
Aquatic and Riparian Effectiveness Monitoring Program & the Student Conservation Association 2013 Overview



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Background—The purpose of the Aquatic and Riparian Effectiveness Monitoring Program (AREMP) is to assess the status and trend of watershed attributes to determine if the Aquatic Conservation Strategy described in the Northwest Forest Plan is achieving its goals of maintaining and restoring the condition of watersheds on federal lands in the Pacific Northwest. AREMP has partnered with the Student Conservation Association (SCA) since 2004 to hire interns for summer field work. From 2004 to 2013, a total of 49 interns gained valuable experience in the field of natural resources working with AREMP.

In 2013, we hired eight SCA interns to work on two different projects, watershed surveys and temperature monitoring. Watershed survey crews conducted surveys in 28 watersheds across the Pacific Northwest this summer. The temperature monitoring crews deployed and downloaded instream and air temperature monitoring sensors in 102 watersheds.

Benefits of Hiring SCA Interns to the US Forest Service and BLM—SCA interns bring new ideas and energy to our agencies, and provide a way to culturally and geographically diversify our work force. The interns' commitment and work ethic results in high quality data collected for agency use, while interns gain valuable work experience. In addition, SCA volunteers often return to our program in future years as seasonal employees. These returning SCA interns provide valuable on-the-ground survey experience to our field crews.

Benefits to SCA Interns—SCA Interns gain valuable experience during their summer internships with AREMP. Interns attend three weeks of training at the beginning of the field season, which includes topics such as safety, use of technical equipment, and how to conduct surveys. Training includes wilderness first aid, CPR, blood borne pathogens, use of epinephrine pens for allergic reactions, use of safety devices (cell phones, satellite phones and Forest Service radios), defensive driving, invasive species identification, how to prevent the spread of invasive species, amphibian identification, stream channel mapping, navigation with GPS units, and use of ArcPad to enter data on field computers. In addition to valuable experience and training, interns are eligible for AmeriCorps Education awards up to \$1400 which can be used to pay education costs at qualified institutions of higher education, for educational training, or to repay qualified student loans.



Johanna Ruff (2011 Intern) teaches current intern Tony Lowndes to collect stream survey data.

SCA Video—In 2013, Jeff Metzger (AREMP Technical Assistant) produced a recruitment video for SCA interns. The video provides a glimpse into the data collection methods AREMP uses to assess stream condition in watersheds. This video will be available to prospective SCA Interns next field season so they have a more complete understanding of the opportunities available to learn new technical skills while working with AREMP. The video is currently available at <http://www.youtube.com/watch?v=Vq9f0oya8Uw>.

2013 SCA Interns –Watershed Survey Crew Interns



Tony Lowndes

Education: University of Nebraska, Lincoln, (expected December 2013)
Environmental Science and Fisheries & Wildlife

Best thing about working for AREMP: Hiking in to new sites and thinking; hey I'm probably one of very few people to see this place!



Nicole Hammond

Education: East Stroudsburg University (2013)
Environmental Studies and Geography minor

Best thing about working for AREMP: The best thing about working for AREMP was learning how special it was to be apart of monitoring the quality of water in the Pacific Northwest. While doing this I had a wonderful experience connecting and learning from many individuals who taught me to be safe and have fun!!!



Stuart Wilkinson

Education: Clemson University, B.S. Natural Resource Management (Expected 2014)

Best thing about working for AREMP: AREMP was a fantastic experience! I really enjoyed the opportunity to travel to a new part of the country, learn techniques and management practices that were unfamiliar to me, meet new people who are excellent mentors and friends, and spend my summer exploring and serving the great outdoors. To pinpoint the best part of my summer is like choosing between flavors of Ben and Jerry's ice cream, so many good options to choose from! For me the best part of my summer with AREMP was working for a large project that was so well organized. My supervisors created a detailed protocol, provided descriptions of and directions to our work sites, put us through a comprehensive training, and placed us in crews we were compatible working with. I was confident and prepared for whatever our work stint had in store for us before we even made it out into the field, and that's because of the organization of the program. Working for AREMP was an awesome experience. There was a lot of hard work put in by all of the program's staff during the year to ensure that our summer season was productive. I appreciated everything they did for us and had a great summer thanks to their organization and effort.



