Sierra Nevada Research Institute
Organized Research Unit
Annual Report 2015

Sierra Nevada Research Institute University of California, Merced

UNIVERSITY OF CALIFORNIA

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Sierra Nevada Research Institute
UNIVERSITY OF CALIFORNIA, MERCED

MEMORANDUM

September 15, 2015

TO: Sam Traina, Vice Chancellor Research & Business Development

FROM: Roger Bales, professor & director

RE: SNRI ORU Annual Report 2015

With this letter we submit the Sierra Nevada Research Institute ORU Annual Report for 2015. This report follows the outline that you provided by email on April 13, 2015. Most of the data and information in it were provided by SNRI members and through UC Merced's business information systems.

Since the original Academic Plan for UC Merced was written in 1997, SNRI was envisioned as a research unit that would bring together faculty and researchers to discover new knowledge in this region of California – stretching from the crest of the Sierra Nevada, through the San Joaquin Valley to the central coast ranges of California.

This year's report articulates the power of this idea as expressed through the number of affiliated faculty and the continued breadth and impact of their research on this region. SNRI researchers are regularly sought out by elected officials, utilities, agencies and the media for their insights on issues such as drought, fire and climate. Current statewide conditions highlight the relevancy and importance of this Institute.

In this fourth year of drought, the SNRI faculty working in the Sierra Nevada and the San Joaquin Valley continue developing knowledge that is shaping the future of California and the world. The geographic location of the Sierra Nevada Research Institute with UC Merced in the heart of the San Joaquin Valley brings attention to a region that is critically important to the economy and health of the State of California.

The 33 SNRI researchers are presently operating with grants valued at more than 24 million dollars between 2014 and 2019.

We are about to begin the 5-year review of SNRI. With this report, you can see that from the inception of the Institute the number of faculty and researchers has continued to grow and the demonstrated importance of their work continues to strengthen the University and California.

Sierra Nevada Research Institute

University of California, Merced

Organized Research Unit (ORU) Annual Report 2015

1.) Brief summary of major activities during the past year, including a discussion of how the prior year's goals have been met.

The 2014/15 academic year represents a significant year for the Sierra Nevada Research Institute. The mission of SNRI to develop new knowledge that will sustain the natural resources and promote social well-being in the Sierra Nevada and Central Valley region has been critical for California and the West as we experience one of the most severe droughts in history. The research of many of the Institute's professors and researchers is often cited and featured in all forms of media – from twitter to the nightly national news. This last year, Legislators, State agencies, agricultural leaders, environmental organizations and NGO's have all sought the advice and engagement of the SNRI thought leaders on the issues California is facing in this region and statewide. The researchers of SNRI are being queried almost daily for insight on issues related to the drought, energy, water, fire risk, climate and more. The importance of SNRI was re-emphasized by the UC Office of the President's decision to fund the multi-campus UC Water Sustainability and Security Research Initiative (UC Water). This initiative is under the direction of three SNRI faculty with a 3.5 million dollar allocation from the UCOP. UC Solar, a successful multi-campus initiative led by SNRI Faculty, was also renewed by the UCOP this year.

There are now 33 faculty members and more than 33 professional researchers engaged in SNRI related research at UC Merced. (See pages 3&4 for a complete listing of SNRI faculty and researchers)

Research carried out by SNRI members and their research groups over the past year has provided knowledge that contributes to sustainability of the region, state and global community. Research programs include renewable energy, decarbonizing the economy, more-sustainable ecosystem management and other climate solutions. Through both legislation and public sentiment California has embarked upon a low-carbon path, leading to carbon neutrality. The current drought has highlighted the need for sustainable water management, the focus of UC Water and many other SNRI projects. California's AB 32 and participation in COP 21 have highlighted the need for public support for a low-carbon economy; and research in our Center for Climate Communications, in UC Solar and under many individual efforts contributed to this goal. SNRI faculty are also contributing to the sustainability of UC Merced and UC and a whole, and doing research that can contribute to the UC goal of carbon neutrality by 2015.

SNRI continues to attract world caliber academic talent. In the 14/15 Academic Year, Mohammad Safeeq joined UC Merced in the forests-water-climate position made available with seed funds from the chancellor and matching funds from the US Forest Service. His position is currently supported 50-50 between UC Merced and PSW (Pacific Southwest Research Station, US Forest Service).

Tapan Pathak was hired by the UC Division of Agriculture and Natural Resources (ANR) and is the first climate specialist within this program. This represents a significant milestone for both UC and UC Merced as he is located on this campus in the heart of the San Joaquin Valley.

The 2nd initiative made possible with seed funds from the chancellor has Teenie Matlock leading the Climate Communication Center, which addresses a high priority for research and outreach within UC and the state. Dr. Emmanuel Vincent recently joined the Center, coming from MIT with previous studies on Oceanography and Climate Communications. He brings with him an exciting new project called Climate Feedback. This Center has held two well-attended Climate Communication workshops on campus in the last year.

Programs for the public and broader community remain a robust part of the SNRI program. Research Week was well attended this year and SNRI led off the week with a seminar and symposium with several SNRI Researchers. SNRI is reaching out into the community with the Science Café and public lecture events at the downtown Karmangar Theatre.

2.) Names of persons serving on the unit's Advisory Committee.

Internal: Kathleen Hull (Committee Chair), Josh Viers, Michael Dawson, Asmeret Asefaw Berhe, YangQuan Chen,

External: Koren Nydick, Resources Manager, Sequoia/Kings Canyon National Parks

3.) Dates of Committee meetings :

May 11, 2015 (Committee was appointed in Spring 2015)

4.) Summary of key Advisory Committee recommendations.

- Transfer administrative support for the Natural Reserve System to the Office of Research staff or add to SNRI Staffing to cover increasing workload.
- Develop a stable vehicle recharge and use system in cooperation with TAPS to lessen heavy SNRI staff workload.
- Initiate the 5 year review of SNRI this Fall
- Request 2-year reappointment of Roger Bales as Director, given timing of 5-year review, with further reappointment evaluated after review.
- SNRI Director should participate in Strategic Academic Focusing
- Develop updated Strategic Plan and Business Plan for SNRI.
- Reconstitute the SNRI membership committee, including a new Chair

5.) Copy of Advisory Committee report(s), minutes, or other relevant documentation.

See attachment A: (page 13)

6.) Names of faculty members actively engaged in the unit's research and their supervision of staff and students.

Faculty		
Ardell, David	Diaz, Gerardo	O'Day, Peggy
Bales, Roger	Fogel, Marilyn	Rice, Robert
Beman, Michael	Forman, Henry	Rolland, Erik
Berhe, Asmeret Asefaw	Frank, Carolin	Rogge, Wolfgang
Blois, Jessica	Ghezzehei, Teamrat A.	Sexton, Jason
Campbell, Elliott	Guo, Qinghua	Traina, Samuel
Chen, Yang Quan	Harmon, Tom	Westerling, Le Roy
Chen, Yihsu	Hart, Stephen	Winston, Roland
Conklin, Martha	Hull, Kathleen	Viers, Joshua
Dawson, Michael	Innes, Robert	
Matlock, Teenie	Joyce, Andrea	
Moran, Emily	Leppert, Valerie	

Supervision of students:

7.) Names of undergraduate and graduate students and postdoctoral scholars directly contributing to the unit who are on the unit's payroll:

Faculty / Staff	**Employee Name**	**Title**
Matlock,Teenie	Timothy Matthew Gann	POSTDOCTORAL SCHOLAR-EMPLOYEE
Ventura, Coty	Andre Craig Frise	STUDENT 2
Ventura, Coty	Andrew Martinez	STUDENT 3
Ventura, Coty	Kian Dell Bradley	STUDENT 4
Ventura, Coty	Patrick Michael Woodbury	STUDENT 3

