

2019 ANNUAL REPORT SIERRA NEVADA RESEARCH INSTITUTE





Sierra Nevada Research Institute
UNIVERSITY OF CALIFORNIA, MERCED
5200 North Lake Road, SRE 109
MERCED, CALIFORNIA 95343

Memorandum

Date: October 16, 2019

To: Sam Traina, Vice Chancellor for Research and Business Development

From: Roger Bales, Director, Sierra Nevada Research Institute

With this letter we submit the Sierra Nevada Research Institute ORU Annual Report for 2018/19. Most of the data and the information in this report were provided by SNRI members and staff, UC Merced's business office, the CAYUSE system and Development and Alumni Relations.

The SNRI is the oldest ORU at UC Merced, and as it was envisioned, this research unit brings together faculty and researchers to discover new knowledge in this region of California – from the crest of the Sierra Nevada, through the San Joaquin Valley to the central coast ranges of California.

The timely creation of this University and the Sierra Nevada Research Institute places this research community at the heart of a range of critical issues facing Californians. Challenges around water, energy, agriculture, wildfire, climate change and impacts on human health all represent the research focus of SNRI researchers and scientists. Grant support for these areas of research continues to flow into this ORU. Success for SNRI is dependent on successful grant awards and excellent grant management. A primary goal this year for SNRI leadership is to fill key administrative positions and the research administrator positions to fully support the SNRI research community.

The climate crisis that we are experiencing is creating research and information demands on the SNRI researchers from all sectors: leaders in government, news agencies, business and citizens. Throughout California, scientists and researchers from this ORU continue to build the reputation of this newest research university of the 21st century.

There are currently 43 faculty members in SNRI and 31 professional researchers engaged in SNRI related research at UC Merced and they are operating with more than 30 million dollars in grant support.

**Sierra Nevada Research Institute
University of California, Merced**

Organized Research Unit (ORU) Annual Report 2018/19

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

The 2018/19 academic year has been a challenging and successful year for the Sierra Nevada Research Institute. The mission of the SNRI faculty and researchers is *to develop new knowledge that will sustain the natural resources and promote social well-being in the Sierra Nevada and Central Valley region* which continues to be critical for California and the West.

SNRI members, their research groups and students continue to make discoveries that contribute to the sustainability of the San Joaquin Valley region, the state and, global communities. Research programs include renewable energy, decarbonizing the economy, more-sustainable ecosystem management and, other climate solutions. As California experiences extremes in climate, from drought and flood to extreme wildfires, SNRI researchers are regularly *sought out for their research and insights by news organizations, legislators, State agencies, decision-makers, agricultural leaders, environmental organizations and NGO's.*

SNRI researchers submitted 44 grant proposals and 24 grant proposals were funded for a total value of \$4,066,717.00 in the 18/19 year. The total value of grants currently administered by the SNRI administrative office is \$30,298,613.00. We continue to advocate for an increase in the number of administrative support staff for the SNRI office.

The February 2019 SNRI Research Symposium was a success with presentations by Assistant Professor Rebecca Ryals, Assistant Professor, Colleen Naughton and Christine Ma, one of the newest Post Doctoral members of SNRI. Assistant Professor Emily Moran was awarded a grant to host a research symposium on campus about Climate Change Impacts in the Southern Sierra. This two-day conference in September featured almost 40 presentations and was well attended.

New films produced about SNRI this year include a new Watershed film by Director/Producer Jim Thebaut. "Beyond the Brink" and the "Watershed" film continue to be shown around California and both films are regularly well received. We produced a 6-minute film about SNRI with Websedge and this film will be shown on a loop at this year's AGU conference in San Francisco. After that showing, the film will be posted on the SNRI website as well as the UCTV "Sustainable California" channel.

In May 2019 Professor Asmeret Asefaw-Berhe was a featured speaker for the 2019 TED Conference. Bill Gates tweeted a link to the video of her talk about soil health which was released in September. Her video has already received over 1million views!

SNRI membership continues to grow with 43 faculty members and 31 professional researchers engaged in SNRI related research at UC Merced.

2.) Names of persons serving on the SNRI Advisory Committee.

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

External: Andi Heard, Resources Manager, Sequoia/Kings Canyon National Parks

Ex-Officio: Roger Bales, Armando Quintero

3.) Dates of Committee meetings:

SNRI Advisory Committee

February 27, 2019

4.) Summary of key Advisory Committee recommendations.

- 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 an SNRI presence and program as a part of the Sustainability group in the new Sustainability, Research & Engineering Building
- Recruit additional new faculty and expand engagement with sustainability related research
- Identify new members for the SNRI Advisory Committee
- Reactivate the SNRI Directors Council
- Develop new Symposia/Seminar Programs/Speaker events for SNRI with Faculty which appeals to the academic, agency staff, elected and the public
- Develop staffing support to foster a more balanced workload for the SNRI- ORU administrative staff. Develop up-to-date position descriptions
- Strengthen Water/Soil/Ag connections in research
- Articulate the SNRI Base – Internal and External
- Seek additional Graduate student funding

5.) Copy of Advisory Committee report(s), minutes.

See Attachment A: (pages 18-19)

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

Faculty

Ardell, David	Fortier, Marie-Odile	Medellin-Azura, Josue
Bales, Roger	Ghezzehei, Teamrat A.	Moran, Emily
Beman, Michael	Guo, Qinghua	Nobile, Clarissa
Berhe, Asmeret Asefaw	Harmon, Tom	O'Day, Peggy
Beutel, Marc	Hart, Stephen	Rice, Robert
Blois, Jessica	Hestir, Erin	Rogge, Wolfgang
Campbell, Elliott	Hull, Kathleen	Ryals, Rebecca
Chen, Yang Quan	Innes, Robert	Safeeq, Mohammad
Chen, Yihsu	Jenkins, Jeffery	Sexton, Jason
Conklin, Martha	Joyce, Andrea	Traina, Samuel
Dawson, Michael	Keske, Catherine	Westerling, Le Roy
Edwards, Daniel	Lercari, Nicola	Winston, Roland
Diaz, Gerardo	Leppert, Valerie	Viers, Joshua
Frank, Carolin	Matlock, Teenie	

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.

The 65 names on the list reflect some of the many students and postdoctoral scholars who work with researchers and are funded for varying periods of work from grants managed by SNRI for SNRI faculty in this fiscal year. Some students are paid for with state funds for administrative support work. Available database information does not allow for a complete report.

<u>Types of appointments in this ORU</u>	<u>Number of appointments</u>
Students	32
Graduate students	9
Post Doctoral Scholars	14
Assistant Project Scientist (multiple locations)	3
Professional Researcher	1
Staff Research Associates	3
Associate Specialist	1
Fiscal Year Researcher	1
Visiting Scholar	1

<u>Name</u>	<u>Title</u>
• Turner, Leigh Alexis Bernacchi	ASSOC SPECIALIST
• Sharma, Shankar	ASST PROJ SCIENTIST-FY
• Trujillo Gomez, Ernesto	ASST PROJ SCIENTIST-FY
• Hartsough, Peter	ASST PROJ SCIENTIST-FY MLA
• Safeeq, Mohammad	ASST RES-FY-B/E/E
• Carper, Dana Lynn	GSR-NO REM
• Guillem, Anaïs	GSR-NO REM
• Portillo-Silva, Catherine	GSR-NO REM
• Wu, Dean Juan	GSR-NO REM
• Barnes, Morgan Elizabeth	GSR-PARTIAL FEE REM
• Booth, Lorenzo Ade	GSR-PARTIAL FEE REM
• Xu, Qingqing	GSR-PARTIAL FEE REM
• Zhao, Tiebiao	GSR-PARTIAL FEE REM
• Guo, Yiping	GSR-PARTIAL FEE REM
• Ma, Qin	INTRM POSTDOC SCHOLAR-EMPLOYEE
• Taylor, Robert	JUNIOR SPECIALIST-MLA
• Bart, Ryan Roger	POSTDOC-EMPLOYEE
• Heeren, Alexander John	POSTDOC-EMPLOYEE
• Sohrabi, Mohammadmehdi	POSTDOC-EMPLOYEE
• Yan, Jing	POSTDOC-EMPLOYEE
• Whipple, Alison Agnew	POSTDOC-EMPLOYEE
• Kniffin, Maribeth Lynn	POSTDOC-EMPLOYEE
• Cui, Guotao	POSTDOC-EMPLOYEE
• Guo, Weichao	POSTDOC-EMPLOYEE
• Yang, Yang	POSTDOC-EMPLOYEE
• Ramalho Da Silva, Iolanda	POSTDOC-EMPLOYEE
• Singh, Chandan Kumar	POSTDOC-EMPLOYEE
• Ackerer, Julien Claude	POSTDOC-EMPLOYEE
• Pelak III, Norman Frank	POSTDOC-EMPLOYEE