Janelle Horstman

Education: Bowling Green State University, (expected May 2014)
Environmental Science with a specialization in Watershed Management

Best thing about working for AREMP: I gained so many new skills and learned new things! I also loved working in the great outdoors.

2013 SCA Interns—Temperature Monitoring Crew Interns



Jon Belz

Education: Dickinson College, Geology (2010)

Best thing about working for AREMP: Working for AREMP involved living in my workplace. Since I spent so much time in the field, I developed a sense of closeness to the forest. I felt privileged to share the land with the forest. It made me so much more aware of what is going on around me and what is out there. It was a unique feeling I have never felt before.



Derek Forester

Education: Humboldt State University (Expected 2015)

Best thing about working for AREMP: AREMP provides a great opportunity to gain valuable experience, meet people and see beautiful places.



Leslie O'Neil

Education: University of Oregon,
Environmental Geography (2009)

Best thing about working for AREMP: I greatly appreciated the chance to help out with planning the stints, calibrating the temperature sensors and checking in and out the data and learning the ropes of being a crew leader with AREMP and being trusted to take on those tasks. I love getting my hands dirty. Field work can be rough but it was a completely new experience and I really enjoyed the challenges of working on the project.



Morgan Schulte

Education: Southern Illinois University, Carbondale (Expected May 2015)
Forestry, specialization in Hydrology

Best thing about working for AREMP: Coworkers and supervisors were the best I've ever worked with.

Previous SCA Interns—Where are they now?

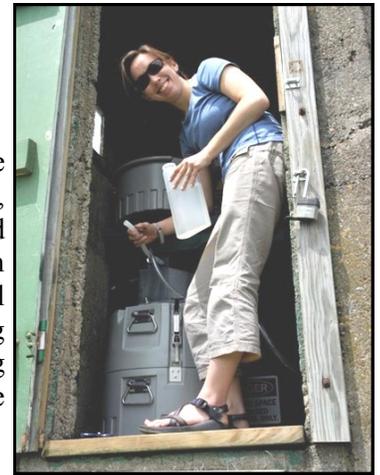
Katie Chang (2011)

Education: University of Vermont, Environmental Science, Minor in Geospatial Technologies (2008)

Current Job: I work as a Lab Technician for Vermont EPSCoR Center for Workforce Development and Diversity at St Michaels College. This is an NSF funded, multi-institution program which supports climate change research, collaboration, and outreach in Vermont. Half of the job is assisting in educating high school students in stream sampling techniques and research. The other half is supporting university level research taking place in the Lake Champlain Basin and within the Lake itself, including coordinating a project with automated water samplers. This also includes supervising laboratory operations and producing and helping to manage high quality data. In the summer, I train and mentor undergraduate research interns in the field and in the lab.

Did AREMP help you get your current position or send you on a new career

trajectory? I already knew that an environmental career was in my future, participating in AREMP helped solidify this. I came from a background of stream monitoring in New England, therefore it was extremely interesting and eye opening to witness the larger, wilder rivers of the west. Although I remain in the field of water quality, I have considered a new career in surveying thanks to measuring channel morphology at AREMP with the Total Station. Above all, I believe that AREMP helped boost my self-esteem and confidence through the positive support of the entire team.



Katie collecting water quality samples in Vermont.



Patrick Donworth (2012)

Education: Brandeis University, Environmental Studies and History (2012)

Current Job: I currently work as a Teaching and Program Assistant for CIEE Sustainability and the Environment, in Costa Rica.

Did AREMP help you get your current position or send you on a new career trajectory? My experience with AREMP has helped me get this and other positions.

Patrick searches for terrestrial amphibians in moss and rocks on the stream bank while working for AREMP.

Rachel Hanauer (2007)

Education: University of Florida, BS Environmental Science (2009)
Indiana University, PhD program in Ecological and Evolutionary Biology (expected 2016)

Current Job: PhD Candidate, IU Department of Biology

Did AREMP help you get your current position or send you on a new career trajectory? Before my summer with AREMP, I wasn't sure what type of environmental science I was most interested in. Working for AREMP convinced me that I should be a field biologist. And that's what I do now, at least for one field season each year! Our AREMP stints helped toughen me up for subsequent field seasons where I was a pro at camping on the side of the road, having no cell signal, wading across streams, and crashing down steep hillsides. AREMP is still the best job I've ever had; where else does a biologist get 6 days off every other week?