Names of undergraduate and graduate students and postdoctoral scholars directly contributing to the ORU's scholarly work through assistantships, fellowships, or traineeships:

Research Scientists Burkhart, John Hilton, Tim Jepsen, Steven Hunsaker, Carolyn Kueppers, Lara Miller, Norman Pathak, Tapan Quinn, Nigel Rice, Robert Safeeq, Mohammad Stephens, Molly Vincent, Emmanuel **Postdoctoral Scholars** Carper, Dana Birkner, Nancy Gann, Timothy Hays, Cynthia Kupihea, James Lu, Yaqiong Maguire, Kaitlin Moyes, Andrew Reinoso-Maset, Estela Rheinheimer, David Whelan, Mary Yoon, Yeosang	**Staff Researchers** Campanella, Andrea Castanha, Cristina Conrad, Michele Curtis, Chris Green, Elizabeth Harrison, Brent Meng, Xiande Milostan, Jeanne Stacy, Erin Womble, Patrick Yu, Hong **Students** Alvarez, Otto Brown, Sarah Daglio, Liza Gomez Keyser, Alisa Lever, Rebecca Lubetkin, Kaitlin Lucas, Ryan Rungee, Joseph Patton Pickard, Michael Robert Tiebiao Zhao	Nelson, Mia Emyle Arevalo, Ashley Jenni Valle Rodriguez, Bianca Lizzet Iencarelli, Elizabeth Rose Busset , Nicholas Garrett Robson, Lindsay Marie Torres, Ryan Jacob Flanagan, Jacob Patrick Booth, Lorenzo Ade Keyser, Alisa Renae MacNeill, Curtis Araya, Samuel Tham, Christina DeNeve Weeks, Danaan Babich, Erin Stinecipher, James Williams, John Rungee, Joseph Rossi, Nancy Dziegiel, Abigail

8.) Extent of student and faculty participation from other academic institutions.

Note: Not all faculty provided information for this section

REU Students 2015: Yosemite National Park
Stephen Hart and Mike Beman are Co-Pi's
Several faculty acted as student advisors.

Student	**University**
Melissa Anderson	University of Minnesota, Morris
Hannah Besso	Western Washington University
Anna Chovanes	Wheaton College
Lydia Lichtiger	Earlham College
Megan Seeley	University of Wisconsin
Megan Sidran	Lewis Clark College
Alexandra Stucy	Monmouth University

Michael Stemkovski NC State University

Professor	Student/Faculty	Institution
Bales, Roger	Graham Fogg	UC Water/Davis
	Andy Fisher	UC Water/Santa Cruz
	Michael Kiparsky	UCWater/Berkeley
	Hellen E. Dalhke	UC Water/Davis
	Holly Doremus	UC Water/Berkeley
	Steven D. Glaser	UC Water/CZO/Berkeley
	Thomas Harter	UC Water/Davis
	Jay Lund	UC Water/Davis
	Josué Medellín-Azuara	UC Water/Davis
	Samuel Solis	UC Water/Davis
	Kevin O'Hara	UC Berkeley
	William Stewart	UC Berkeley
	Carlos Oroza	UC Berkeley
	Ziran Zhag	UC Berkeley
	Zeshi Zheng	UC Berkeley
	Hunsaker, Carolyn	CZO/USFS
	Anthony O'Geen	CZO/UC Davis
	Peter Hartsough	CZO/UC Davis
	Naomi Tague	CZO/UC Santa Barbara
	Cliff Reibe	CZO/U Wyoming
	Michael Golden	CZO/UC Irvine
	SNAMP Collaborators	*(See Conklin)*
Beman, Michael	REU Students	*(See REU above)*
Berhe, Asmeret	CZO Collaborator	*(See Bales)*
Blois, Jessica	Behrensmeyer, Kay	Smithsonian Institution
	Eronen, Jussi	University of Helsinki
Blois, Jessica	Ferrier, Simon	CSIRO (Australia)
	Fitzpatrick, Matt	University of Maryland Center for Environmental Science
	Gill, Jacquelyn	University of Maine
	Gotelli, Nick	University of Vermont
	Graham, Russ	Penn State
	Grimm, Eric	Illinois State Museum
	Jackson, Steve	USGS Southwest Climate Science Center
	Lawing, A. Michelle	Texas A&M
	Lugilde, Diego Nieto	University of Maryland Center for Environmental Science
	Lyons, S. Kate	Smithsonian
	McGill, Brian	University of Maine
	McGuire, Jenny	Georgia Tech

Professor	Student/Faculty	Institution
	Mychajliw, Alexis	Stanford University
	Polly, P. David	Indiana University
	Williams, Jack	UW Madison
Campbell, Elliott	Not available	
Chen, Yihsu	Not available	
Chen, YangQuan	Not available	
Conklin, Martha	UCWater collaborators	*(See Bales)*
	CZO collaborators	*(See Bales)*
	John Battles	*UC Berkeley/SNAMP*
	Maggie Kelly	*UC Berkeley/SNAMP*
	Steve Stephens	*UC Berkeley/SNAMP*
	Lynn Huntsinger	*UC Berkeley/SNAMP*
Dawson, Michael	Not available	
Diaz, Gerardo	Not available	
Fogel, Marilyn	Alexander, Conel	Carnegie Institution of Washington
	Miller, Gifford	University of Colorado
	Misc.	Stroud Water Research Institute
	Steele, Andrew	Carnegie Institution of Washington
Frank, Carolin	Albalasmeh, Ammar	Jordan University of Science and Technology
Ghezzehei, Teamrat	Bayala, Roger	Institut Senegalais Pour la Recherche Agricole
	Berli, Markus	Desert Research Institute, Nevada
	Carminati, Andrea	University of Gottingen
	Dijkema, Jelle	Wageningen University and Desert Research Institute
	Furman, Alex	Technion Institute, Israel
	Moret, David	Consejo Superior de Iinvestigaciones Cientificas
	Sancho, Carolina Pena	Consejo Superior de Iinvestigaciones Cientificas
	Van Der Ploeg, Marine	Wageningen University
	Van Genuchten, Rien	Federal University of Sao Paolo
Guo , Qinghua	SNAMP	(*See Conklin)*
Harmon, Tom	Allen, Michael	University of California Riverside
	Ayllon, Roxanna	Universidad Austral de Chile
	Chandra, Sudeep	University of Nevada Reno
	Conde, Daniel	Universidad de la República, Uruguay
	Escobar, Jaime	Universidad del Norte, Colombia
	Hanson, Paul	University of Wisconsin
	Helman, Michal	University of Montana
	Hoyos, Natalia	Universidad del Norte, Colombia
	Jones, Stuart	University of Notre Dame

Professor	Student/Faculty	Institution
	Longo, Maria Clara	Universidad Nacional del Sur, Argentina
	Oberbauer, Steve	Florida International University
	Perillo, Gerardo	Instituto Argentino de Oceanografía & UniversidadNacional del Sur, Argentina
	Picollo, M. Cintia	Instituto Argentino de Oceanografía & Universidad Nacional del Sur, Argentina
	Pinto, Adrian	University of Costa Rica
	Reid, Brian	Centro de Investigaciones en Ecosistemas de la Patagonia, Universidad Austral de Chile
	Rundel, Philip	UCLA
	Rusak, James	Queen's University and Ontario Ministry of the Environment
	Schwendenmann, Luitgard	University of Aukland, New Zealand
	Scordo, Facundo	Universidad Nacional del Sur, Argentina
	Scott, Dane	University of Montana
	Silvia, London	Instituto de Investigaciones Económicas y Sociales del Sur
	Velez, Maria	University of Regina, Canada
	Wemple, Beverley	University of Vermont
	Zelikova, Jane	University of Wyoming
	Zilio, Mariana	Instituto de Investigaciones Económicas y Sociales del Sur
Hart, Stephen	REU	See above
Leppert, Valerie	Not available	
Hull, Kathleen	Not available	
Joyce, Andrea	Not available	
Moran, Emily	Not available	
Matlock, Tennie	none	
O'Day, Peggy	Not available	
Rice, Robert	Butler, Leslie	University of California Davis
	Glaser, Steve	University of California Berkeley
	Horwath, William	University of California Davis
	Zhang, Ziran	UC Berkeley
	Steven Glazier	UC Berkeley
Rolland, Eric	1 (no name)	Purdue University
	1 (no name)	Shanghai Jiaotong University
	2 (no name)	University of Alberta

