0	0	0	0	0	1	2	5	12		
Graduate Student	38	114	0	0	0	0	0	0	0	0	0	0	0	0	15	45	0	0	0	0	0	0	0	0	53	159		
Undergraduate Student	17	41	1	4	0	0	23	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	103		
K-12 Instructor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	145	0	26	145		
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	388	0	0	68	388		
Professional	12	34	3	10	0	0	0	0	0	0	0	0	1	1	13	32	48	279	0	0	1	5	2	6	80	367		
Other	18	27	1	3	0	0	0	0	0	0	0	0	1	7	8	29	15	43	0	0	0	0	85	319	128	428		
Volunteer	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	35	0	0	0	0	9	30	17	68			
SUBTOTAL	98	256	8	34	0	0	23	58	0	0	2	6	5	11	39	115	70	357	7	14	95	538	97	357	444	1746		
TOTAL	193	1065	108	512	4	43	80	232	10	47	13	37	5	11	46	158	78	407	8	19	95	538	138	494	778	3563		

Sedgwick Reserve	UCSB		UC Other		CSU System		CA Comm College		Other CA College		Out of State College		Int'l University		Government		NGO/Non-Profit		Profit Business		K-12 School		Other		Total		
	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users
UNIVERSITY- LEVEL RESEARCH																											
Staff	3	3	6	12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	10	17
Faculty	16	41	7	94	1	5	1	3	1	1	5	21	1	5	0	0	0	0	0	0	0	0	0	0	0	32	170
Research Scientist/Post Doc	5	40	4	18	0	0	0	0	1	8	2	5	2	3	8	51	5	14	0	0	0	0	0	0	0	27	139
Research Assistant (non-student/faculty/postdoc)	19	61	15	148	0	0	0	0	2	2	3	13	0	0	0	0	2	4	0	0	0	0	3	5	44	233	
Graduate Student	26	187	21	156	0	0	0	0	4	22	14	238	3	59	0	0	1	4	0	0	0	0	0	0	69	666	
Undergraduate Student	58	132	5	17	6	6	5	11	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	76	168	
K-12 Instructor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14	0	0	3	14
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	1	8	
Professional	2	4	3	16	0	0	0	0	0	0	0	0	0	0	2	4	6	27	0	0	0	0	0	0	13	51	
Other	3	3	1	3	0	0	1	1	0	0	1	1	0	0	0	0	2	19	0	0	0	0	2	6	10	33	
Docent	21	402	0	0	1	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	23	423	
Volunteer	7	93	2	4	3	45	0	0	0	0	1	4	0	0	0	0	3	51	1	2	0	0	7	42	24	241	
SUBTOTAL	160	966	64	468	11	76	7	15	9	34	27	283	6	67	10	55	20	121	1	2	3	14	14	62	332	2163	
UNIVERSITY - LEVEL INSTRUCTION (CLASS)																											
Staff	0	0	3	15	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	16
Faculty	4	24	1	5	0	0	2	19	2	8	1	4	0	0	1	1	0	0	0	0	0	0	0	0	0	11	61
Research Scientist/Post Doc	1	3	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7
Graduate Student	103	268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103	268	
Undergraduate Student	119	374	25	125	0	0	30	30	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196	551	
Other	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	
SUBTOTAL	227	669	30	150	0	0	33	50	25	34	1	4	0	0	1	1	0	0	0	0	0	0	0	0	317	908	
OTHER																											
Staff	12	27	0	0	1	3	0	0	0	0	0	0	0	0	0	0	1	1	0	0	6	6	0	0	20	37	
Faculty	50	55	2	3	2	5	2	9	0	0	3	12	0	0	1	1	0	0	0	0	0	0	0	0	60	85	
Research Scientist/Post Doc	34	39	3	7	0	0	0	0	0	0	0	0	5	24	1	1	9	17	0	0	0	0	8	8	60	96	
Research Assistant (non-student/faculty/postdoc)	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
Graduate Student	10	22	7	21	6	17	0	0	14	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	116	
Undergraduate Student	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	14	17	24	
K-12 Instructor	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	70	0	0	71	72	
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	796	809	0	0	796	809		
Professional	15	62	2	12	2	2	0	0	0	0	0	0	0	0	5	10	28	36	0	0	1	17	5	11	58	150	
Other	2	4	1	2	0	0	0	0	0	0	0	0	0	0	20	20	101	104	1	3	173	184	715	1145	1013	1462	
Docent	796	962	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	797	964	
Volunteer	17	38	1	62	3	3	0	0	0	0	0	0	0	0	0	0	18	45	0	0	0	0	2	3	41	151	
SUBTOTAL	948	1223	16	107	15	32	2	9	14	56	3	12	5	24	27	32	157	203	1	3	1046	1086	737	1181	2971	3968	
HOUSING																											
Research Scientist/Post Doc	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Professional	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11
SUBTOTAL	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	
TOTAL	1347	2870	110	725	26	108	42	74	48	124	31	299	11	91	38	88	177	324	2	5	1049	1100	751	1243	3632	7051	