<u>Name</u>	<u>Title</u>
• Guo,Qinghua	RES-FY
• Gilmore,Michelle Elizabeth	SRA 2 Staff Research Associate
• Stacy,Erin Michele	SRA 3
• Womble,Patrick	SRA 3
• Elias,Oscar Antonio	STDT 1
• Flores,Valeria Josephine	STDT 1
• Glasser,Susan Marley	STDT 1
• Leiske,Chad Morales	STDT 1
• Piña,Antonio De Jesus	STDT 1
• Torres,Ryan Jacob	STDT 1
• Tran,Christian Anthony	STDT 1
• Vazquez,Samantha Yadira	STDT 1
• Schep,Willem K	STDT 1
• Mcdermott,Spencer Riley	STDT 1
• Mercado,Jesus Abrahan	STDT 1
• Rodal Morales,Naivy Dennise	STDT 1
• Arceo Madriz,Mariela D	STDT 1
• Garcia,Luis Eduardo	STDT 1
• Klotz,Paige Courtney	STDT 1
• Merugumala,Preethi	STDT 1
• Barahona Membreno,Timothy	STDT 1
• Salinas Aguilar,Andrea B	STDT 1
• Ahmed,Joshua Raihan	STDT 2
• Castro,Madeline Kaye	STDT 2
• Wilson,Destini Mariah Ashley	STDT 2
• Perez Rojas,Yulissa T	STDT 2
• Pomephimkham,Mimi	STDT 2
• Siaotong,Athena Beverly	STDT 2
• Singh,Tarandeep	STDT 2

<u>Name</u>	<u>Title</u>
• Bagshaw, Sophia B	STDT 3
• Fraga Hernandez, Joaquin	STDT 3
• Ojeda, Nancy Veronica	STDT 3
• Teurn, Jadie Lynn	STDT 3
• Kraintz, Wesley Paul Campbell	STDT 3
• Currier, Christopher Walker	STDT 4
• Yinger, Zachary Garrett	STDT 4
• Hudson, Robert John Munger	Visiting Scholar

Names of undergraduate and graduate students and postdoctoral scholars directly contributing to the ORU's scholarly work through assistantships, fellowships, or traineeships. (this is only a partial list and is limited by available database information)

Postdoctoral Scholar

Bart, Ryan Roger
 Heeren, Alexander John
 Sohrabi, Mohammadmehdi
 Yan, Jing
 Whipple, Alison Agnew
 Kniffin, Maribeth Lynn
 Cui, Guotao
 Guo, Weichao
 Yang, Yang
 Ramalho Da Silva, Iolanda
 Singh, Chandan Kumar
 Ackerer, Julien Claude
 Pelak III, Norman Frank
 Ma, Qin

Staff Researchers

Stacy, Erin
 Milostan, Jeanne
 Bernacchi, Leigh
 Gilmore, Michelle

Meng, Xiande

Patrick Womble

Students

Elias, Oscar Antonio
 Flores, Valeria Josephine
 Glasser, Susan Marley
 Leiske, Chad Morales
 Piña, Antonio De Jesus
 Torres, Ryan Jacob
 Tran, Christian Anthony
 Vazquez, Samantha Yadiria
 Schep, Willem K
 Mcdermott, Spencer Riley
 Mercado, Jesus Abrahan
 Rodal Morales, Naivy
 Dennise
 Arceo Madriz, Mariela D
 Garcia, Luis Eduardo
 Klotz, Paige Courtney
 Merugumala, Preethi

Students

Barahona Membreno, Timothy
 Salinas Aguilar, Andrea B
 Ahmed, Joshua Raihan
 Castro, Madeline Kaye
 Wilson, Destini M Ashley
 Perez Rojas, Yulissa T
 Pomephimkham, Mimi
 Siaotong, Athena Beverly
 Singh, Tarandeep
 Bagshaw, Sophia B
 Fraga Hernandez, Joaquin
 Ojeda, Nancy Veronica
 Teurn, Jadie Lynn
 Kraintz, Wesley Paul
 Campbell
 Currier, Christopher
 Walker
 Yinger, Zachary Garret

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

Note: Not all faculty provided information for this section, and we were not able to verify the accuracy of all entries.

Professor	Student/Faculty	Institution
Ardell, David	Andrea Collins-Hed	UC Merced– PhD candidate
	Fateme Hadi Nezhad	UC Merced – PhD candidate
Bales, Roger	Rhondene Wint	UC Merced – PhD candidate
	Graham Fogg	UC Water/Davis
	Andy Fisher	UC Water/Santa Cruz
	Michael Kiparsky	UC Water/Berkeley
	Hellen E. Dalhke	UC Water/Davis
	Holly Doremus	UC Water/Berkeley
	Steven D. Glaser	UC Water/CZO/Berkeley
	Carlos Oroza	UC Berkeley
	Ziran Zhag	UC Berkeley
	Zeshi Zheng	UC Berkeley
	Hunsaker, Carolyn	USDA
	Anthony O’Geen	CZO/USFS
	Peter Hartsough	CZO/UC Davis
	Naomi Tague	CZO/UC Davis
	Cliff Reibe	CZO/UC Santa Barbara
	Michael Goulden	CZO/U Wyoming
	CZO Collaborators	~30
	Other UC Water Collaborators	~30
	Sustainable Growth Council Ctr Collaborators	~30
Beman, Michael	Ariadna Cairo	UC Merced – PhD candidate
	Sonia Vargas (new)	UC Merced – PhD candidate
	Jesse Wilson	UC Merced – PhD candidate
	Joaquin Fraga-Hernandez	UC Merced – PhD candidate
Berhe, Asmeret	CZO Collaborator	<i>(See Bales)</i>
	Craig Rassmussen	University of Arizona
	Dale Johnson	University of Nevada, Reno
	Carolyn Hunsaker	US Forest Service
	Caroline Masiello	Rice University
	Emma McCorkle	UC Merced – PhD candidate
Berhe, Asmeret	Kimber Moreland	UC Merced – PhD candidate
	Robert Graham	UC Riverside
	Carolina Boix Fayos	(CEBAS), Spain
	Morgan Barnes	UC Merced - PhD candidate

	Rebecca Lever	UC Merced - PhD candidate
	Dale Johnson	UNR
	Jonathan Sanderman	CSIRO Adelaide
	Markus Kleber	Oregon State University
	Johan Six	UC Davis
	Chelsea Arnold	UC Merced - PhD candidate
	Manisha Dolui	UC Merced - PhD candidate
	Lixia Jin	UC Merced - PhD candidate
	Leila Wahab	UC Merced - PhD candidate
Beutel, Marc	Louis Amegbletor	UC Merced - PhD candidate
	Melissa Conn	UC Merced - PhD candidate
	Byran Fuhrman	UC Merced - PhD candidate
	Lindsey Jerome	UC Merced - PhD candidate
	Jaycee Martinez	UC Merced - PhD candidate
	Mark Seelos	UC Merced - PhD candidate
	Stefano Casitrati	UC Merced - PhD candidate
Blois, Jessica	Behrensmeyer, Kay	Smithsonian Institution
	Eronen, Jussi	University of Helsinki
	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
	Mychajliw, Alexis	Stanford University
	Polly, P. David	Indiana University
	Williams, Jack	UW Madison
	Gio Rapacciuolo	UC Merced – PhD candidate
	Danaan DeNeve	UC Merced – PhD candidate
	Robert Boria	UC Merced – PhD candidate
	Nate Fox	UC Merced – PhD candidate
Campbell, Elliott	James Stinecipher	UC Merced – PhD candidate
Chen, Yihsu	Not available	

Chen, YangQuan	Huifang Dou Brandon Stark Brendan Smith Tiebiao Zhao Duval Johnson Guoxiang Zhang Haoyu Niu Jose Alcala	Lecturer UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate
Conklin, Martha	UCWater collaborators CZO collaborators John Battles Maggie Kelly Steve Stephens Lynn Huntsinger Stefano Casirati Melissa Thaw	See Bales) (See Bales) UC Berkeley/SNAMP UC Berkeley/SNAMP UC Berkeley/SNAMP UC Berkeley/SNAMP UC Merced – PhD candidate UC Merced – PhD candidate
Dawson, Michael	Bob Wayne Rasmus Nielsen Beth Shapiro Jeff Wall Karly Higgins Baily Carlson Nattanon Wuthituntisil	UCLA UCB UCSC UCSF UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate
Diaz, Gerardo	Andres Munoz Viacheslav Plotnikov Sai Thani Kiran Hota Hector Gomez Genesis Higueros Jose Rbalcaba-Cruz Juan De Dios Mariscal Uriel Paez Reyes	UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced - undergrad UC Merced - undergrad UC Merced – undergrad UC Merced - undergrad
Edwards, Daniel	Kinsey Brock Megha Suswaram Laura Van Vranken Indiana Madden Kaithlen Zen Pacheco Robert Degen Anthony Javiya	UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – undergrad UC Merced - undergrad UC Merced – undergrad UC Merced - undergrad
Frank, Carolin	Albalasmeh, Ammar Jackie Shay Jame Kupihea	Jordan University of Science and Technology UC Merced – PhD candidate UC Merced – PhD candidate