Professor	Student/Faculty	Institution
Sexton, Jason	Blackman, Ben	University of Virginia
	Carscadden, Kelly	University of Toronto
	Hirst, Megan	University of Melbourne
	Hoffmann, Ary	University of Melbourne
	Slatyer, Rachel	University of Melbourne
Westerling, Anthony	Not available	
Winston, Roland	Constance Chang-	UC Berkeley
	Hasnain	UC Davis
	Pieter Stroeve	UCSB
	Umesh Mishra	UC Riverside
	Alfredo Martinez-	UCLA
	Morales	UC Irvine
	Yang Yang	UCSC
	Matthew Law	UCSB
	Michael Isaacson	UC Davis
	Steve DenBaars	UC Berkeley
	Nael El-Farra	UC San Diego
	Ali Javey	UC San Diego
	Sungho Jin	UCSC
	Zhaowei Liu	UC Davis
	Patrick Mantey	UC Berkeley
	Adam Moule	UCSB
	Sayeff Salahuddin	UC Davis
	James Speck	UC Riverside
	Daniel Sperling	UC Davis
	Sadrul Ula	UC Berkeley
	Jerry Woodall	UC Davis
	Ming Wu	UC Berkeley
	Eli Yablonovitch	UC Berkeley
	Adam Durbin	UC San Diego
	Mark Durbin	UC San Diego
Viers, Joshua	UC Water collaborator	(See Bales)

9.) Numbers and FTE of academic research personnel, technical staff, and administrative personnel who are paid through the unit's accounts.

	All accounts
Academic Research Personnel	32 FTE
Technical Staff	2 FTE
Administrative Personnel	13 FTE

See attachment B for a complete listing of these individuals (page 17)

10.) Efforts to contribute to the campus's diversity goals. Contributions to diversity and equal opportunity can take a variety of forms, including efforts to advance equitable access to education, public service that addresses the needs of California's diverse population, or research in a scholar's area of expertise that highlights inequities.

UC Merced has one of the most diverse student populations in the UC system. In all areas, the SNRI students, grad students and employees–reflect California. The new knowledge being created by the SNRI Faculty, researchers and students creates better understanding of conditions, needs and solutions that have a direct impact on low-income, rural and diverse populations. *Note the ethnic diversity represented by the names of the UC Merced undergraduate and graduate students listed in section 7 of this report.*

Two SNRI public programs in the Downtown Merced area have been successful outreach to the local population:

Since 2014, the *Science Café Merced* has held nine monthly events. This program continues to receive a very positive response from the audience as well as the host business, Coffee Bandits. It is designed to fulfill the international Science Café model: an event hosting "*people who may or may not typically get involved with scientific discussions. They are not exclusive club meetings for scientists and science majors, nor do they take place exclusively in lecture halls or science museums"* (Science Café website).

Most contributions to the campus' diversity goals come from the efforts of individual faculty. These include talks to the community and school groups, interviews with local press, op-ed pieces in local and regional newspapers, meetings with students and prospective students and participation in community events. SNRI does not have outreach staff, but does support efforts by campus and individual faculty where possible.

SNRI also sponsored public lectures and conversations at the Karmangar Theatre in downtown Merced. These events are free to the public and have been attended by a wide variety and hundreds of guests from the Merced and surrounding community. Both events included a question and answer period with the audience.

The authors of The West Without Water, Lynn Ingram and Frances Malamud-Roam presented to a full house and addressed the geologic history of major drought in the West.

The author of Dodging Extinction, Anthony Barnosky, spoke about past extinctions and described the indications that we are heading into the 6th extinction. [a]

SNRI is a regular participant in the Merced River Fair which is a local annual event.

11.) List of publications, issued by and acknowledging the unit, including books, journal articles, and reports and reprints, showing author, title, and press run; or other evidence of creative scholarship, such as colloquia, conferences, workshops, performances, and exhibitions. Publications must acknowledge the ORU.

Books: 14
Journal Articles: 145
Reports: 4
Citations: 61
Press Releases: 30

SNRI does not ask faculty, researchers and students to acknowledge SNRI in publications. Some do list an SNRI affiliation, along with a school affiliation within UC Merced. However, SNRI does not explicitly request that members and their research affiliates do this. It is left to the individual to decide what is appropriate for each publication.

See Attachment C for complete listing of articles/press releases by SNRI members and researchers in the 2014/2015 academic year (beginning on page 18)

12.) Sources and amounts (on an annual basis) of income, including contracts and grants, gifts, University support, service agreements, and income from the sale of publications and from services.

FY 14/15 Grants and Contracts	$ 8,107,758.78
UCOP support for UC Water	$ 819,601.00
Gifts	$ 152,761.00
State Funding (SNRI Operations)	$ 492,523.86
FY 14/15 total for SNRI grants/gifts/state funding	$ 8,753,043.54
Total value of current active SNRI Grants (2014-2019)	$24,776,480.76

[a] *Funds provided specifically for research initiatives by UC Merced; not a part of core SNRI budget.*

These are approximate amounts of grants and contracts to SNRI members and researchers. This was compiled from data available from the SNRI MSO, the UC Merced Sponsored Projects Office and the Campus Gift administration Office.

See Attachment E for details (page 42, 43 & 44)

13.) Expenditures from all sources of support funds, distinguishing use of funds for administrative support, direct research, and other specified uses.

General Funds Attachment E (Page 44)

Direct Research	$ 8,107,758.78
Academic Salaries	$ 74,273.80
Career Staff	$ 208,289.86
Student Appointments	$ 28,878.37
General Operations	$ 35,904.25
Travel	$ 17,721.73
Benefits	$ 109,587.00
Other Expenses	$ 9,661.58
Total	$ 8,600,282.54

14.) Description and amount of space currently occupied.

Two administrative office spaces in Science and Engineering Building 1

Science and Engineering Building 1, Room 206 (160 sq ft)

Science and Engineering Building 1, Room 208 (321 sq ft)

Conference room - Science and Engineering Building 1, Room 200 (486 sq ft)

Administrative Office Building (Temporary Modular buildings)

AOB 125 Office (109 sq ft)
AOB 144 Office (107 sq ft)
AOB 145 Office (110 sq ft)

Total square footage: 1,293 sq ft

15.) Summary of ORU goals for the coming year.

- Continue the development of SNRI, UC Merced as the world class research university partner for outstanding engagement with research, governance and policy leaders focused on the Sierra and Central Valley regions, and comparative regions world-wide.

- Develop stronger partnerships with private-sector business and regional development leaders

- Increase funding support from all external sources

- Develop strategic development and funding plans for SNRI faculty and programs

- Develop a more balanced workload for the ORU administrative support staff

- Prepare the 5-year review of SNRI with oversight committee guidance and complete Self Study in Fall -2015

- Further contribute to strategic UC Merced growth and look for opportunities to develop SNRI priorities within the 6 themes of Strategic Academic Focusing
    - *Toward a Sustainable Planet*
    - *Computational Science and Data Analytics*
    - *Chemical and Biological Materials and Matter*
    - *Entrepreneurship and Management*
    - *Human Health Science*
    - *Inequality, Power and Social Justice*

- Provide updated Strategic Plan and Business Plan for SNRI.