Sierra Nevada Aquatic Research Laboratory	UCSB		UC Other		CSU System		CA Comm College		Other CA College		Out of State College		Int'l University		Government		NGO/Non-Profit		Profit Business		K-12 School		Other		Total			
	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs
UNIVERSITY- LEVEL RESEARCH																												
Staff	0	0	4	308	0	0	0	0	0	0	0	0	0	0	0	0	0	3	108	0	0	0	0	0	0	0	7	416
Faculty	6	684	5	238	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	1	20	14	947
Research Scientist/Post Doc	5	1434	4	234	0	0	0	0	0	0	0	0	0	0	3	580	0	0	0	0	0	0	0	0	0	0	12	2248
Research Assistant (non- student/faculty/postdoc)	5	1249	21	1289	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	2538
Graduate Student	4	439	20	606	1	31	0	0	0	0	3	38	1	151	0	0	0	0	0	0	0	0	0	0	0	0	29	1265
Undergraduate Student	14	74	9	347	4	124	0	0	0	0	22	140	1	62	0	0	0	0	0	0	0	0	0	0	0	0	50	747
K-12 Instructor	1	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	61
Professional	7	494	5	20	0	0	0	0	0	0	0	0	0	0	3	734	1	365	1	4	0	0	0	0	0	0	17	1617
Other	1	27	2	11	0	0	0	0	0	0	0	0	0	0	1	77	1	27	0	0	0	0	4	274	9	416		
Volunteer	14	854	1	5	0	0	0	0	0	0	2	10	0	0	0	0	0	0	0	0	0	3	18	0	0	20	887	
SUBTOTAL	57	5316	71	3058	5	155	0	0	0	0	29	193	2	213	7	1391	5	500	1	4	3	18	5	294	185	11142		
UNIVERSITY - LEVEL INSTRUCTION (CLASS)																												
Staff	0	0	4	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	30	6	80	
Faculty	17	249	7	56	0	0	1	2	4	37	21	302	0	0	0	0	0	0	0	0	0	4	60	0	0	54	706	
Research Scientist/Post Doc	0	0	0	0	0	0	0	0	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	
Graduate Student	16	220	15	54	0	0	0	0	5	75	48	702	0	0	0	0	0	0	0	0	0	0	0	0	0	84	1051	
Undergraduate Student	53	410	58	383	0	0	14	28	28	296	39	281	0	0	0	0	0	0	0	0	0	0	0	0	0	192	1398	
K-12 Instructor	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15	0	0	2	16		
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	300	0	0	20	300		
Professional	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17	
Other	0	0	1	11	0	0	11	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	26	47	
SUBTOTAL	88	897	85	554	0	0	26	52	37	408	109	1294	0	0	0	0	0	0	0	0	25	375	16	44	386	3624		
OTHER																												
Staff	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	3	11	
Faculty	3	12	1	9	0	0	0	0	0	0	2	18	0	0	1	365	0	0	0	0	0	0	0	0	0	7	404	
Research Scientist/Post Doc	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	12	4	15	
Research Assistant (non- student/faculty/postdoc)	8	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	40	
Graduate Student	0	0	43	129	0	0	0	0	5	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	144	
Undergraduate Student	0	0	0	0	0	0	0	0	0	0	10	90	0	0	0	0	0	0	0	0	0	0	0	0	0	10	90	
K-12 Instructor	2	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	77	0	0	71	137		
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	824	984	0	0	824	984		
Professional	1	32	0	0	0	0	0	0	0	0	0	0	0	0	23	407	1	2	0	0	0	0	0	0	25	441		
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	15	10	11	38	38	865	1048	926	1112		
Volunteer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	63	0	0	63	63		
SUBTOTAL	16	156	44	138	0	0	0	0	5	15	12	108	0	0	24	772	16	19	10	11	994	1162	868	1060	1989	3441		
TOTAL	161	6369	200	3750	5	155	26	52	42	423	150	1595	2	213	31	2163	21	519	11	15	1022	1555	889	1398	2560	18207		