	Jorge Montiel Berli, Markus Carminati, Andrea Andrea Salinas Dijkema, Jelle	UC Merced – PhD candidate Desert Research Institute, Nevada University of Gottingen Undergrad Wageningen University and Desert Research Institute
Ghezzehei, Teamrat	Furman, Alex Moret, David Sancho, Carolina Pena Van Der Ploeg, Marine Van Genuchten, Rien Jessica Alvarez Samuel Araya Toshiyuki Bandai Touyeee Thao	Technion Institute, Israel Consejo Superior de Investigaciones Cientificas Consejo Superior de Investigaciones Cientificas Wageningen University Federal University of Sao Paolo UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate UC Merced – PhD candidate
Guop, Quinghua	SNAMP	
Harmon, Tom	Allen, Michael Ayllon, Roxanna Chandra, Sudeep Conde, Daniel Escobar, Jaime Hanson, Paul Helman, Michal Hoyos, Natalia Jones, Stuart Longo, Maria Clara Oberbauer, Steve Perillo, Gerardo Picollo, M. Cintia Pinto, Adrian Reid, Brian Rundel, Philip Rusak, James	University of California Riverside Universidad Austral de Chile University of Nevada Reno Universidad de la República, Uruguay Universidad del Norte, Colombia University of Wisconsin University of Montana Universidad del Norte, Colombia University of Notre Dame Universidad Nacional del Sur, Argentina Florida International University Instituto Argentino de Oceanografía & Universidad Nacional del Sur, Argentina Instituto Argentino de Oceanografía & Universidad Nacional del Sur, Argentina University of Costa Rica Centro de Investigaciones en Ecosistemas de la Patagonia, Universidad Austral de Chile UCLA Queen’s University and Ontario Ministry of the Environment University of Auckland, New Zealand
Harmon, Tom	Schwendenmann, Luitgard Scordo, Facundo	Universidad Nacional del Sur, Argentina

	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
	Henry Pai	UC Merced – PhD candidate
	Diganta Adhikari	UC Merced – PhD candidate
	Irvin Arroyo	UC Merced – PhD candidate
	Angel Fernandez Bou	UC Merced – PhD candidate
Hart, Stephen	James Kupihea	UC Merced – PhD candidate
	Morgan Barnes	UC Merced - PhD candidate
	Nicholas Dove	UC Merced - PhD candidate
	Susan Soltau	UC Merced - MS candidate
	Emma Aronson	UC Riverside
	Cliff Riebe	University of Wyoming
	Mengqiang Zhu	University of Wyoming
	Ben Sullivan	University of Nevada Reno
Hestir, Erin	Christiana Ade	UC Merced PhD– candidate
	Erik Bolch	UC Merced PhD– candidate
	Brandon Genco	UC Merced PhD– candidate
	Brittany Lopez Barreto	UC Merced PhD– candidate
Hull, Kathleen	Adam Fleenor	UC Merced PhD– candidate
Innes, Robert	not available	
Jenkins, Jeffrey	Madeline Brown	UC Merced PhD– candidate
	Dana Swarth	UC Merced PhD– candidate
	Jeremy Neil	UC Merced PhD– candidate
	Felber Jair Bermudez	UC Merced PhD– candidate
Joyce, Andrea	Not available	
Keske, Catherine	Elizabeth Holcomb	UC Merced PhD– candidate
Lecari, Nicola	not available	
Leppert, Valerie	Henry Forman	Davis School of Gerontology, USC, US
Leppert, Valerie	Dra. Monserrat Bizarro-Sordo	Materials Institute, UNAM, Mexico
	Annaliza Torres	
		UC Merced PhD – candidate

Matlock, Tennie	Not available	
Medellin-Azura, Josue	Jorge Valero	UC Merced PhD– candidate
Moran, Emily	Mengjun Shu	UC Merced PhD– candidate
	Jeffrey Lauder	UC Merced PhD– candidate
	Dean Wu	UC Merced PhD– candidate
Nobile, Clarissa	Diana Rodriguez	UC Merced PhD– candidate
	Ashley Valle Arevalo	UC Merced PhD– candidate
	Craig Ennis	UC Merced PhD– candidate
	Thaddeus Seher	UC Merced PhD– candidate
	Akshay Paropkari	UC Merced PhD– candidate
	Austin Perry	UC Merced PhD– candidate
	Priyanka Bapat	UC Merced PhD– candidate
	Sabah Ul-Hasaon	UC Merced PhD– candidate
O’Day, Peggy	Stefanie Helmrich	UC Merced PhD– candidate
	Nigel Quinn	LBNL
	Paul Aronstein	UC Merced PhD– candidate
	Rolf Mehlhorn	LBNL
	Julie Collignan	LBNL
Rice, Robert	Butler, Leslie	UC Davis
	Glaser, Steve	University of California Berkeley
	Horwath, William	University of California Davis
	Zhang, Ziran	UC Berkeley
	Steven Glazier	UC Berkeley
Rogge, Wolfgang	Not available	
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
	Dannise Ruiz Ramos	UC Merced PhD– candidate
	Molly Stephens	UC Merced PhD– candidate
	Daniel Toews	UC Merced PhD– candidate
	Brandon Hendrickson	UC Merced PhD– candidate
	Jacqueline Shay	UC Merced PhD– candidate
	Lillie Pennington	UC Merced PhD– candidate
	Jorge Armando Montiel	UC Merced PhD– candidate
	Molina	UC Merced PhD– candidate

	Sunshine Lopez	UC Merced PhD– candidate
	Gabriel Zepeda	UC Merced PhD– candidate
	Mimi Pomephimkam	UC Merced PhD– candidate
	Chungtug Asa Francisco	UC Merced PhD– candidate
Traina, Samuel	None	
Westerling, Anthony	Xu Qingqing	UC Merced – PhD candidate
	Samrajya Thapa	UC Merced – PhD candidate
	Sam Jonathan	UC Merced – PhD candidate
Winston, Roland	Constance Chang-Hasnain	UC Berkeley
	Pieter Stroeve	UC Davis
	Umesh Mishra	UCSB
	Alfredo Martinez-Morales	UC Riverside
	Yang Yang	UCLA
	Matthew Law	UC Irvine
	Michael Isaacson	UCSC
	Steve DenBaars	UCSB
	Nael El-Farra	UC Davis
	Ali Javey	UC Berkeley
	Sungho Jin	UC San Diego
	Zhaowei Liu	UC San Diego
	Patrick Mantey	UCSC
	Adam Moule	UC Davis
	Sayeff Salahuddin	UC Berkeley
	James Speck	UCSB
	Daniel Sperling	UC Davis
	Sadrul Ula	UC Riverside
	Jerry Woodall	UC Davis
	Ming Wu	UC Berkeley
	Eli Yablonovitch	UC Davis
Viers, Joshua	UC Water collaborator	(see Bales)
	Alan Cai	UC Merced PhD– candidate
	Vicky Espinoza	UC Merced PhD– candidate
	Anna Fryjoff-Hung	UC Merced PhD– candidate
	Alison Whipple	UC Merced PhD– candidate
	Lorenzo Booth	UC Merced PhD– candidate

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

This reflects only the state accounts. The attachment shows all personnel paid with state funds and grants.

Administrative Personnel	4 FTE
Research Personnel	53 FTE
Technical Staff	6 FTE

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.

The SNRI faculty, students and staff are a strong representative group of the UC Merced community which has one of the most diverse student populations in the UC system.

Note the ethnic diversity represented by the names of the UC Merced undergraduate, graduate students and employees listed in section 7 of this report.

Contributions to the campus' diversity goals come from the efforts of individual faculty, supervisors and campus leadership. Actions in the SNRI include hiring and supporting a diverse workforce, active participation in selecting students for fellowships and scholarships, meetings with students and prospective students and participation in numerous community events.

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.

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.

- ***An updated list of all faculty publications is posted on the Sierra Nevada Research Institute Website.***

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.

<i>FY 17/18 Active Grants and Contracts to faculty</i>	\$ 4,827,557.59
<i>Gifts</i>	\$ 24,413.00
<i>State Funding (SNRI Operations)</i>	\$ 295,446.59
Total	\$ 5,147,417.18

- **See Attachment B for all funds administered by SNRI (page 20-27).**
- **See Attachment C for Gift details (page 27)**

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.

24 new proposals were awarded this fiscal year with a total value of \$ 4,066,717.00

Important note: *There are two Research administrators in SNRI and they provide both pre-award and post-award support for the faculty and manage the activity of over 50 active grants.*

Proposals prepared	57
Proposals submitted	44
Proposal funded	24
Total value of newly funded proposals in FY 18/19	\$4,066,717.00

Note: These are minimum numbers and may reflect missing data for some faculty. This data is from the UC Merced CAYUSE system.

