A Graduate Program of Hydrologic Sciences Alumni survey was conducted in September – October of 2012. A total of 97 responses were received. The graph below illustrates where alumni of GPHS are employed and where current GPHS students will likely find employment. For up to date job announcements go to the GPHS jobs website: www.hydro.unr.edu/jobs

(Source: 2012 GPHS Alumni Survey; n = 97)
We are having our annual recruitment fair on March 7-8 and have an excellent group of students who will be visiting with us. Current GPHS students are a big part of giving these recruits a warm welcome – be sure to come to our colloquium on Friday, March 7 when our own Scott Tyler will be giving an exciting presentation. We also can use your help by volunteering to house, drive or meet with the recruits. Please contact us if you can help. Most of the recruits will arrive on Thursday, March 6 in the evening, and will spend the day with us on March 7 touring DRI and UNR campuses, meeting with students and faculty, and attending the Friday Colloquium presentation. On Saturday, March 8, the prospective students will tour the Tahoe/Truckee watershed, and then they will join many of us for the annual SAIWI Africa Dinner at the California Building at Idlewild Park (see info in the newsletter about how to get tickets for this fun event that also benefits SAIWI!).

Other events this semester include receiving the UNR administration’s response to the Program Review that we received last semester from our reviewers, who were very complimentary of the GPHS. We have also implemented the Graduate Certificate in International Water Resources in Fall 2013. You may have noticed that there is a recent hiring trend at UNR, which is a great opportunity for the GPHS. Please be an active participant in the selection of new faculty and administrators at UNR because they can have a big impact on the future of the GPHS. Some current searches that will be completed in the Spring semester include a soil scientist faculty position in NRES, a faculty member in Civil and Environmental Engineering, an ecohydrologist faculty position in NRES, and a new Graduate Dean and Vice Provost who will oversee the GPHS. Please send any comments on these candidates to me by the deadlines I send around and thanks for your input!

Finally, a big thank you to our student leadership for this year: Tanna DeRuyter, Alecia Brantley, and Claire Archer as Speaker Committee Co-Chairs; Murphy Gardner, Joe Sapin, and Gwen Davies as AWRA Co-Presidents; Angela Stevens and Christine Hedge as SAIWI Co-Presidents along with Ally Freitas; Angela Stevens as AquaClara Editor; and Erik Cadaret as Graduate Student Representative. Please be sure to thank these students for their leadership and involvement in bringing exciting and interesting activities to our Program. We are looking for replacements for most of these positions for next year; consider getting some leadership experience and getting involved! Contact us or these students if you are interested in getting involved!

Cheers, Laurel and Rina

Laurel Saito: Director
Rina Schumer: Associate Director
Hydro Honors and Awards

2014 Student Leadership Positions
Contact current student leaders listed below if you are interested in a position for 2014-2015!

UNR GPHS
Graduate Student Representative:
Erik Cadaret
ecadaret.reno@gmail.com

UNR GPHS
Colloquium Committee
Co-Chairs:
Alicia Brantley
alecia.abrantley@ufl.edu
Claire Archer
claire.archer2@gmail.com

Student Association for International Water Issues
Co-Presidents:
Christine Hedge
christine.hedge@dri.edu
Angela Stevens
angela.ds8@gmail.com

American Water Resources Association
Co-Presidents:
Joe Sapin
joesapin@gmail.com
Gwendolyn Davies
gwendolyn.davies.11@gmail.com

2014 NWRA Annual Conference Award Recipients

1st Place Poster Presenter: Ryan Liebert
Poster Title: “Estimating open water evaporation from Lake Mead with remote sensing”

3rd Place Poster Presenter: Sunny Grunloh
Poster Title: "Fate and transport of disinfection by-products in Las Vegas Valley during aquifer storage and recovery”

Clare Mahannah Scholarship Recipient: Lydia Peri

International Hydrogeologists Association US National Chapter’s Membership Award: Erik Cadaret