ATTACHMENT: A

SNRI ORU Advisors meeting agenda and notes
May 11, 2015
10-11am

Attendees present: Roger Bales (Director) , Kathleen Hull (Chair), Josh Viers, Michael Dawson, Asmeret Asefaw Berhe, YangQuan Chen, Armando Quintero (Staff)
Absent: External Advisor (position vacant at this time)

Action items in italics-

1 Members and role of AC -- Outlined in the UC president's Administrative Policies and Procedures Concerning Organized Research Units , as per 10-130 of UCOPs organizational manual. The most recent copy of the ORU policies and procedures is attached, and posted here: http://policy.ucop.edu/doc/2500488/ORU. See section II.5a.

Advisory Council review and report to the VCR?
Roger is talking with VC for Research about how he wants to handle this.
VC said he sent letters to the Advisory Council about continued participation.
The purpose of this meeting is to prepare for the next calendar year.
Regarding ORU Director Appointment: Members can provide a letter or memo to the Vice Chancellor.

2 Status of SNRI, including staffing & administrative support. Continue as current & seek staff additions, or shift some workload to other units?

SNRI Admin staff need to shift some workload to other units or get additional help. They are working in support of NRS and vehicle management in addition to being the busiest ORU at UC Merced.
Questions about staff support should arise from the annual and 5-year report.
Coty is the MSO
Armando is ED
Three staff and two students:

- grant management for SNRI
- Organize/support all SNRI events
- Handling business for NRS system (needs a full time person)
- Vehicle management for SNRI

Would like to move the NRS to John Jackson – he is declining – because of insufficient staff.
Need to get a staff member dedicated to NRS – either at SNRI or in Office of Research
Should we make a funding request for additional support for SNRI / NRS / EAL /vehicle administrative workload?
Administration of NRS was moved to Research Office
Budget and Finance for NRS has remained with SNRI
There are 9 models for how the NRS is managed in the UC system – each campus is different.
SNRI has such a large volume of grants that even within the UCM campus the SNRI

administrative workload is heavier than other ORUs and departments.

Advisor consensus to ask Sam and John Jackson to have the Office of Research take over the budget/finance soon. SNRI leadership is willing to continue support with the funding support for that position until the administrative workload is transferred to Office of Research.

It is essential that we get that support, SNRI staff is working overtime to keep up right now. They are regularly working at least one weekend day/per week.

We are keeping a record of overtime worked by SNRI admin support staff.

3 SNRI 5-yr review -- Armando compiling data for next AY review. Aim for fall or spring?

2 years late, regarding timing, we will get administrative guidance from Office of Research.
Were we formally notified that we were under review?
Sam said in the Fall that we were to wait for guidelines.
Write a memo to program review and oversight committee and ask them for guidance and suggested timing.
A self study then an external review.
Self Study is expected to be submitted in late fall (targeting early fall).
External Committee picks it up in the Spring and it could take some time (one year?) for that work to be completed.
There is guidance for the academic units that we should adopt.
If we tell "Proc" we want it, they will provide a recommended schedule.
We could say the data is ready in September and report ready in the late fall.
Anthropology is shooting for a September date and it takes a year to get review completed.
Mike Dawson will provide a timeline.
We will provide a memo to PROC asap.
Getting the information from PROC will be helpful in terms of suggested reviewers, external and internal to be provided by SNRI Advisory group.

4 Annual report -- Armando compiling data. Resume this after a 1-yr gap?

David Hosley started annual report a few years ago. This has now changed and the research council wants a report with more metrics.
Report seems to focus on justifying existence of the ORU.
The Annual Report is the place to get the data and compile the information.
Report is due in July 2015. Armando will have draft by early June for review by faculty.
Do we have the cycles to provide an external report next year?
A simpler external report will work with the annual report available for additional detail/information.

5 SNRI Director re-appointment; see attached letter from last year. Request reappointment?

Does Roger want to be re-appointed?, "Yes and No".
Asked for 5 year re-appointment. He was appointed for one year pending the submission of a report.
Will probably get a one-year extension.
Would be good to get a two year reappointment minimum or four year maximum. Will need to be careful of the 10 year appoint limit for ORU Directors.
Kathleen will write a letter to VC Research requesting a formal appointment extension.

6 Participation in Strategic Academic Focusing -- Developing SNRI priorities within the 6 themes (p 6, attached). Level of participation for SNRI? Formulate goals?

Level of participation. Interested in full participation with SNRI backing. Martha was involved during Roger's Sabbatical.
Provide updated Strategic Plan and Business Plan for SNRI.
SNRI can/should be represented at all of the 6 Themes.
How is academic focusing going to play out over the next 6 months ?
This does represent an opportunity for SNRI to develop strength – and develop strength for the campus.
Director would like to carry the flag for Strategic Growth at these meetings.
Within the areas of strategic focusing, there may need to be some triage – if SNRI Directors role is to strengthen SNRI through the most relevant pillars.
SNRI has tried to be an advocate for public health.
We should have a voice – contribute to the conversation with overarching strategic directives that SNRI provides with priorities for the campus and the State.
The furthering of SNRI's sustainability is critical to SNRI's Leadership and we should proceed wisely and cautiously.
We may be better off participating as faculty.
Roger is participating in sustainability and management pillars.
Other ORU's have faculty attending meetings as advocates for their particular ORU.
SNRI being a reasoned voice for strategic growth is important.
We are not saying we want positions – we want to know how we can support the Pillars as SNRI faculty.
Roger gives a gentle nod to participate and represent the view of strategic growth.
After the first group meeting, we should re-group to see how this is working.
Did we offer job to the Environmental Engineering Faculty hire with a spouse hiring?
Are there any other faculty hires coming in?
3 in LES – Asmeret will provide names.
Search for an SNRI position is being led by Tony Westerling.

7 SNRI membership additions & membership committee. Suggestions to reconstitute committee?

Henry Foreman, Mike Dawson and Wolfgang – we need a new chair.
Weigh in on faculty who want to join SNRI?
Wolfgang is willing to stay on.
Mike Dawson will be Chair for Grad Council.
Suggestion that Wolfgang to be asked to Chair? Who will ask?

Need a new member – need suggestions from SNRI leadership.
Andrea Joyce – would be a good person, Kathleen and Mike will help on that.

8 Other items?

SNRI Plan should be reviewed with the 5 year review.
Roger sent out the SNRI Plan 11/12 academic year to all committee members.
Need external ORU committee member name from Sam Traina. (Armando pursing this)

ATTACHMENT: B

SNRI Academic Research Personnel	**SNRI Administrative Personnel**
1. Bales, Roger 2. Birkner, Nancy 3. Booth, Lorenzo 4. Campell, John E. 5 Carper, Dana Lynn 6. Conklin, Martha 7. Flanagan, Jacob, Patrick 8. Frank Carolin 9. Gann, Timothy 10. Hart, Stephen 11. Hilton, Timothy 12. Hull, Kathleen 13. Hunsaker, Carolyn 14. Keyser, Alisa 15. Kupihea, James 16. Lu, Yaqiong 17. Lucas, Ryan 18. Ma, Qin 19. Martin, Sara 20. Miller, Norman 21. O'Day, Peggy 22. Pickard, Michael 23. Reinoso, Maset 24. Rungee, Joseph 25. Safeeq, Mohammad 26. Saska, Philip 27. Thaw, Melissa 28. Vincent, Emmanuel 29. Westerling, Tony 30. Yang, Yetao 31. Yoon, Yeosang 32. Zhao, Tiebiao	1. Campanella, Andrea 2. Galvan, Crystal 3. Meng, Xiande 4. Quintero, Armando 5. Stacy, Erin 6. Valle, Alexis 7. Ventura, Coty 8. Womble, Patrick ***Following list represents students who make up 5 FTE*** *(full time equivalent)* 9. Anderson, Andreas 10. Bradley, Kian 11. Canal, Esther 12. Chi, Asia Con 13. Frise, Andre 14. Iencarelli, Elizabeth 15. Loera, Andrew 16. Martinez, Andrew 17. Shchemelinin, Yoni 18. Torres, Ryan 19. Woodbury, Patrick 20. Zhou, Michelle