In fiscal year 18/19, SNRI Research Administrators managed active grants with a total value of \$30,298,613.00. While 30 of these grants just need to be closed out, the administration of these grants will operate more efficiently when SNRI is appropriately staffed. Successful administration of these grants is essential in maintaining a strong reputation as a R1 Research Institution.

See Attachment D for FY 17/18 Grant activity (Pages 28-29)

These grants were awarded by the following 40 different funding entities:

Almond Board of California
AMEC
Bella Vista Foundation
Bureau of Reclamation – USDI
California Parks and Recreation
California Pistachio Research Board
California State University, Fresno
California Trout, Inc.

California Wildlife Conservation Board – WCB
 Department of Energy/Miscellaneous Offices and Programs
 Lawrence Livermore National Security, LLC
 Merced County Mosquito Abatement District
 Merced Irrigation District
 National Institute for Food and Agriculture – NIFA
 National Science Foundation - NSF
 National Park Service - NPS
 Nature Conservancy
 Pennsylvania State University
 San Diego County Water Authority
 Savannah River Nuclear Solutions, LLC
 Save The Redwoods League
 Sequoia Riverlands Trust
 South Yuba River Citizens
 UC Agriculture and Natural Resources - UCANR
 UC Berkeley
 UC Center for Information Technology Research in Interest of Society-CITRIS
 UC Davis
 UC Los Angeles – UCLA
 UC MEXUS
 UC Natural Reserve System
 UC Office of The President – UCOP
 UC Santa Cruz
 UC Santa Barbara
 UC San Diego
 University of Missouri
 University of Wisconsin
 University of Southern California – USC
 US Department of the Interior/Miscellaneous Agencies – SDI
 US Department of Agriculture Forest Service – USDA

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

<i>FY 17/18 Active Grants and Contracts to faculty</i>	\$ 4,827,557.59
<i>Gifts</i>	\$ 24,413.00
<i>State Funding (SNRI Operations)</i>	\$ 295,446.59
Total	\$ 5,147,417.18

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)

Science and Engineering Building 1, Room 236 (160 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: 1,453 sq ft

Note: SNRI moved to SRE in the Fall of 2019, which will be reflected in the next annual report.

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 an SNRI presence and program as a part of the Sustainability group in the new Sustainability, Research & Engineering Building
- Recruit additional new faculty and expand engagement with sustainability related research
- Identify new members for the SNRI Advisory Committee
- Reactivate the SNRI Directors Council
- Develop new Symposiums/Seminar Programs/Speaker events for SNRI with Faculty which appeals to the academic, agency staff, elected and the public
- Develop staffing support to foster a more balanced workload for the SNRI- ORU administrative staff. Develop up-to-date position descriptions
- Carry out strategic planning and contribute to the campus-wide strategic plan
- Rebuild staffing levels to continue providing high quality support to SNRI faculty and researchers

ATTACHMENT: A

SNRI Advisory Committee
February 27, 2019
Notes from meeting are in italics

Present:

Asmeret Asefaw Berhe (Chair)
Josh Viers, CITRIS
Yang Quan Chen, SNRI
Mike Dawson, SNRI

Roger Bales, Director, SNRI
Armando Quintero, Executive Director, SNRI

Appointed, attending next meeting:
Andrea Joyce, SSHA
Dr. Andi Heard, National Park Service

Items to discuss

Need to develop statements for VC Traina to look into process about how ORU's are increasing grant funding awards and need to create sustainable funding approach for ORU's.

So far, in FY 2018/19, there have been 37 grant proposals developed for SNRI faculty

In the same period, \$8,058,628 in grants have been awarded to SNRI faculty.

Key points to raise:

- *Comparing external funding of ORU's to Schools needs to compare apples to apples*
- *The increase in grant submissions by SNRI faculty is creating relationships and collaborations which sets the stage for additional and future funding opportunities.*

Invite Andi Heard and Andrea Joyce to next meeting. *Next Meeting March 27 4pm-5pm*
Should we have a lunch to meet Andi meet in person? *Available dates in April?*

Box for SNRI Advisory Committee is operating– These are the items in Box:

The purpose for this review is to re-evaluate what faculty needs for support from SNRI- please review the following 3 items and comment:

- *SNRI Strategic Staffing Plan*
 - *Faculty Director duties*

- *Exec Director duties*
SNRI is going to be co-located in a new building with which is intended to bring together multi-investigator research which includes sustainability as one aspect of the research. We need to evolve to meet the needs of faculty as SNRI is bigger than Sustainability so we have to define this role so that Sustainability does not become limiting. Sustainability plus in the research agenda. An outcome as ORU's will be to increase the number of PhD's as an R1 University.
 - *SSHA event request SNRI sponsorship - \$500.00 approved by SNRI AC*
 - *Questions for faculty in BOX – preparing a Qualtrix online questionnaire*
 - *Please review the questions in BOX and comment!*
 - *Roger and Armando will be meeting with faculty to get feedback from faculty*
 - *Websedge SNRI AGU film project*
 - *Identified faculty who attend AGU and Armando developing video outline to present to SNRI AC and AGU Members.*
 - *This is a 6 minute video about SNRI for AGU target date for completion is May 30*
 - *Code of Conduct proposal – Please review to see if we would want to make available for faculty labs and SNRI offices.*
- Review the following documents in BOX and add any comments or suggested changes:*
- *SNRI Directors Council – current members that we need to revisit*
 - *SNRI Directors Council role statement*
 - *SNRI Bylaws*
 - *SNRI One Pager*

Who would you like to invite from SSHA?

How shall we seek nominations?

Mario Sifuentes? Armando to inquire about Mario's interest (Wednesday March 6th).

Meetings for 3rd Wednesday at the same time for SNRI AC

Ideas for promoting SNRI

Presentation folders with SNRI logo

Updated one pagers

Develop a Speakers list with members

Seminar on the State of Research and Research needs in the Southern Sierra and San Joaquin Region.

Attachment: B

SNRI ACCOUNT SUMMARY BY DEPARTMENT OF ALL GRANT/RESEARCH/GIFT FUNDS
ACCOUNT SUMMARY BY DEPARTMENT
FOR THE PERIOD JULY 1,2018 TO JUNE 30, 2019
EXPENDITURES (CURRENT FUNDS)

SIERRA NEVADA RESEARCH INSTITUTE

Account/CC	Fund	Fiscal Year		Inception		Encumbrance	Ledger Balance
		Appropriation	Expenditures	Appropriation	Expenditures		
		()=Debit	()=Credit	()=Debit	()=Credit		()=Debit
449001	RESEARCH-SIERRA NEVADA RES INST-OPER						
	2349						
	4	4584.77	3512.26	29054.74	27982.23		1072.51
Total 449001		4584.77	3512.26	29054.74	27982.23	0.00	1072.51
449001/2A	RESEARCH-SNRI-OPERATIONS						
	1990						
	0	615448.45	614614.00	615448.45	614614.00	107.81	726.64
	1993						
	4	27041.00		27041.00			27041.00
	2349						
	4		1072.51		1072.51		(1072.51)
	3736						
	5	15000.00		15000.00			15000.00
	4006						
	1	25578.03	349.59	25578.03	349.59	21500.00	3728.44
	5516						
	3	7969.94		7969.94			7969.94
	6832						
	0	15730.04		15730.04			15730.04
Total 449001/2A		706767.46	616036.10	706767.46	616036.10	21607.81	69123.55
449001/CC	RESEARCH-SNRI-CLIMATE COMMUNICATION						
	1990						
	0	159672.65	42370.63	159672.65	42370.63	12706.16	104595.86
	4006						
	1	7989.50	1883.79	7989.50	1883.79		6105.71
Total 449001/CC		167662.15	44254.42	167662.15	44254.42	12706.16	110701.57
449001/MS	RESEARCH-SIERRA NEVADA RES INST-SAFEEQ						
	2247						
	3	69661.82	26099.26	154150.00	110587.44		43562.56
	5756						
	9	175774.50	105107.70	209810.00	139143.20	44.88	70621.92
Total 449001/MS		245436.32	131206.96	363960.00	249730.64	44.88	114184.48
449001/VR	RESEARCH-SNRI-OPERATION-VEHICLE RECHARGE						
	1990						
	0	2074.67	2074.67	2074.67	2074.67		0.00
Total 449001/VR		2074.67	2074.67	2074.67	2074.67	0.00	0.00