Valentine Camp Reserve		UCSB		UC Other		CSU System		CA Comm College		Other CA College		Out of State College		Int'l University		Government		NGO/Non-Profit		Profit Business		K-12 School		Other		Total		
		Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users	UDs	Users
UNIVERSITY- LEVEL RESEARCH																												
Staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	109	0	0	0	0	0	0	0	4	109
Faculty	3	48	4	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	70
Research Scientist/Post Doc	0	0	2	10	0	0	0	0	0	0	0	1	4	0	0	0	0	1	2	0	0	0	0	0	0	0	4	16
Research Assistant (non-student/faculty/postdoc)	0	0	17	44	0	0	0	0	0	0	0	0	0	0	0	0	0	7	182	0	0	0	0	0	0	24	226	
Graduate Student	0	0	7	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	18	
Undergraduate Student	0	0	4	368	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	368	
K-12 Instructor	1	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	61	
Professional	1	61	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	65	
Other	1	22	1	22	0	0	0	0	0	0	0	0	0	0	0	0	0	1	22	0	0	0	0	3	6	6	72	
Volunteer	12	732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	28	56	41	790	
SUBTOTAL	18	924	36	488	0	0	0	0	0	0	0	1	4	0	0	0	0	14	317	0	0	0	0	31	62	100	1795	
UNIVERSITY - LEVEL INSTRUCTION (CLASS)																												
Staff	0	0	2	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12
Faculty	1	14	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	24	
Graduate Student	6	54	5	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	68	
Undergraduate Student	10	90	51	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	292	
Other	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	
SUBTOTAL	17	158	61	244	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78	402	
OTHER																												
Staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	
Graduate Student	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	
K-12 Instructor	3	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	115	115	0	0	118	226	
K-12 Student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	778	778	0	0	778	778		
Professional	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	108	5	540	0	0	0	0	7	658		
Other	2	306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	138	138	106	106	247	551		
Volunteer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	7	7	9	9		
SUBTOTAL	6	427	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	108	6	541	1033	1033	116	116	1163	2228		
TOTAL	41	1509	98	735	0	0	0	0	0	0	0	1	4	0	0	0	0	15	425	6	541	1033	1033	147	178	1341	4425	

J. Other Projects and Activities (Instructional Activities Support)

The following includes a Report on the Instructional Activities at UCSB NRS Reserves during AY22-23.

1. Courses Facilitated

In AY22-23 University Level Instruction (class) use of the 7 UCSB Reserves included 2,194 users over 8,734 user days representing a continued recovery to near pre-pandemic use rates by class users compared to AY18-19 (2,729 Users and 7,627 user days). Undergraduates comprised the majority of the class use in FY22-23 with 1,633 undergraduate users over 5,351 User days. The majority of university-level class use of UCSB Reserves was by UCSB and UC students and instructors, with UCSB use comprising 676 Users and 2709 User Days, and (non-UCSB) UC comprising 324 Users and 2,324 User Days. The majority of UC user days were associated with the UC NRS Systemwide Course, “California Ecology and Conservation”. There were 86 courses (graduate and undergraduate) utilizing the UCSB Reserves in AY22-23 – which is a return to pre-pandemic course usage rates (83 in AY18-19). The UCSB Reserves service the following institutions in support of University Level education: other UC Campuses, California State Universities, Community Colleges, other California Colleges/Universities, international Universities or Colleges, and NGO/Non-Profit Entities and Governmental Agencies in support of University Level Teaching (Table 7).