Attachment C

Publications – Books, Journal Articles, Reports
Books: 14
Journal Articles: 145
Reports: 4
Press Releases: 30

Faculty Member	Publication
Ardell, David	Burow, D.A., Umeh-Garcia, M.C., True, M.B., Bakhaj, C.D., Ardell, D.H., Cleary, M.D. Dynamic regulation of mRNA decay during neural development (2015) Neural Development, 10 (1), art. no. 11, .
Ardell, David	Amrine, K.C.H., Swingley, W.D., Ardell, D.H. tRNA Signatures Reveal a Polyphyletic Origin of SAR11 Strains among Alphaproteobacteria (2014) PLoS Computational Biology, 10 (2), art. no. e1003454, .
Bales, Roger	Harpold, A.A., Molotch, N.P., Musselman, K.N., Bales, R.C., Kirchner, P.B., Litvak, M., Brooks, P.D. Soil moisture response to snowmelt timing in mixed-conifer subalpine forests (2015) Hydrological Processes, 29 (12), pp. 2782-2798.
Bales, Roger	Bales, R.C., Rice, R., Roy, S.B. Estimated loss of snowpack storage in the Eastern Sierra Nevada with climate warming (2015) Journal of Water Resources Planning and Management, 141 (2), art. no. 04014055, .
Bales, Roger	Kirchner, P.B., Bales, R.C., Molotch, N.P., Flanagan, J., Guo, Q. LiDAR measurement of seasonal snow accumulation along an elevation gradient in the southern Sierra Nevada, California (2014) Hydrology and Earth System Sciences, 18 (10), pp. 4261-4275.
Bales, Roger	Goulden, M.L., Bales, R.C. Mountain runoff vulnerability to increased evapotranspiration with vegetation expansion (2014) Proceedings of the National Academy of Sciences of the United States of America, 111 (39), pp. 14071-14075..
Bales, Roger	Mcconnell, J.R., Maselli, O.J., Sigl, M., Vallelonga, P., Neumann, T., Anschütz, H., Bales, R.C., Curran, M.A.J., Das, S.B., Edwards, R., Kipfstuhl, S., Layman, L., Thomas, E.R. Antarctic-wide array of high-resolution ice core records reveals pervasive lead pollution began in 1889 and persists today (2014) Scientific Reports, 4, art. no. 5848, .
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LiDAR-derived snowpack data sets from mixed conifer forests across the Western United States
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Beman, Michael — Carolan, M.T., Smith, J., Beman, J.M.
Transcriptomic evidence for microbial sulfur cycling in the eastern tropical North Pacific oxygen minimum zone
(2015) Frontiers in Microbiology, 6 (MAY), art. no. 00334, .

Beman, Michael — Hayden, C.J., Beman, J.M.
High abundances of potentially active ammonia-oxidizing bacteria and archaea in oligotrophic, high-altitude lakes of the Sierra Nevada, California, USA
(2014) PLoS ONE, 9 (11), art. no. 0111560, .

Beman, Michael — Wilson, J.M., Severson, R., Beman, J.M.
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(2014) PLoS ONE, 9 (7), art. no. e99821, .

Beman, Michael — Beman, J.M.
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Berhe, Asmeret	Brok, E., Frandsen, C., Madsen, D.E., Jacobsen, H., Birk, J.O., Lefmann, K., Bendix, J., Pedersen, K.S., Boothroyd, C.B., Berhe, A.A., Simeoni, G.G., Mørup, S. Magnetic properties of ultra-small goethite nanoparticles (2014) Journal of Physics D: Applied Physics, 47 (36), art. no. 365003, .
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Berhe, Asmeret	Kaiser, M., Asefaw Berhe, A. How does sonication affect the mineral and organic constituents of soil aggregates? - A review (2014) Journal of Plant Nutrition and Soil Science, 177 (4), pp. 479-495.
Blois, Jessica	Jackson, S.T., Blois, J.L. Community ecology in a changing environment: Perspectives from the Quaternary (2015) Proceedings of the National Academy of Sciences of the United States of America, 112 (16), pp. 4915-4921.
Blois, Jessica	Nieto-Lugilde, D., Maguire, K.C., Blois, J.L., Williams, J.W., Fitzpatrick, M.C. Close agreement between pollen-based and forest inventory-based models of vegetation turnover (2015) Global Ecology and Biogeography, 24 (8), pp. 905-916.
Blois, Jessica	Gill, J.L., Blois, J.L., Benito, B., Dobrowski, S., Hunter, M.L., Jr., Mcguire, J.L. A 2.5-million-year perspective on coarse-filter strategies for conserving nature's stage (2015) Conservation Biology, 29 (3), pp. 640-648.
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Chen, Yihsu	Chen, Y., Hobbs, B.F., Hugh Ellis, J., Crowley, C., Joutz, F. Impacts of climate change on power sector NO<inf>x</inf> emissions: A long-run analysis of the US mid-atlantic region (2015) Energy Policy, 84, pp. 11-21.
Chen, Yihsu	Ding, Y., Kang, C., Wang, J., Chen, Y., Hobbs, B.F. Foreword for the special section on power system planning and operation towards a low-carbon economy (2015) IEEE Transactions on Power Systems, 30 (2), art. no. 7042873, pp. 1015-1016.
Chen, Yihsu	Huang, Y., Chen, Y. Analysis of an imperfectly competitive cellulosic biofuel supply chain (2014) Transportation Research Part E: Logistics and Transportation Review,

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Chen, Yihsu	Limpaitoon, T., Chen, Y., Oren, S.S. The impact of imperfect competition in emission permits trading on oligopolistic electricity markets (2014) Energy Journal, 35 (3), pp. 145-166. Cited 3 times.
Chen, Yihsu	Bushnell, J., Chen, Y., Zaragoza-Watkins, M. Downstream regulation of CO2 emissions in California's electricity sector (2014) Energy Policy, 64, pp. 313-323.
Chen, YangQuan	Cao, J., Li, C., Chen, Y. High-order approximation to Caputo derivatives and Caputo-type advection-diffusion equations (II) (2015) Fractional Calculus and Applied Analysis, 18 (3), pp. 735-761.
Chen, YangQuan	Cao, J., Syta, A., Litak, G., Zhou, S., Inman, D.J., Chen, Y. Regular and chaotic vibration in a piezoelectric energy harvester with fractional damping (2015) European Physical Journal Plus, 130 (6), art. no. 103, 11 p.
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Chen, YangQuan	Ma, Y.D., Lu, J.-G., Chen, W.D., Chen, Y.Q. Robust stability bounds of uncertain fractional-order systems (2014) Fractional Calculus and Applied Analysis, 17 (1), pp. 136-153.
Chen, YangQuan	Stark, B., Rider, S., Chen, Y. Optimal control of a diffusion process using networked unmanned aerial systems with smart health (2014) IFAC Proceedings Volumes (IFAC-PapersOnline), 19, pp. 1254-1259.