449001/WA	RESEARCH-SNRI-WAWONA FIELD STATION-OP						
	1990						
	0				0.01		(0.01)
	6832						
	0	364.49		364.49			364.49
Total 449001/WA		364.49	0.00	364.49	0.00	0.01	364.48
Total 449001		1126889.86	797084.41	1269883.51	940078.06	34358.86	295446.59
449002/NM	RESEARCH-SNRI-IDC RETURN-N MILLER						
	2009						
	5	567.50		567.50			567.50
Total 449002/NM		567.50	0.00	567.50	0.00	0.00	567.50
449002/RR	RESEARCH-SNRI-IDC RETURN-R RICE						
	1993						
	3	1230.02		1230.02			1230.02
	2009						
	5	720.18		720.18			720.18
Total 449002/RR		1950.20	0.00	1950.20	0.00	0.00	1950.20
449002/SJ	RESEARCH-SNRI-IDC RETURN-S JEPSON						
	2009						
	5	23.31		23.31			23.31
Total 449002/SJ		23.31	0.00	23.31	0.00	0.00	23.31
449002/WR	RESEARCH-SNRI-IDC RETURN-ROGGE						
	2009						
	5	69.92		69.92			69.92
Total 449002/WR		69.92	0.00	69.92	0.00	0.00	69.92
Total 449002		2610.93	0.00	2610.93	0.00	0.00	2610.93
449205/CF	RESRCH-SNRI EARTH SYS-PART SUPP-C-FRANK						
	2126						
	7	15535.46	615.99	20000.00	5080.53		14919.47
Total 449205/CF		15535.46	615.99	20000.00	5080.53	0.00	14919.47
449205/PS	RESEARCH-SNRI-EARTH SYSTEMS-PART SUPPORT						
	2133						
	1	15000.00	14999.95	15000.00	14999.95		0.05
Total 449205/PS		15000.00	14999.95	15000.00	14999.95	0.00	0.05
Total 449205		30535.46	15615.94	35000.00	20080.48	0.00	14919.52
449208/RB	RES-SNRI-ENV ENG-OVRD VAR-R BALES						
	2124						
	1	4770.30		12445.00	7674.70		4770.30
Total 449208/RB		4770.30	0.00	12445.00	7674.70	0.00	4770.30
Total 449208		4770.30	0.00	12445.00	7674.70	0.00	4770.30
449209/RB	RESEARCH-SNRI-ENV ENG-PART SUPP-BALES						
	2124						
	1	30973.39		300064.00	269090.61		30973.39
Total 449209/RB		30973.39	0.00	300064.00	269090.61	0.00	30973.39
Total 449209		30973.39	0.00	300064.00	269090.61	0.00	30973.39
449213/ER	RES-SNRI-COMPUTER SCI & ENG-E ROLLAND						
	5811						
	7						0.00
Total 449213/ER		0.00	0.00	0.00	0.00	0.00	0.00
Total 449213		0.00	0.00	0.00	0.00	0.00	0.00
449214	RESEARCH-SNRI-ENVIRONMENTAL ENGINEERING						
	2349						
	4	1747.32	1747.32	1991.68	1991.68		0.00
Total 449214		1747.32	1747.32	1991.68	1991.68	0.00	0.00
449214/AJ	RESEARCH-SNRI-ENV ENG ANDREA JOYCE						
	5813						
	4			14628.84	14628.84		0.00
Total 449214/AJ		0.00	0.00	14628.84	14628.84	0.00	0.00
449214/AW	RESEARCH-SNRI-ENVRNMNTL ENG-A WESTERLING						
	1834						
	4	9451.69	9300.00	250000.00	249848.31		151.69
	1835						
	5	34526.90	20617.54	118464.00	104554.64		13909.36

	1990					
	0	91000.00	99144.60	91000.00	99144.60	(8144.60)
	2211					
	4	(572.01)		60000.00	60572.01	(572.01)
	2247					
	7	62337.21	48207.25	190000.00	175870.04	14129.96
	2255					
	3	69508.20	27579.23	79997.00	38068.03	41928.97
	5755					
	8			153007.04	153007.04	0.00
	5757					
	8	43729.16	16886.33	61557.00	34714.17	26842.83
	6909					
	0	16575.58	9551.89	16575.58	9551.89	7023.69
	6985					
	1		20578.26		20578.26	(20578.26)
Total 449214/AW		326556.73	251865.10	1020600.62	945908.99	0.00
449214/J1	RESEARCH-SNRI-ENVIRONMENTL ENG-CAMPBELL					
	3765					
	8	16991.05		16991.05		16991.05
Total 449214/J1		16991.05	0.00	16991.05	0.00	0.00
449214/JC	RESEARCH-SNRI-ENV ENG-J ELLIOT CAMPBELL					
	2130					
	0	848034.65		1346241.00	498206.35	142555.94
	2242					
	3	116636.70	95578.69	623284.68	602226.67	30077.07
	3765					
	8	41854.64		41854.64		41854.64
	5811					
	0	(241.73)		249277.00	249518.73	(241.73)
	6976					
	3	161258.24		161258.24		161258.24
	6985					
	1	1596.49		1596.49		1596.49
Total 449214/JC		1169138.99	95578.69	2423512.05	1349951.75	172633.01
449214/JM	RESEARCH-SNRI-ENV ENG-MEDELLIN-AZUARA					
	2248					
	8	12895.00	380.77	12895.00	380.77	12514.23
Total 449214/JM		12895.00	380.77	12895.00	380.77	0.00
449214/JV	RES-SNRI-ENVIR ENG-J VIERS					
	5812					
	2			34238.14	34238.14	0.00
Total 449214/JV		0.00	0.00	34238.14	34238.14	0.00
449214/M1	RESEARCH-SNRI-ENVIRONMENTL ENG-M CONKLIN					
	1830					
	8	23698.85	91.10	100000.00	76392.25	23607.75
	2124					
	1	180921.96	111485.40	643930.00	574493.44	69436.56
Total 449214/M1		204620.81	111576.50	743930.00	650885.69	0.00
449214/M2	RESEARCH-SNRI-ENVIRONMENTL ENG-M CONKLIN					
	1830					
	8					0.00
	6908					
	5	(13202.89)	23888.75	(13202.89)	23888.75	(37091.64)
Total 449214/M2		(13202.89)	23888.75	(13202.89)	23888.75	0.00
449214/MB	RESEARCH-SNRI-ENVIRON ENG-BEUTEL					
	2096					
	1	104200.28	87403.47	146857.00	130060.19	16796.81
	5760					
	6	78658.00	67300.79	78658.00	67300.79	113.75
	6976					
	3	168736.00	85903.37	168736.00	85903.37	82832.63
Total 449214/MB		351594.28	240607.63	394251.00	283264.35	113.75
449214/MC	RESEARCH-SNRI-ENVIRONMENTL ENG-M CONKLIN					
	1830					
	8	1655.32	14822.00	68183.00	81349.68	(13166.68)

1990						
0		113794.70		113794.70		(113794.70)
2124						
1	132934.11	40012.57	295352.20	202430.66		92921.54
2248						
8	864554.64	67790.72	908215.00	111451.08	166242.02	630521.90
2248						
9	376068.39	195962.17	387597.00	207490.78		180106.22
2260						
0	(9064.72)	10368.97	394099.00	413532.69	596.09	(20029.78)
2261						
4		56819.16		56819.16		(56819.16)
2672						
3	1028.29	1012.81	162000.00	161984.52		15.48
4006						
1	93415.94	10682.30	93415.94	10682.30	800.00	81933.64
4008						
0	18885.46	765.58	18885.46	765.58		18119.88
Total 449214/MC	1479477.43	512030.98	2327747.60	1360301.15	167638.11	799808.34
449214/QG	RESEARCH-SNRI-ENVIRONMENTAL ENG-Q. GUO					
2126						
3	19050.56		265854.00	246803.44		19050.56
2248						
2			32053.79	32053.79		0.00
2260						
4			50492.26	50492.26		0.00
Total 449214/QG	19050.56	0.00	348400.05	329349.49	0.00	19050.56
449214/R1	RESEARCH-SNRI-ENVIRONMENTAL ENG-R. BALES					
2124						
1	656736.37	479124.19	2207986.80	2030374.62	103.10	177509.08
2248						
0	(2953.47)		20000.00	22953.47		(2953.47)
Total 449214/R1	653782.90	479124.19	2227986.80	2053328.09	103.10	174555.61
449214/R2	RESEARCH-SNRI-ENVIRONMENTAL ENG-R. BALES					
2124						
1	64747.43	13377.28	163062.00	111691.85		51370.15
4006						
1	9835.42	480.00	9835.42	480.00		9355.42
6908						
5	(6521.03)	1304.66	(6521.03)	1304.66	21.64	(7847.33)
Total 449214/R2	68061.82	15161.94	166376.39	113476.51	21.64	52878.24
449214/RB	RESEARCH-SNRI-ENVIRONMENTAL ENG-R. BALES					
1836						
5	266130.78	90129.87	454644.00	278643.09	1007.74	174993.17
1839						
5	788202.00	136739.65	788202.00	136739.65	78304.77	573157.58
1990						
0	425908.81	269423.79	425908.81	269423.79	90.01	156395.01
2120						
5			1705393.80	1705393.80		0.00
2124						
1	248742.39	83157.35	601244.00	435658.96	13507.58	152077.46
2247						
5	601.29		122500.00	121898.71		601.29
2248						
0	109769.48	98883.81	384000.00	373114.33		10885.67
3647						
0	(344.74)		(344.74)			(344.74)
4008						
0	27879.87		27879.87			27879.87
5800						
7	59890.55	62214.53	104433.00	106756.98		(2323.98)
6908						
5	803.09		803.09			803.09
6983						
5	(610.84)		(610.84)			(610.84)
Total 449214/RB	1926972.68	740549.00	4614052.99	3427629.31	92910.10	1093513.58