Table 7. Institution types utilizing UC Santa Barbara Natural Reserves for university-level instruction in AY22-23

Institution Type	Number of Courses
California Community College	13
California – Other University or College	7
California State University System	7
International University or College	0
Non-Governmental Organization	1
University of California	54
U.S. – University of College Outside of California	4
Total	86

2. Graduate & Undergraduate Student Support Provided by the UCSB NRS

Graduate Education Support

UCSB Reserves are regularly and frequently used as field experimental and/or collection sites for graduate student research, and also for graduate student pursuits in university-level education, either as students or teaching assistants. Reserve staff facilitate this use by providing access and accommodations, sharing knowledge about the Reserves’ natural resources, assisting with experimental design and ideas, sharing data, helping students connect with other researchers, and providing field support as needed and feasible. Graduate student research and university-level coursework at UCSB Reserves continue to be significant - in FY22-23, graduate student use of all UCSB NRS Reserves was 601 users over 4,250 user days, similar compared to FY21-22.

Graduate students utilizing UCSB’s Reserves originate from multiple departments and disciplines, including Ecology, Evolution and Marine Biology, Environmental Science & Management, Physics, Art,

Engineering (various departments), Earth Science, Geography, and others. This use by graduate students contributes to master’s theses or doctoral dissertations by students from UCSB and various institutions of higher education. In FY22-23 there have been at least 26 master’s theses or doctoral dissertations produced resulting from graduate student use at UCSB NRS Reserves (Table 8).

Table 8. Masters-level theses or doctoral dissertations produced as a result of research carried out at a UCSB NRS Site, FY22-23. CSMR = Carpinteria Salt Marsh Reserve, COPR = Coal Oil Point Reserve, RMR = Rancho Marino Reserve, SCIR = Santa Cruz Island Reserve, SEDG = Sedgwick Reserve, SNARL = Sierra Nevada Aquatic Research Laboratory, VAL = Valentine Camp Reserve.

Reserve	CSMR	COPR	SCIR	SEDG	RMR	SNARL	VAL
<i>Published Theses FY22-23</i>	7	2	4	5	0	7	1

Graduate Student Financial Support Provided by the UCSB Natural Reserve System

In FY22-23 UCSB NRS supported 8 graduate students with \$24,560 in graduate student support, and those funds all originated from philanthropic gifts. The following provides summaries of UCSB NRS graduate student support opportunities. Detailed information on all graduate students who have been provided funding support can be referenced [HERE](#).

- **Sedgwick Reserve Single Step Fellowship in Land Ethics (Donor Sourced):** Established in 2016, this endowment supports qualified graduate student(s) in UC Santa Barbara who are engaged in new or ongoing research at Sedgwick Reserve.
- **Sedgwick Reserve La Kretz Fellowship Endowment (Donor Sourced):** Established in 2017, the purpose of the fund is to support qualified graduate student(s) with a focus on conservation science and environmental issues relevant to the Sedgwick Reserve and the ecosystems that the Sedgwick Reserve represents.
- **Valentine Eastern Sierra Reserves Graduate Student Grants (Donor Sourced):** Through a competitive application process, grants of up to \$1,500 each are awarded to graduate students planning to conduct research at Valentine Camp Reserve, the Sierra Nevada Aquatic Research Laboratory (SNARL), or the surrounding area.
- **Systemwide UC NRS Mildred Matthias Graduate Student Research Awards:** Providing up to \$3,000 each, the Matthias grants encourage students to establish independent research projects at Reserves. Since its inception in 1988, more than 450 UC students have received nearly \$875,000 in Mathias Grant funding. Descriptions of these projects can be found on the [Mathias Research Projects web page](#).

Undergraduate Education Support

Undergraduate education is a major component of UCSB Reserve use and occurs via multiple activity types, including research, and university-level coursework, but also through internships, docent and volunteer programs hosted, and student stipends funded by the UCSB NRS, including “work-study” employment and training at the central administrative office.