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Chen, YangQuan	Han, J., Di, L., Coopmans, C., Chen, Y. Pitch loop control of a VTOL UAV using fractional order controller (2014) Journal of Intelligent and Robotic Systems: Theory and Applications, 73 (1-4), pp. 187-195.
Chen, YangQuan	Malek, H., Dadras, S., Chen, Y. Application of fractional order current controller in three phase grid-connected PV systems (2014) Proceedings of the American Control Conference, art. no. 6859509, pp. 5224-5229.
Chen, YangQuan	Stark, B., Stevenson, B., Stow-Parker, K., Chen, Y. Embedded sensors for the health monitoring of 3D printed unmanned aerial systems (2014) 2014 International Conference on Unmanned Aircraft Systems, ICUAS 2014 - Conference Proceedings, art. no. 6842253, pp. 175-180.
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Chen, YangQuan	Jensen, A.M., McKee, M., Chen, Y. Procedures for processing thermal images using low-cost microbolometer cameras for small unmanned aerial systems (2014) International Geoscience and Remote Sensing Symposium (IGARSS), art. no. 6947013, pp. 2629-2632.
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Chen, YangQuan	Yin, C., Chen, Y., Zhong, S.-M. Robust stability and stabilization of uncertain fractional-order descriptor nonlinear system (2014) IFAC Proceedings Volumes (IFAC-PapersOnline), 19, pp. 6080-6085.
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Chen, YangQuan	Yin, C., Chen, Y., Zhong, S.-M. Fractional-order power rate type reaching law for sliding mode control of uncertain nonlinear system (2014) IFAC Proceedings Volumes (IFAC-PapersOnline), 19, pp. 5369-5374.
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Attachments D– next page (page 42-44)