449214/RR	RESEARCH-SNRI-ENVIR ENG-R. RICE					
	2247					
	1	68254.62	44053.96	206005.23	181804.57	24200.66
Total 449214/RR		68254.62	44053.96	206005.23	181804.57	0.00 24200.66
449214/ST	RESEARCH-SNRI-ENVIRONMENTAL ENG-TRINA					
	1993					
	1	17366.00	17366.00	17366.00	17366.00	0.00
	5863					
	7	82096.53	41339.87	120000.00	79243.34	40756.66
Total 449214/ST		99462.53	58705.87	137366.00	96609.34	0.00 40756.66
449214/WR	RESEARCH-SNRI-ENVIRO ENGINEERING W ROGGE					
	6908					
	5	15000.00	3250.46	15000.00	3250.46	700.00 11049.54
Total 449214/WR		15000.00	3250.46	15000.00	3250.46	700.00 11049.54
Total 449214		6400403.83	2578521.16	14692770.55	10870887.88	434119.71 3387762.96
449216	RESEARCH-SNRI-MECHANICAL ENG					
	2349					
	4	810.00	810.00	810.00	810.00	0.00
Total 449216		810.00	810.00	810.00	810.00	0.00 0.00
449216/YC	RESEARCH-SNRI-MECHANICAL ENG-Y CHEN					
	3647					
	0	25241.39	18389.54	25241.39	18389.54	6851.85
Total 449216/YC		25241.39	18389.54	25241.39	18389.54	0.00 6851.85
Total 449216		26051.39	19199.54	26051.39	19199.54	0.00 6851.85
449224/RB	RSRCH-SNRI-ENV ENG-COST SHARE-BALES					
	1990					
	0	116728.78	116578.69	116728.78	116578.69	150.09
Total 449224/RB		116728.78	116578.69	116728.78	116578.69	0.00 150.09
Total 449224		116728.78	116578.69	116728.78	116578.69	0.00 150.09
449253	RESEARCH-SNRI-EARTH SYSTEMS SCIENCES					
	2349					
	4	2394.70	2394.70	2724.70	2724.70	0.00
Total 449253		2394.70	2394.70	2724.70	2724.70	0.00 0.00
449253/AB	RES-SNRI-EARTH SYSTEMS SCIENCES-A BERHE					
	2124					
	1	6702.70	6053.53	16896.00	16246.83	649.17
	5761					
	0	48243.00	9139.28	48243.00	9139.28	39103.72
Total 449253/AB		54945.70	15192.81	65139.00	25386.11	0.00 39752.89
449253/CF	RES-SNRI-EARTH SYSTEMS SCIENCES-C FRANK					
	2126					
	7	773723.55	188957.14	1633447.00	1048680.59	56333.51 528432.90
Total 449253/CF		773723.55	188957.14	1633447.00	1048680.59	56333.51 528432.90
449253/EM	RESEARCH-SNRI-EARTH SYSTEMS - MORAN					
	2133					
	0	199996.00	64745.99	199996.00	64745.99	135250.01
	5816					
	6	4441.02	3183.34	5000.00	3742.32	1257.68
	5817					
	6	3998.00	52.88	3998.00	52.88	3945.12
Total 449253/EM		208435.02	67982.21	208994.00	68541.19	0.00 140452.81
449253/JB	RESEARCH-SNRI-EARTH SYSTEMS SCI-BLOIS					
	2133					
	5	386190.00	24583.68	386190.00	24583.68	572.23 361034.09
Total 449253/JB		386190.00	24583.68	386190.00	24583.68	572.23 361034.09
449253/JS	RES-SNRI-EARTH SYSTEMS SCIENCES J SEXTON					
	4006					
	1	7210.40	762.00	7210.40	762.00	6448.40
Total 449253/JS		7210.40	762.00	7210.40	762.00	0.00 6448.40
449253/LK	RESEARCH-SNRI-EARTH SYSTEMS SCIENCES					
	2241					
	0			1090275.87	1090275.87	0.00
Total 449253/LK		0.00	0.00	1090275.87	1090275.87	0.00 0.00

449253/MB	RESRCH-SNRI-EARTH SYSTEMS SCIENCES-BEMAN					
	6908					
	5	12672.22	6260.00	12672.22	6260.00	6412.22
Total 449253/MB		12672.22	6260.00	12672.22	6260.00	0.00 6412.22
449253/NM	RES-SNRI-EARTH SYSTEMS SCIENCES-N MILLER					
	6908					
	5	203.68		203.68		203.68
Total 449253/NM		203.68	0.00	203.68	0.00	0.00 203.68
449253/PO	RESEARCH-SNRI-EARTH SYSTEMS-P. O'DAY					
	1824					
	4	52476.83	7595.20	53594.00	8712.37	44881.63
	2122					
	1			299999.52	299999.52	0.00
	2242					
	6	(1864.15)	(1511.26)	199999.89	200352.78	(352.89)
	4006					
	1	6112.83	5135.83	6112.83	5135.83	977.00
	5760					
	1	247808.00	77014.30	247808.00	77014.30	170793.70
	5813					
	9	214332.92	107306.79	609146.00	502119.87	374.71 106651.42
	5866					
	5	36700.00	340.25	36700.00	340.25	36359.75
Total 449253/PO		555566.43	195881.11	1453360.24	1093674.92	374.71 359310.61
449253/SH	RESEARCH-SNRI-EARTH SYSTEMS - S. HART					
	1836					
	6	(5279.10)	(5279.10)	140907.00	140907.00	27.76 (27.76)
	1993					
	1		5017.48		5017.48	(5017.48)
	2124					
	1	45009.80	43930.32	247066.00	245986.52	31.18 1048.30
	3749					
	9	2984.60	2977.37	2984.60	2977.37	15.02 (7.79)
	3765					
	8	21974.00	3704.61	21974.00	3704.61	18269.39
	4006					
	1	14250.00	11443.76	14250.00	11443.76	473.67 2332.57
	5709					
	7	42120.99	36310.25	117643.00	111832.26	129.30 5681.44
Total 449253/SH		121060.29	98104.69	544824.60	521869.00	676.93 22278.67
449253/TG	RES-SNRI-EARTH SYSS SCIENCES T-GHEZZEHEI					
	1839					
	0	43156.00	43235.01	43156.00	43235.01	(79.01)
	2248					
	4	208520.91	108637.63	357300.00	257416.72	63.00 99820.28
Total 449253/TG		251676.91	151872.64	400456.00	300651.73	63.00 99741.27
Total 449253		2374078.90	751990.98	5805497.71	4183409.79	58020.38 1564067.54
449315/KH	RESEARCH-SNRI-ANTHROPOLOGY-K. HULL					
	2565					
	3			89261.51	89261.51	0.00
	2565					
	7	16337.69	14979.61	74015.01	72656.93	1358.08
Total 449315/KH		16337.69	14979.61	163276.52	161918.44	0.00 1358.08
Total 449315		16337.69	14979.61	163276.52	161918.44	0.00 1358.08
449318/NL	RESEARCH-SNRI-HISTORY-LERCARI					
	1837					
	1		31635.78		31635.78	151968.11 (183603.89)
	1838					
	7	13542.97	13019.90	15000.00	14476.93	523.07
	1840					
	3	90000.00	28281.61	90000.00	28281.61	61718.39
	1840					
	8	50000.00		50000.00		40000.01 9999.99
	3765					
	8	(6266.51)	3144.95	(6266.51)	3144.95	(9411.46)