In FY22-23 there were 2,192 undergraduate student users over 11,312 user days per year participating in research and/or university coursework at UCSB’s 7 Reserves. This represents an 18.5% increase in users and an 11% increase in user days relative to FY21-22. In FY22-23 and in previous years, the majority (~51%) of undergraduate students visiting UCSB Reserves are UCSB students. The UCSB NRS sites are also heavily utilized by courses from other UC campuses, CA State Universities, community colleges, and other State, national, and international universities. Reserves provide significant opportunities for

hands-on training in field research, mentorship by instructors and Reserve staff, and an immersive experience that classroom-based training does not provide. The projects are largely based in the natural sciences but also span across other disciplines including mechanical engineering, arts, and writing programs.

Course Offerings

The UC NRS Field Studies Program 'California Ecology and Conservation Course (ENVS 188)' is a systemwide UC program administered out of the UC Office of the President NRS that brings students from across UC's nine general campuses together for immersive learning experiences at NRS Reserves. The first component of the program to launch is California Ecology and Conservation: <https://ucnrs.org/teaching/cec/>. As part of this course, UC undergraduate students spend seven weeks living and studying at different NRS Reserves. While conducting firsthand studies of California ecosystems, students gain skills in field research methods, experimental design, data analysis, scientific writing, and public speaking. California Ecology and Conservation emphasizes the skills needed to conduct independent scientific research. In AY 22-23, UCSB NRS Executive Director Wittmann worked with numerous undergraduate advisors in EEMB, ES, CCS, and MCDB to distribute information about the course. Several UCSB students from various majors have taken this class over the years, earning course credit that fulfills their degree requirements. The UCSB NRS was instrumental early in the offering of this course in connecting UCSB departments with the UC NRS so that the course was advertised and its application to degree programs was established.

Internships and Docent Programs

- **Henry W. Offen Internship (Donor Funded):** The Henry W. Offen UCSB Undergraduate Research Endowment celebrates the life of Professor Henry Offen, Chemistry Professor and Emeritus Professor at UCSB for more than 45 years, and first Director of the UCSB Natural Reserve System (NRS), a position he held for 16 years. The Endowment provides an annual stipend to support an Internship for eligible undergraduate students at UCSB with sophomore, junior, or senior standing when they apply. Each year the internship takes place at one of the seven UCSB Reserves and provides an opportunity for the student to be mentored by the Reserve Director, to live onsite, and to learn about and support Reserve management activities. A \$1,000 stipend is provided through the endowment and supports the student throughout the internship period. The 2022-23 intern, Joelle Canto-Adams of the UCSB Environmental Studies Department, was hosted at the Coal Oil Point Reserve.
- **Coal Oil Point Reserve Internships (Grant Funded) and Volunteer Docent Program:** Each year, COPR Director Sandoval and Coal Oil Point Reserve staff seek grant funds to provide paid internships for UC Santa Barbara undergraduate students. The Reserve staff supervises the interns and manages the budget and final reporting for the grants that support the interns. The internship programs offer different internship categories to provide opportunities for a variety of student interests. Each internship pays \$375 to a student for 50 hours of hands-on activities supervised by the Reserve staff. A list of the undergraduate students who received internships since 2005 is available at this [link](#).

K. Required Supplementary Materials

1. Fiscal information

To be provided by UC Santa Barbara Office of Research.

2. Space

The UCSB NRS maintains extensive infrastructure to support the research and educational mission of the UC Natural Reserve System. In addition to the management of extensive natural lands, roads, and trails, there are a total of 73 buildings comprising nearly 80,000 square feet at Reserve sites (Table 9). For a full list of all UCSB NRS buildings, [please visit this link](#).

Table 9. Number of Buildings and Area (in sq footage) of Reserve capital infrastructure

Reserve	# of Buildings	Total Square Footage
COPR	10	8,188
CSMR	3	184
RMR	5	3,276
SCIR	11	9,474
SEDG	13	20,909
SNARL	20	27,021
VAL	10	10,665
Total	72	79,717