Appropriation ItD	Expenditures ItD	Appropriation Fiscal Year 14-15	Expenditures Fiscal Year 14-15	Award Amount	PI Last Na	PI First Na	Project	Sponsor	Award Title
1,705,280.00	1,608,675.94	355,029.81	258,425.75	1,985,280.00	Bales	Roger	AMR (Fab 100010	NSF	instrument cluster for hydrologic, atmospheric and ecosystem science
238,436.00	89,963.29	197,339.86	48,867.15	222,213.00	Bales	Roger	STEF (PINECREST)	USDA Forest Service	Variable Thinning Using Historical Stand Structure Data to Create Fire-resilient Forests an Enhance
112,500.00	98,901.63	30,923.30	17,324.93	77,500.00	Bales	Roger	KREW	USDA Forest Service	Watershed Function & Effects from Forest Restoration: Kings River Experimental Watershed & Critical Zone Observatory
45,921.36	5,716.14	45,921.36	5,716.14	121,841.00	Bales	Roger	SWEEP2/ANR	UC ANR	Effects of Forest Management on Water Yiends and Other Ecosystem Services in Sierra Nevada Forests
25,280.48	24,477.39	25,280.48	24,477.39	43,887.00	Bales	Roger	CITRIS	CITRIS	CITRIS Seed Funding: Quantifying the Value of Hydrologic Forecasting for Intelligent Hydropower Operations
672,631.80	481,298.66	475,692.81	284,359.67	5,122,740.00	Bales	Roger	PIMRB	NSF	Southern Sierra Critical Zone Observatory
53,041.00	13,537.63	53,041.00	13,537.63		Bales	Roger	RESRB	NSF	Southern Sierra Critical Zone Observatory
264,381.00	112,648.11	215,878.94	64,146.05		Bales	Roger	CORE/MAIN	NSF	Southern Sierra Critical Zone Observatory
150,000.00	68,369.24	148,389.58	66,758.82	150,000.00	Bales	Roger	-	USDA Forest Service	Climate and Landscape-Change Effects Research on Water Quantity and Quality of Forests in Sierra Nevada (and Comparative Areas)
17,488.00	17,488.00	17,488.00	17,488.00		Bales	Roger	Financial Aid Acct	NSF	Southern Sierra Critical Zone Observatory
12,445.00	7,674.70	12,455.00	7,674.70		Bales	Roger	Overhead Varianc	NSF	Southern Sierra Critical Zone Observatory
200,064.00	168,715.61	200,064.00	168,715.61		Bales	Roger	articipant Suppor	NSF	Southern Sierra Critical Zone Observatory
599,334.00	5,461.00	599,334.00	5,461.00	3,529,750.00	Bales	Roger	WASSRI	UCOP	UC Water Security and Sustainability Research Initiative
67,194.45	28,193.01	67,194.45	28,193.01	34,665.00	Bales	Roger	Chasing Snow	The Yosemite Foundation	Chasing Snow: How Will Changing Snow Affect Yosemite's Resources
6,820.00	-	6,820.00	-		Berhe	Asmeret	UCM-A	NSF	Southern Sierra Critical Zone Observatory
266,582.93	95,691.12	266,582.93	95,691.12	314,504.00	Campbell	Elliot	-	UC Lab Fees Research Program	Quantifiying Urban CO2 fluxes using carbonyl sulfide and 14C
249,277.00	201,166.50	148.888.04	100,777.54	249,277.00	Campbell	Elliot	AFRI	University of Missouri (USDA prime)	Farmer Adaptation to Climate-Induced Yield Changes and Market Impacts
367,645.68	36,354.20	367,645.68	36,654.20	1,045,721.00	Campbell	Elliot	DOE-Brazil	US Department of Energy DC	Scaling from Flux Towers to Ecosystem Models: Regional constraints on Carbon Cycle Processes from
21,790.00	-	21,790.00	-	25,846.00	Campbell	Elliot			
4,056.00	4,056.00	4,056.00	4,056.00		Campbell	Elliot			
48,921.03	27,318.60	48,921.03	27,318.60	144,410.00	Chen	YangQuan	ANR-UAV	UC-ANR	Rotor Unmanned Aerial Vehicles (UAV's) as a Crop Monitoring Tool
55,674.20	39,609.40	55,674.20	36,609.40		Conklin	Martha	UCM-C	NSF	Southern Sierra Critical Zone Observatory
225,420.00	76,272.11	225,158.56	76,010.67		Conklin	Martha	CZO-E&O	NSF	Southern Sierra Critical Zone Observatory
200,485.00	187.786.27	82,813.60	70,114.87	200,485.00	Conklin	Martha	USDA-SNAMP (TO12)	UC Berkeley (USDA prime)	Sierra Nevada Adaptive Management Program
36,785.55	36,785.55	(37,311.45)	(37,311.45)	165,000.00	Conklin	Martha	TASK19	DWR	Sierra Nevada Adaptive Management Program, Merced-Task Order 19
284,501.45	139,744.49	284,501.45	139,744.49	163,556.00	Conklin	Martha			
68,423.00	-	68,423.00	-	268,423.00	Conklin	Martha			
100,000.00	-	100,000.00	-		Conklin	Martha			
100,000.00	-	100,000.00	-		Conklin	Martha			
27,857.00	-	27,857.00	-	161,999.00	Conklin	Martha			
130,753.00	3,624.36	130,753.00	3,624.36		Conklin	Martha			
149,950.33	149,950.33	130,735.09	130,735.09		Frank	Carolin	EAGER	NSF	EAGER: Nitrogen Fixing Bacterial Endosymbioses in Above Ground Conifer Tissue
1,429,949.00	111,511.80	1,429,949.00	111,511.80	1,623,786.00	Frank	Carolin	DIMENSIONS	NSF	Dimensions: Taxonomic, genetic, and functional biodiversity of above-ground bacterial endophytes in subalpine conifers
189,609.00	184,874.13	34,931.41	30,196.54	57,449.00	Guo	Qinghua	SNAMP	UC Berkeley (USDA prime)	Sierra Nevada Adaptive Management Program
265,854.00	80,314.87	265,854.00	80,314.87	265,854.00	Guo	Qinghua	Forest3D	NSF	ABI Development: Forest3D - An Open Source Platform for Lidar Applications in Forestry
38,409.00	29,290.23	38,409.00	29,290.23	38,408.76	Guo	Qinghua	DOQQs	USDA Forest Service	Using LiDAR and DOQQs to Map Forest Vegetation for Assessing Wildlife Habitat
38,038.00	31,909.49	26,536.31	20,407.80		Hart	Stephen	UCM-H	NSF	Southern Sierra Critical Zone Observatory
66,532.00	57,936.97	30,191.55	21,596.52	318,150.00	Hart	Stephen	REU	NSF	REU Site: Yosemite Environmental Science Research Training
232,218.00	164,252.90	159,879.47	91,914.37		Hart	Stephen	REU	NSF	REU Site: Yosemite Environmental Science Research Training
19,400.00	20,650.00	-	1,250.00		Hart	Stephen	REU	NSF	REU Site: Yosemite Environmental Science Research Training
200,000.00	154,163.22	45,836.78	-	600,000.00	Hosley	David	-	USDI	National Parks Insitute
					Hosley	David	-	-	National Parks Insitute - Program Income Acct
89,363.00	78,722.20	24,484.97	13,844.17	89,363.00	Hull	Kathleen	NAGPRA	USDI	El Portal NAGPRA Project
34,569.00	27,955.13	33,390.48	26,776.61	34,569.00	Hull	Kathleen	-	NPS	Research and Reporting for Yosemite Archeological Collections
37,745.00	37,681.84	37,745.00	37,681.84	37,745.00	Jepsen	Steven	-	UC ANR	Lake-Pair Synchronicity as an Indicator of Permafrost Change in Arctic Regions
15,000.00	2,428.11	15,000.00	2,428.11	15,000.00			Pistachio	ornia Pistachio Research Bo	Molecular identification of leaffooted plant bug and stink bug species and strains in pistachio orchards
25,563.00	24,566.58	13,825.52	12,829.10	17,555.00	Joyce	Andrea	-	Mosquito Research Foundation	Population genetic structure of the Culex pipiens complex in Merced County
2,800.83	-	2,800.83	-	11,650.00	Joyce	Andrea	-	UCOP	Behavioral insights to Understand Genetic Isolation in a Maize Pest, the leafopper Dalbulus Maidis
35,416.00	24,460.88	35,416.00	24,460.88	35,439.00	Joyce	Andrea	14.ENTO8.Joyce	Almond Board of California	Early Detection of Leaffooted Plant Bug in Almond Orchards
39,957.44	39,957.44	12,318.81	12,318.81	36,959.00	Joyce	Andrea	13.ENTO8.Joyce	Almond Board of California	Early Detection of Leaffooted Plant Bug in Almond Orchards
2,043,562.00	2,037,879.66	137.38	(5,544.96)	4,995,279.00	Kueppers	Lara	-	DOE	Sup Alpine Species Range Shifts with Climate Change: temperature and soil moisture manipulations to test species and population responses
536,700.00	536,561.87	380.10	241.97		Kueppers	Lara	-	DOE	Sup Alpine Species Range Shifts with Climate Change: temperature and soil moisture manipulations to test species and population responses (Overhead Variance)
1,081,711.00	887,081.39	460,440.17	265,810.56		Kueppers	Lara	-	DOE	Sup Alpine Species Range Shifts with Climate Change: temperature and soil moisture manipulations to test species and population responses
47,151.00	46,919.80	12,158.37	11,927.17	72,153.00	Miller	Norman	-	UCB (NSF prime)	CNH: Wetland Persistence in a Working Landscape: Links between Landowner Decisions, Climate, Disease, Ecology, and Metapopulation Dynamics
73,523.00	58,549.16	58,050.28	43,076.44	73,523.00	Miller	Norman	-	NASA	Evaluation of Impacts of Climate Variability and Change at NASA Ames Research Center
691,296.46	691,296.46	46,697.04	46,697.04	781,992.00	O'Day	Peggy	-	DOE	Molecular Mechanisms and Kinetics of Microbial Anerobic, Nitrate-Dependent U(IV) and Fe(II) Oxidation
300,000.00	209,984.33	206,341.83	116,290.16	300,000.00	O'Day	Peggy	-	NSF	Collaborative Research: Quantifying the Reactive Surface Area of Environmental Solids
42,327.00	52,596.85	42,327.00	52,596.85	42,327.00	O'Day	Peggy	NIH-RS6	USC (NIH prime)	Human Models of the Nanoparticulate-Induced Inflammatory/Antioxidant Axis in Aging
300,126.00	252,464.11	143,918.41	96,256.52	300,126.00	O'Day	Peggy	-	DOE	Uranium and Strontium Fate in Waste-Weathered Sediments: Scaling of Molecular Processes to Predict Reactive Transport
112,607.00	2,615.41	112,607.00	2,615.41	112,607.00	O'Day	Peggy			
				69,252.00	Rice	Robert			
100,000.00	13,826.86	100,000.00	13,826.86	100,000.00	Rolland	Erik	RLF	Resources Legacy Fund	Development and Implementation of the California State Parks Institute
35,000.00	8,832.92	35,000.00	8,832.92	35,000.00	Viers	Joshua	Vollmar	llmar Natural Land Consulti	Assessment of Conservation Status of Vernal Pool Habitat in the Central Valley
60,197.00	44,106.53	36,925.22	20,834.75	60,197.00	Westerling	Anthony	-	UCSD (NSF Prime)	Multiscale Modeling of Aerosol Indiret Effects on Decadal Timescales
220,000.00	167,175.60	92,963.98	40,139.58	275,000.00	Westerling	Anthony	CNAP	UCSD (NOAA Prime)	California Nevada Applications Program
121,978.00	121,980.48	(253.64)	(251.16)	275,000.00	Westerling	Anthony	USDA-AFRI	Penn State	Projecting Climate Change Mitigation and Adaptation in Fire-Prone Forests Under Future Climate Change
153,022.00	24,935.89	153,022.00	24,935.89		Westerling	Anthony	USDA-AFRI	Penn State	Projecting Climate Change Mitigation and Adaptation in Fire-Prone Forests Under Future Climate Change (new FAU opened; fund 25202 was given erroneous series)
75,000.00	55,775.39	72,021.83	52,797.22	75,000.00	Westerling	Anthony		USDA Forest Service	Modeling Potential Fire, Emissions, Suppression Costs, and WUI Impacts with Different Landscape Vegetation Scenarios under Changing Climate
38,409.00	29,290.23				Guo	Qinghua	DOQQs	USDA Forest Service	Using LiDAR and DOQQs to Map Forest Vegetation for Assessing Wildlife Habitat
					Rolland	Erik	DPR	rtment of Parks and Recre	The UC Merced California State Parks Institute
		FY 14-15		Award Total					
15,301,971.99	9,854,241.74	8,107,758.78	$ 3,003,075.61	24,776,480.76					