	5860						
	9	(4294.48)	251.76		4546.24		(4546.24)
Total 449318/NL		142981.98	76334.00	148733.49	82085.51	191968.12	(125320.14)
Total 449318		142981.98	76334.00	148733.49	82085.51	191968.12	(125320.14)
449321/AJ	RESEARCH-SNRI-PSYCHOLOGY-A. JOYCE						
	2095						
	8	9745.87	6682.59	50000.00	46936.72	9.79	3053.49
	4006						
	1	10000.00	135.30	10000.00	135.30		9864.70
	5814						
	5	(4286.83)		50000.00	54286.83		(4286.83)
	5814						
	8			36470.67	36470.67		0.00
	5816						
	7	42000.00	38073.50	42000.00	38073.50	19.82	3906.68
	5860						
	8	221.64		25391.00	25169.36		221.64
	5861						
	6			49000.00	49000.00		0.00
	5863						
	3	11453.00	14538.62	45000.00	48085.62	45.00	(3130.62)
	5863						
	9	1063.79	1217.60	49800.00	49953.81	158.72	(312.53)
Total 449321/AJ		70197.47	60647.61	357661.67	348111.81	233.33	9316.53
Total 449321		70197.47	60647.61	357661.67	348111.81	233.33	9316.53
629001/DH	PUBLIC SERVICE-SNRI-NPI-HOSLEY						
	4003						
	9	1074.34		1074.34			1074.34
	6926						
	2	9082.55		9082.55			9082.55
Total 629001/DH		10156.89	0.00	10156.89	0.00	0.00	10156.89
629001/RB	PUBLIC SERVICE-SNRI-R. BALES						
	6985						
	1	(21260.56)	618.23	(21260.56)	618.23		(21878.79)
Total 629001/RB		(21260.56)	618.23	(21260.56)	618.23	0.00	(21878.79)
Total 629001		(11103.67)	618.23	(11103.67)	618.23	0.00	(11721.90)
629213/ER	PUBLIC SERV-SNRI-COMP SCI & ENG-ROLLAND						
	5811						
	7			13826.86	13826.86		0.00
Total 629213/ER		0.00	0.00	13826.86	13826.86	0.00	0.00
Total 629213		0.00	0.00	13826.86	13826.86	0.00	0.00
789001/FA	FINANCIAL AID-SNRI						
	3647						
	0		4000.00		4000.00		(4000.00)
	4006						
	1		2000.00		2000.00		(2000.00)
Total 789001/FA		0.00	6000.00	0.00	6000.00	0.00	(6000.00)
Total 789001		0.00	6000.00	0.00	6000.00	0.00	(6000.00)
789214/JC	FINANCIAL AID-SNRI-ENV ENG-CAMPBELL						
	3765						
	8	(26588.82)		(26588.82)			(26588.82)
Total 789214/JC		(26588.82)	0.00	(26588.82)	0.00	0.00	(26588.82)
789214/MC	FINANCIAL AID-SNRI-ENV ENG-CONKLIN						
	1830						
	8	(12294.00)		12240.00	24534.00		(12294.00)
Total 789214/MC		(12294.00)	0.00	12240.00	24534.00	0.00	(12294.00)
789214/RB	FIN AID-SNRI-ENVIRONMENTAL ENG-R BALES						
	2124						
	1	(11360.47)	5919.83	17488.00	34768.30		(17280.30)
Total 789214/RB		(11360.47)	5919.83	17488.00	34768.30	0.00	(17280.30)
Total 789214		(50243.29)	5919.83	3139.18	59302.30	0.00	(56163.12)
789253/PO	FIN AID-SNRI-LIFE/ENV SCIENCE-O'DAY						
	1824						
	4	71153.79	56978.23	97809.00	83633.44		14175.56

	5760						
	1	52000.00	26000.00	52000.00	26000.00		26000.00
Total 789253/PO		123153.79	82978.23	149809.00	109633.44	0.00	40175.56
789253/SH	FIN AID-SNRI-LIFE/ENVIRON SCI-HART						
	3765						
	8	(21000.00)	15194.00	(21000.00)	15194.00		(36194.00)
Total 789253/SH		(21000.00)	15194.00	(21000.00)	15194.00	0.00	(36194.00)
Total 789253		102153.79	98172.23	128809.00	124827.44	0.00	3981.56
							5123004.18
State Funds		295446.59					
Gifts		24413.00					
Grants		4827557.59					
Total		5147417.18					

Attachment: C
Gifts Administered through Development and Alumni Relations

Sierra Nevada Research Institute donations FY 18/19

Gift Date	Gift Type	Fund Description	Title	First Name	Last Name	Gift Amount
6/26/19		SNRI - Climate Feedback		anonymous		\$15.00
6/25/19		SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
5/28/19	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
4/29/19	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
		SNRI - Climate Change and the Ecology of Sierra Nevada Forests Symposium			Brigham Young University	\$5,000.00
4/19/19	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
3/28/19	Cash	SNRI Fund	Mr.	Gary	Kremen	\$1,500.00
3/20/19	Cash	UC WATER SSRI	Mr.	Gary	Kremen	\$1,400.00
		SNRI - Entomology PI: Andrea Joyce	Dr.	Andrea	Joyce	\$10,000.00
2/27/19	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
					United Way of Central New Mexico	\$228.00
2/1/19	Cash	SNRI - Climate Feedback			Sandberg	\$10.00
1/28/19	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
12/31/18	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
		SNRI Fund			Benevity, Inc.	\$3,000.00
12/31/18	Cash	SNRI Fund			Benevity, Inc.	\$3,000.00
12/11/18	Cash	SNRI - Climate Feedback	Mr.	Ville	Lahde	\$50.00
12/4/18	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00
10/29/18	Cash	SNRI - Climate Feedback	Mr.	Dan	Sandberg	\$10.00

9/26/18	Cash	SNRI - Climate Feedback	Mr. Dan	Sandberg	\$10.00
8/27/18	Cash	SNRI - Climate Feedback	Mr. Dan	Sandberg	\$10.00
7/27/18	Cash	SNRI - Climate Feedback	Mr. Dan	Sandberg	\$10.00
7/12/18	Cash	SNRI - Climate Feedback	Mr. Ville	Lahde	\$100.00
Total					\$24,413.00

ATTACHMENT: D (next 2 pages)

This information is from the UC Merced CAYUSE records

Grant proposals submitted through Sponsored Projects Office in FY 18/19

Proposals prepared 57

Proposals submitted 44

Proposal funded 24

Total value of newly funded proposals in FY 18/19 \$4,066,717.00

Sierra Nevada Research Institute
2018/19 Fiscal Year Research Proposals Generated

57 project proposals were prepared for SNRI Faculty and Researchers in the 2018/19 FY

Date of Submission	Cayuse Record #	Name of Faculty-Lead	Sponsor	Funding Level Requested	Title of Project
07/10/2018	18-0479	Dan Edwards	NSF	\$1,260,949.00	CAREER
07/27/2018	18-0527	Roger Bales	UCOP	1,865,002.00	MRPI
07/27/2018	19-0030	Jeff Jenkins	UCOP	\$660,892.00	MRPI
07/27/2018	19-0031	Peggy O'Day	Dept of Defense	178,955.0	Anchor-QEA
09/17/2018	19-0032	Nicola Lercari	Cal Parks and Recreation	\$220,000.00	Interactive 3donline
08/27/2018	19-0036	Mohammad Safeeq	Cal Wildlife Conservation Board WCB	\$558,189.00	Southern Sierra Streamflow Enhancement
07/19/2018	19-0039	LeRoy Westerling	Ecology and Environment – San Mateo	\$67,000.00	Wildfire Vulnerability and Resilience Initiative
07/23/2018	19-0041	Asmeret Berhe	UC Santa Cruz-sub	\$259,244.00	MRPI
07/22/2018	19-0042	Marc Beutel	UCB sub	\$10,000.00	MRPI
07/25/2018	19-0044	John Beman	UCSD sub	\$129,999.00	MRPI
07/30/2018	19-0049	Peggy O'Day	UCB sub	\$275,225.00	MRPI
08/09/2018	19-0071	Martha Conklin	Cooperative Ecosystem Studies Units	\$210,731.00	Hemlock Phase 3
10/31/2018	19-0097	Marc Beutel	City of San Diego – AMEC	\$236,392.00	Hodges Reservoir
11/01/2018	19-0152	Peggy O'Day	Cal Dept of Fish and Wildlife	\$798,559.00	Cdwl_delta
10/20/2018	19-0157	Mohammad Safeeq	UCANR	\$75,291.00	Ryan-ciwr
11/01/2018	19-0158	Jeff Jenkins	Save The Redwoods League	\$12,500.00	Giant-sequoia
11/01/2018	19-0176	Roger Bales	UC Irvine -sub	\$1,796,291.00	SGC
10/31/2018	19-0188	Steve Hart	UC Riverside sub	\$50,000.00	Nsf-ucr