Erik Cadaret has been selected as a recipient of one of the International Hydrogeologists Association US National Chapter’s (IAH USNC) sponsored 2014 student memberships for graduate students enthused about hydrogeology and learning more about hydrogeology in other countries. With this award, Erik has access to full membership benefits which includes access to our premier publication, the Hydrogeology Journal. The International Association of Hydrogeologists (IAH/AIH) is a scientific and educational charitable organization for scientists, engineers, water managers and other professionals working in the fields of groundwater resource planning, management and protection. Founded in 1956, it has grown to a world-wide membership of more than 4000 individuals. Erik would like to thank Dr. Simon Poulson for his nomination. Without it, Erik would not have received this award.
Welcome Spring 2014 New Students

Katherine Clancey – MS Hydrology
Advisor: Laurel Saito
Where are you from?
Puerto Rico
Previous university attended and program of study?
University of Puerto Rico, Mayagüez Campus
B.S. in Civil Engineering
Research topic?
Shasta Dam CE-QUAL-W2 Modeling
Interests/hobbies?
Hiking, mountain biking, skiing, horseback riding & dancing
What are you looking forward to most this year?
Working on research, meeting new people, and exploring Reno and its vicinities

Claire Archer – Ph.D. Hydrogeology
Advisor: Paula Noble
Where are you from?
Richmond, Virginia
Previous university attended and program of study?
Boston University, BA in Earth Science and Marine Science, Scripps Institution of Oceanography, MS in Geosciences
Research topic?
Reconstructing past environmental and climate conditions in the Rieti Basin, Italy, using sedimentological and geochemical analyses of lake sediment cores.
Interests/hobbies?
Climbing, yoga, crossword puzzles.
What are you looking forward to most this year?
Learning and meeting new people.

Steven Bacon – Ph.D. Hydrology
Advisor: Ken Adams
Where are you from?
Newport Beach, CA
Previous university attended and program of study?
Humboldt State University: B.S. Geology
M.S. Environmental Systems – Geology
Research topic?
Paleohydrology along the eastside of the Sierra Nevada
Interests/hobbies?
Skiing, flat-water kayaking, hiking
New Faculty to GPHS

Dr. Ramon Naranjo – USGS
Research Hydrologist with the U.S Geological Survey in Carson City, NV. Research areas: 3-D numerical modeling, aquatic ecology, contaminant transport, ground water hydrology, groundwater/surface water interactions, hyporheic exchange, nutrient cycling, stream restoration, surface water hydrology & vadose zone hydrology

Dr. Guoping Tang – Desert Research Institute
Assistant Research Professor
Research areas: biogeochemical cycles, carbon sequestration, climate change, surface water hydrology & watershed processes

Dr. Ronald Breitmeyer – University of Nevada Reno
Assistant Professor
Geological Sciences and Engineering
Research areas: 3-D numerical modeling, contaminant transport, evapotranspiration, hydrogeology, thermal modeling, vadose zone hydrology, water quality & water resource evaluation

Volunteer Opportunity at Hug High

Jason Aytes and Erik Cadaret are recruiting Hydrologic Sciences graduate students to volunteer at Hug High. Over 70 percent of the students at Hug High are from low income families and cannot pay for tutors. We are looking for volunteers this year to help out as math tutors at Hug High once or twice a month during the times listed below:

Tu and Th-2:45-3:45

Saturday tutors in the month of March

This is our second year working with Jason Aytes of Hug High to coordinate tutors for his students. The math exam results from last year improved noticeably as a result of this partnership, so we want to increase the number of tutors. It is a great professional development opportunity and resume builder! It is also a tremendous help to the students. If you are interested and want more information please contact one of us:

Jason Aytes, ASCENT Coordinator at Hugh High School
jaytes@washoeschools.net

Erik Cadaret, Graduate Student Hydrologic Sciences
ecdaret.reno@gmail.com
Student Organizations