Expenditure Sub-Object Summary As of June 30, 2015

Account/CC: 449001/2A RESEARCH-SNRI-OPERATIONS Fund : 19900 GENERAL FUNDS

Sub-Object	Description	Expenditure	Encumbrance ()=CREDIT	
00-0000	SALARIES-ACADEMIC-UNDESIGNATED BALANCES			
00-1050	S&W-ACADEMIC ADMINISTRATIVE	40377.96		
00-1070	S&W-APPRENTICE RESEARCH	13758.34		
00-1888	ACADEMIC SALARIES-DEFAULT	20137.50		
00 Academic Salaries**		**74273.80**	**0.00**	74273.80
01-0000	SALARIES-STAFF-UNDESIGNATED BALANCES			
01-1110	S&W-MGMT/CAREER STAFF	207904.26		
01-1940	ACCRUED S & W COSTS	385.60		
01 Staff - Career**		**208289.86**	**0.00**	208289.86
02-0000	GENERAL ASSISTANCE-UNDESIGNATED BALANCES			
02-1120	S&W-CAREER STAFF SUB 2	2000.00		
02-1130	S&W-CASUAL STAFF	24929.10		
02-1140	S&W-WORK-STUDY	1098.65		
02-1940	ACCRUED S & W COSTS	850.62		
02 Limited Appts - Students**		**28878.37**	**0.00**	28878.37
03-0000	SUPPLIES & EXPENSE-UNDESIGNATED BALANCES			
03-2040	CONFERENCE REG FEES/IN-STATE TRAVEL	1531.00		
03-2045	CONFERENCE REG FEES/OUT-OF-STATE TRA	480.00		
03-3003	FREIGHT AND SHIPPING-OUTGOING	387.75	6.24	
03-3195	MISCELLANEOUS FACILITIES SERVICES	1656.21		
03-3210	ADVERTISING-RECRUITMENT/PROCUREMENT			
03-3214	PROMOTIONAL MATERIALS & SERVICES	1192.80	332.77	
03-3265	COMPUTING NETWORK SERVICES	198.00		
03-3284	CUSTODIAL SERVICES (RECHARGE)	28.26		
03-3308	ENTERTAINMENT-FOOD & BEVERAGE	640.57		
03-3310	FOOD & BEVERAGE, BUSINESS CONFER & MT	1846.31		
03-3321	EVENT COORDINATION (RECHARGE)	295.00		
03-3380	INSURANCE	3029.15		
03-3464	PARKING SERVICES (RECHARGE)	280.00		
03-4001	TELEPHONE TOLLS	4233.66		
03-4003	TELEPHONE-OTHER	53.11		
03-4070	OUTGOING MAIL CHARGES	56.42		
03-4380	COMPUTING SUPPLIES OR HARDWARE (<$20	326.71		
03-4410	CUSTODIAL/CLEANING SUPPLIES	13.31		
03-4460	ELECT. SUPPLIES OR COMPONENTS	11.64		
03-4505	FOOD	218.31		
03-4525	FURNITURE & FIXTURES (NON-INVENTORIAL)	2469.15		
03-4630	LAB/SHOP INSTRUMENTS AND SUPPLIES	6581.12		
03-4700	OFFICE SUPPLIES	2933.22	2544.18	
03-4715	PAPER/PLASTIC SUPPLIES - NON-OFFICE	18.38		
03-4771	PROJECT SPECIFIC OFFICE TYPE SUPPLIES			
03-5210	UTILITIES-ELECTRICITY		19.21	
03-5805	SPACE RENTAL/LEASE ON-CAMPUS	20.00		
03-6010	PRINTING OF OFFICE SUPPLIES	34.94	28.49	
03-6030	COPYING SERVICES	0.07		
03-6605	COMP SOFTWARE LICENSE/RENTAL FEES	217.32		
03-9100	THEFT SENS EQUIP $200-4999-COMP HARDW	7151.84		
03 General Operations**		**35904.25**	**2930.89**	38835.14
05-0000	SPECIAL ITEMS-UNDESIGNATED BALANCES			
05-1060	S&W-PROFESSIONAL RESEARCH	15.56		
05-2000	TRAVEL-IN-STATE AND DOMESTIC	13225.98	209.52	
05-2020	PARKING	247.25		
05-2025	VEHICLE RENTAL-TRAVEL	561.64		
05-2040	CONFERENCE REG FEES/IN-STATE TRAVEL	395.00		
05-2045	CONFERENCE REG FEES/OUT-OF-STATE TRA	2505.00		
05-2100	TRAVEL-CONFERENCES FEES	50.00		
05-2700	RELOCATION EXPENSE	504.54		
05-3310	FOOD & BEVERAGE, BUSINESS CONFER & MT	69.67	11.48	
05-3456	PROFESSIONAL SERVICES/UNIVERSITY	147.09		
05 Travel**		**17721.73**	**221.00**	17942.73
06-0000	EMPLOYEE BENEFITS-UNDESIGNATED BALANCES			
06-8543	CORE MEDICAL-STAFF CASUAL	659.78		
06-8563	CORE LIFE-STAFF CASUAL	1.41		
06-8710	DENTAL INSURANCE-PSBP	144.48		
06-8720	HEALTH INSURANCE-PSBP	1974.31		
06-8730	VISION INSURANCE-PSBP	49.60		
06-8741	DISABILITY INSURANCE-PSBP	24.50		
06-8751	LIFE INSURANCE-PSBP	7.85		
06-8761	BROKER FEES-PSBP	24.55		
06-8940	ACCRUED BENEFITS COSTS	141.03		
06-8291	BENEFITS FOR ACADEMICS	20339.83		
06-8292	BENEFITS FOR STAFF CAREER	85842.40		
06-8293	BENEFITS FOR STAFF CASUAL	377.26		
06 Benefits**		**109587.00**	**0.00**	109587.00
07-0000	SPECIAL ITEMS-UNDESIGNATED BALANCES			
07-3003	FREIGHT AND SHIPPING-OUTGOING	51.45		
07-3105	MAINT/SVC AGREEMENT-COMPUTER SOFTW	90.91		
07-3160	REPAIRS-OTHER EQUIP	232.10		
07-3195	MISCELLANEOUS FACILITIES SERVICES	139.06		
07-3308	ENTERTAINMENT-FOOD & BEVERAGE	1137.00		
07-3310	FOOD & BEVERAGE, BUSINESS CONFER & MT	2442.73		
07-3410	LAUNDRY SERVICES	64.00		
07-3425	MEMBERSHIPS, BUSINESS AND PROFESSION	1000.00	100.00	
07-3464	PARKING SERVICES (RECHARGE)	200.00		
07-4003	TELEPHONE-OTHER	96.78		
07-4318	AUDIO SUPPLIES	39.94		
07-4380	COMPUTING SUPPLIES OR HARDWARE (<$20	12.42		
07-4410	CUSTODIAL/CLEANING SUPPLIES	24.76		
07-4460	ELECT. SUPPLIES OR COMPONENTS	7.22		

07-4630	LAB/SHOP INSTRUMENTS AND SUPPLIES		4955.38	
07-4700	OFFICE SUPPLIES	1306.14		
07-4706	PACKAGING/CONTAINERS/ADHESIVES	12.65		
07-5810	FACILITY RENTAL-SHORT TERM	2636.00		
07-6020	ART/PHOTO SERVICES	35.00		
07-6030	COPYING SERVICES	58.92		
07-6200	BOOKS & MAPS FOR DEPT USE	74.50		
07 Other Expenses**		**9661.58**	**5055.38**	14716.96
				492523.86

Attachment E

Gifts Administered through Development and Alumni Relations

Donor Name	Gift Amount	Fund Description
The Yosemite Foundation	$36,066.00	Chasing Snow Project
Mitsubishi CFA	$46,835.00	Support to Undergraduate Students to Work as Naturalists
Gary Kremen	$3,000.00	Sierra Nevada Research Institute Fund
Roger C. Bales	$5,000.00	Sierra Nevada Research Institute Fund
Stephen W. Ho	$10.00	Sierra Nevada Research Institute Fund
Emmanuel Vincent	$1,600.00	Sierra Nevada Research Institute - Climate Feedback
Evan Evans	$250.00	Sierra Nevada Research Institute - Climate Feedback
ANCHOR QEA, LLC	$10,000.00	Sierra Nevada Research Institute – O'Day – Geochemistry
Edison International (SCE)	$50,000.00	SCE STEM Fellowships for Graduate Students
	$152,761.00	