11/28/2018	19-0207	Alejandro Gutierrez	City of Newman	\$179,986.00	Wetland feasibility
12/07/2018	19-0220	Nicola Lercari	NSF	\$93,205.00	UNC Chapel Hill-UCM
12/18/2018	19-0228	Andrea Joyce	Cal Pistachio Research Board	\$85,480.00	Potential Pheromone Strains
12/18/2018	19-0232	Catherine Keske	NSF		Letter of Intent
1/5/2019	19-0240	Asmeret Berhe	Lawrence Livermore	\$202,656	Deeply Rooted: Evaluating Plant..
1/17/2019	19-0244	Nicola Lercari	NSF	\$994,838	Acquisition of UAV-based Lidar
01/23/2019	19-0259	Mohammad Safeeq	New Mexico State	\$185,987	Hydrosocial transformation to balance availability
02/04/2019	19-0242	Roger Bales	Consortium of Univ	\$3,000	Let's talk about Water
02/12/2019	19-0303	Asmeret Berhe	Georgia Southern University	\$91,676	Integrating major North American forest cover types
02/14/2019	19-0285	Emily Moran	NSF	\$417,580	The risks of safety: xylem anatomy
02/20/2019	19-0319	Mohammad Safeeq	CSU Fresno	\$33,000	Farm Water Management Toolkit
02/21/2019	19-0301	Asmeret Berhe	NSF	\$408,656	New Arctic
02/21/2019	19-0313	Andrea Joyce	UC Davis	\$24,921	PacVec Training
02/21/2019	19-0318	Nicola Lercari	Ca State Parks	\$90,000	Fort Ross
02/27/2019	19-0336	Emily Moran	Seq Riverlands	\$8,322	Forest Future
03/06/2019	190348	Leroy Westerling	UC Davis	\$412,683	Strategies for Mitigation
03/15/2019	19-0355	Anne Kelly	NSF	\$81,664	Safety in Ocean and Field Sciences
03/19/2019	19-0365	Asmeret Berhe	Univ of Colorado	\$299,998	Plant-soil linkages
03/19/2019	19-0368	Asmeret Berhe	Univ of Wisconsin	\$299,615	Post-fire Carbon Cycling in the Northern Boreal Forest
03/21/2019	19-0371	Nicola Lercari	Ca State Parks	\$50,000	RESEARCHING AND IMPLEMENTING ADA
03/23/2019	19-0376	Peggy O'Day	Modesto City Wellfield feas	\$36,700	Modesto Wellfield Nitrate/Arsenic/Uranium Remedial
03/26/2019	19-0379	Roger Bales	NSF	\$998,660	CZO
04/11/2019	19-0382	Teamrat Ghezzehei	DOE	\$539,935	Coupling hydrological and physical mechanisms
04/11/2019	19-0384	Peggy O'Day	DOE	\$540,000	Impact of phosphorus from airborne deposition
05/13/2019	19-0429	Teamrat Ghezzehei	NSF	\$299,978	Novel digital and metabolomic sensing of soil
05/31/2019	19-0431	Peggy O'Day	Savannah River Nuclear Solutions	\$270,001	Manganese and Iron Oxide-modified Activated Carbon



Sierra Nevada Research Institute Research Symposium UC Merced Research Week 2019

For more information contact: snrirequests@ucmerced.edu

Water, Soils and Forest Climate Challenges in the Southern Sierra and San Joaquin Valley



**“Reusing organic wastes to
mitigate climate change
in agroecosystems”**



**“The future of safe drinking
water in California”**



**“Disturbance and recovery,
fire impacts on vegetation
water use in the Sierra Nevada”**

**Monday, March 4, 2019 11:30 am - 2:00 pm
Kolligian Library - Room 232**

11:30 am Lunch and refreshments

12:00 pm Introductions and Overview - Roger Bales, Director SNRI

**12:10 pm Reusing organic wastes to mitigate climate change in agroecosystems
Rebecca Ryals, Assistant Professor**

**12:30 pm The future of Safe Drinking Water in California
Colleen Naughton, Assistant Professor**

**12:50 pm Disturbance and recovery, Fire impacts on vegetation
water use in the Sierra Nevada
Christine Ma, Post Doctoral Researcher, SNRI**

1:20 pm Moderated Panel discussion with speakers

Lunch and Refreshments Provided





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Sierra Nevada Research Institute

BYLAWS

Article I: Mission and Objectives

The Sierra Nevada Research Institute (SNRI) is an Organized Research Unit¹ at UC Merced, with a mission to discover and disseminate new knowledge that contributes to sustaining the environment and ecosystems of California, and related regions worldwide, through integrated research and scholarly activity in natural science, social science, humanities, arts and engineering. This mission will be accomplished through:

- Collaborative, multidisciplinary research conducted by faculty, students, staff from multiple schools and graduate groups schools at UC Merced;
- Strong interactions with related research units within the UC system and close collaborative relations with scientists and managers at national laboratories (particularly LLNL), local, state, and federal agencies, and non-governmental organizations;
- Creation of research facilities on the UC Merced campus and within the Central Valley and Sierra Nevada regions of California;
- Sharing of research results, data and information with public and private stakeholders in the region through publications, forums and workshops.
- Fostering links between natural and cultural understanding and resources in the region.

As an Organized Research Unit (ORU), SNRI was established to provide a supportive infrastructure for interdisciplinary research complementary to the academic goals of UC Merced's graduate groups and undergraduate degrees. SNRI will facilitate research and research collaborations; disseminate research results through research conferences, meetings and other activities; strengthen graduate and undergraduate education by providing students with training opportunities and access to facilities; seek extramural research funds; and carry out university and public service programs related to the SNRI's research expertise.

Article II: Membership

Membership shall be opened to faculty and researchers who are actively involved in scientific inquiry and scholarship consistent with the objective of SNRI, as defined in Article I. Membership is not limited to UC Merced ladder-rank faculty and may include individuals in the professional research series. Voting privileges on SNRI policy and by-law matters are restricted to SNRI members who are ladder-rank faculty.

Affiliate membership is open to individuals who do not hold a UC Merced appointment but are engaged in scholarship consistent with the objective of SNRI as outlined in Article I.

¹ See <http://www.ucop.edu/research/orupolicy.html> for Administrative Policies and Procedures Concerning Organized Research Units within UC.

Individuals wishing to be members or affiliate members of SNRI must submit a written request to the Director indicating their interest and briefly outlining how they will contribute to the SNRI mission. This should be accompanied by a current curriculum vita. Materials will be evaluated by the Membership Committee and the individual admitted to SNRI membership if their application receives a majority vote of the Committee.

Members are expected to participate actively in SNRI's mission and objectives. Each member is responsible for providing the Membership Committee with appropriate documentation of participation. The Committee will conduct a review of the membership every four years using the following metrics: 1) An active research program indicated by publication in the principal peer-reviewed journals relevant to the mission and scope of SNRI during the past four years, or other appropriate scholarly products. 2) A contribution to student mentorship and training by either advising or co-advising one or more students doing research or scholarship. 3) General contribution to the research and outreach mission of SNRI, e.g. through participation in grants and contracts as a principal investigator or co-investigator, or participation in other SNRI activities. Members who are approved as principal investigators at UC Merced may submit grant proposals through SNRI.

It is expected that members will be evaluated relative to more than one of the above metrics, while affiliate members will normally be evaluated relative to the 3rd metric.

Article III: Director

The Director of SNRI is appointed by the Chancellor. When a new director is appointed, nominations should be solicited from the Advisory Committee. Review of the director should take place every five years, with the review normally taking place shortly before the required five-year review of SNRI as an ORU.

Article IV: Advisory Committee

A formal Advisory Committee, chaired by a faculty member other than the Director, shall meet regularly, participate actively in setting the SNRI's goals as reflected in the SNRI Strategic Plan, and critically evaluate SNRI's effectiveness on a continuing basis. The Advisory Committee shall provide counsel to the Director on all matters pertaining to SNRI, including budgetary matters and personnel. More than half of the Advisory Committee members shall be ladder-rank faculty members from UC Merced. The committee may also include faculty from other UC campuses, members from the professional research series, and one or more members from outside UC. The Advisory Committee is appointed by the Chancellor to staggered three-year terms. The committee should report at least annually to the Chancellor.

Article V: Internal Committees

SNRI shall have a Membership Committee appointed by the Director in consultation with the Advisory Committee consisting of at least three SNRI ladder-rank faculty to review new and continuing applications for membership in SNRI. The Membership Committee will also review SNRI appointments to the professional research series in accord with the UC Academic Personnel Manual. The Membership Committee may constitute an ad hoc committee for review of an appointment if, in its judgment, additional expertise beyond that of the Membership Committee is needed for the evaluation.

The Director will constitute such additional committees, in consultation with the Advisory Committee, as are needed to advise on the day-to-day operations of SNRI, including its laboratories and field facilities.

Article VI: Meetings

The membership of SNRI will meet on an as-needed basis to address issues of concern to the membership. The Director may call a meeting, and shall convene a meeting if requested in writing by the Advisory Committee chair or five members of SNRI.

Article VII: Quorum

Issues that require a vote of the membership shall provide an opportunity for all eligible members to vote. Group decisions will be determined by simple majority of those voting. If requested by one or more members, voting will be carried out in a manner that preserves anonymity.

Article XI: Amendments

Amendments to the By-Laws require approval by two-thirds majority of the eligible voting members of SNRI who participate in the vote. Written notice of the proposed amendment shall be sent to each member prior to the meeting at which the amendment is to be discussed, or one week prior to a vote if no meetin