American Water Resources Association

The University of Nevada, Reno Student Chapter of the American Water Resources Association (AWRA) was developed in 1991. AWRA is planning their annual spring trip to the Castle Lake Research Station located in northern California’s Siskiyou Mountains, near the city of Mount Shasta. The glacial cirque lake is 5,400 feet above sea level and is part of the headwaters of the Sacramento River. The Castle Lake Environmental Research and Education Program (CLEREP) has established the longest running mountain research data set in the country. Participants in the trip will stay overnight at the research center and assist with water quality data collection. The trip dates are April 18-19, 2014. AWRA continues to host the after colloquium socials and encourages more students to get involved with the club. Please contact Joe Sapin (joesapin@gmail.com) or Gwen Davies (gwen.davies.11@gmail.com) if interested in attending the Castle Lake trip or if you are interested in joining AWRA.

Student Association for International Water Issues

The Student Association for International Water Issues (SAIWI) is a student organization at the University of Nevada, Reno, whose mission is to increase access to clean drinking water and improved sanitation services. Working on a local, village to village level, SAIWI implements sustainable water projects that educate and empower communities, while also providing hands-on international experiences to student volunteers. In January 2014, SAIWI members Jamie Myers, Erik Cadaret and Lander Kennedy travelled to Valle Escondido, Bocas Del Toro Panama to continue work on a sanitation project. This was SAIWI’s 3rd trip to Valle Escondido. Jamie, Erik & Lander worked with Peace Corps and local community members to build one composting latrine and the toilet seats to finish off a few others. SAIWI is currently planning their summer trip to the community of Mua Hills, Kenya to work on an erosion control project. The 11th Annual Ron Petersen Memorial African Dinner will be on March 8, 2014. SAIWI always welcomes new members. Please visit the SAIWI website for more information (www.saiwi.org) or email them at unr.saiwi@gmail.com.
Program Events

GPHS Spring 2014 Colloquium Series

Seminars will be from 4:00pm - 5:00pm.
An informal social will follow each seminar in the Redfield Foyer, outside the Redfield auditorium (DMS 110).

**Friday, March 7th**
Scott Tyler, Ph.D. University of Nevada Reno
“Sea Level Rise and Antarctic Ice Shelf Monitoring: New Monitoring and Modeling Approaches”
Location: Joe Cowley Student Union-Great Room (403)

**Tuesday, April 8th**
Dorthe Wildenschild, Ph.D. Oregon State University
“Optimizing Capillary Trapping as a Carbon Dioxide Mitigation Strategy: Pore-Scale Findings in Support of Larger-Scale Implementation”
Location: Joe Cowley Student Union-Great Room (403)

**Wednesday, April 16th**
Craig Divine, Ph.D. Arcadis US Inc.
“Opportunities in Mine Water Remediation: Leveraging Lessons and New Insights in Hydrogeology and Large Plume Treatment”
NWRA Spring Dinner Forum
See details below

**Friday, April 25th**
Eric Roden, Ph.D. University of Wisconsin, Madison
“Microbial iron redox cycling in sedimentary environments”
Joint seminar with Civil and Environmental Engineering
Location: Redfield Auditorium (DMS 110)

UNR/NWRA Spring Dinner Forum

“Opportunities in Mine Water Remediation: Leveraging Lessons & New Insights in Hydrogeology & Large Plume Treatment”

With Dr. Craig Divine, Principal Hydrogeologist & Vice President, ARCADIS US Inc.

**Wednesday, April 16, 2014**
Best Western Plus Airport Plaza Hotel
1961 Terminal Way Reno, NV 89502
No-Host Bar 6:00 pm - Dinner 7:00 pm
Presentation 8:00 pm

Space is limited; please call 775-853-4753 to RSVP.

Register at http://www.nvwra.org/unrnwra-spring-dinner-forum/

Space is limited for this event, so please register early to reserve your seat.

The reservation deadline is Monday, April 7, 2014 at 3:00 pm

**Early Registration** by March 31st: $35 NWRA Members, $40 Non Members, $20 Students

**Registration** after March 31st: $45 NWRA Members, $50 Non Members, $20 Students
UNR/DRI Graduate Program of Hydrologic Sciences
2014 Recruitment Fair Itinerary

Thursday, March 6th
- Students arriving at various times via air and car.
- Hosts or designated drivers pick-up students that are traveling via air

Friday, March 7
- Introductions, overview, coffee, bagels 9:00 am (Schumer)
- DRI tour 9:15-10:00 am (Schumer)
- DRI faculty meetings 10:00 – 11:45am
  Coffee with students in kitchen
- Travel to UNR 11:45 – 12:00
- Lunch at the Overlook (12:30 – 1:15pm)
- UNR laboratory tour (1:30 – 2:00)
- UNR faculty meetings (2:00 – 3:30pm)
- Walk to GPHS colloquium – Joe Cowley Student Union
  (Great Room 403) (3:45 – 4:00pm)
- GPHS Colloquium – Dr. Scott Tyler: Sea level rise and Antarctic ice shelf monitoring: new monitoring and modeling approaches (4:00 – 5:00pm)
- Colloquium social (5:00 – 6:30pm)
- 6:30 Pizza and leftovers at Jamie and Allison’s: 1915 Prince Way

Saturday, March 8
- Tahoe fieldtrip – meet at DRI’s upper parking lot at 8:30 am
  o Fieldtrip (8:30 am– 1:00 pm)
  o Return to Reno and host home (2:00 – 3:00 pm)
- Hosts/drivers take recruits to California Building at Idlewild park to set up/attend SAIWI fundraiser (5:00 pm)
- Hosts or drivers take recruits home

**DAYLIGHT SAVINGS STARTS AT 2AM SUNDAY MORNING**
**TURN CLOCKS AHEAD 1 HR**

Sunday, March 9th
- Designated drivers take recruits to airport
Student Association for International Water Issues & International Development Missions present:

11th Annual Ron Petersen Memorial

African Dinner

March 8
2014

California Building
Idlewild Park

Doors open at 6:00pm

Event includes:
* African Cuisine
* Entertainment
* Silent Auction & Raffle
* Cash Bar
* SAIWI Trip Presentations

* Tickets $40
Students $25

Limited number of tickets!

For Details and Tickets:
Olivia Dillon
(775) 530-7299
Olivialdillon@gmail.com

Sponsored by:

Funds raised will be used for water and sanitation projects in Kenya and the Navajo Nation (SAIWI.org)
Recent Publications


Issued US patents:


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**Congratulations to Our GPHS Graduates**

- **Tracy Backes** - December 2013 - MS Hydrology  
  Advisor: Rina Schumer  
  Thesis Title: Combined role of low- and mid-level jets and atmospheric rivers on winter precipitation in the eastern Sierra Nevada

- **Cornelia Barth** – December 2013 – Ph.D. Hydrology  
  Advisor: Douglas Boyle  
  Thesis Title: Toward the use of modern hydrologic modeling tools in paleoclimate studies

- **Shahnewaz Mohammad** – December 2013 – Ph.D. Hydrogeology  
  Advisor Gina Tempel  
  Thesis Title: Geochemistry of naturally occurring arsenic in the Humboldt River Basin, Nevada

- **Christopher Pearson** – December 2013 – MS Hydrology  
  Advisor Rina Schumer  
  Thesis title: Nutrient and mercury concentrations and loads in Lake Tahoe Basin snowpack

- **Laurel Stratton** – December 2013 - MS Hydrogeology  
  Advisor: Paula Noble  
  Thesis title: Feasibility study for using diatom assemblages from a small dilute subalpine lake as an indicator of past megadroughts in the Sierra Nevada
GRADUATE PROGRAM OF HYDROLOGIC SCIENCES
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Donate to GPHS: https://supportnevada.unr.edu/gphs.

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