Rachel holds a Motmot while conducting field work for her PhD program.

Previous SCA Interns—Where are they now?



Ian conducts an amphibian survey while working for AREMP.

Ian Higgins (2010)

Education: Warren Wilson College (2012)

Current Job: Seasonal Botany Technician for the National Park Service in Tucson, Arizona and a Hydrology Technician for the US Forest Service in Cedar City, Utah

Did AREMP help you get your current position or send you on a new career trajectory? The experience helped get my current positions. Now I am looking for jobs and a possible Pathways position with Dixie National Forest.

Tyler Krug (2005)

Education: Northern Michigan University, Physical Geography (2004)
University of Maryland, Masters in Environmental Management

Current Job: Regulatory Project Manager for the US Army Corps of Engineers in the North Bend Field Office. I conduct Clean Water Act and Rivers & Harbors Act permit evaluations on a multitude of projects occurring in southwestern Oregon. I work with private, state and federal entities to reduce aquatic resource impacts through avoidance and minimization techniques.

Did AREMP help you get your current position or send you on a new career trajectory? Having federal experience through AREMP (four summers) helped launch me into a full time position with the Army Corps in Buffalo, NY. I went back and got my Master's while I was there and then applied and was selected for this job back out in Oregon. AREMP is a great starter job for field biologists/land surveyors. Some of us that worked there back in the day look back on how awesome it was we got to see parts of the Pacific Northwest not too many have seen.



Tyler and former intern Emily Lang collect bug samples while working for AREMP in 2006.



Rose conducting stream surveys.

Rosemary Pazdral (2010)

Education: Brandeis University, Environmental Studies (2012)

Current Job: Ecological Information Specialist at Northwest Habitat Institute

Did AREMP help you get your current position or send you on a new career trajectory? My three field seasons with AREMP were hugely influential in my ambitions to join the environmental community. It was my first exposure to field work. I started with AREMP as a Student Conservation Association Intern, spent my second year on a satellite project as a fisheries technician, and transitioned back to watershed monitoring as a biological technician for my third season. Every summer I gained new skills and knowledge, and was always surrounded by competent, hard working, and fun people. My favorite part about working at AREMP was our regional scope and the ability, if not the excuse, to explore the most untraveled, pristine sites in the Pacific Northwest. My experience at AREMP added to my appreciation for the Pacific Northwest landscape, and reinforced my commitment to studying and working in the natural world.

Previous SCA Interns—Where are they now?



Julie enjoys a sunny day hiking in California.

Julie Riggo (2010)

Education: Grand Valley State University, BS in Natural Resources Management (2010) and University of Michigan, MS in Natural Resources and Environment (2013)

Current Job: Currently I am employed full time as a Live Nursery Specialist in Chino Hills, CA.

Did AREMP help you get your current position or send you on a new career trajectory? AREMP did not help me get my current position but has definitely been a staple on my resume since 2010. I took the Nursery specialist position in Southern California so that I could move from Michigan to get a job in the field of water resource policy/management here. My experience from AREMP has been invaluable in interviews so far and hopefully I will land the job I am hoping for soon. I am so thankful for the AREMP experience and still reference it all the time!

Karen Villatoro (2012)

Education: Texas A&M, Environmental Geosciences (2010)

Current Job: Student/Bartender

Did AREMP help you get your current position or send you on a new career trajectory? I decided after working with AREMP that I needed more technical experience and that I loved the environmental science field even more than ever. I am completing a certificate in environmental technology at the local community college. I will be done with the certificate Summer of 2014. The skills and knowledge that I gained with AREMP has been invaluable and the experience unforgettable.



Karen looks over the Grand Canyon.



Ethan backpacking in the Pacific Northwest in 2012.

Ethan Rubenstein (2012)

Education: Ithaca College, BA Environmental Studies (2012)

Current Job: I'm currently with the Americorps program, MassLIFT (Land Initiative For Tomorrow). Serving as the Land Stewardship Coordinator with the Buzzards Bay Coalition, a non-profit in Massachusetts. I'm helping manage fee properties and monitor properties under conservation restrictions. Other duties include creating baseline documentation for newly acquired conservation restrictions and coordinating stewardship tasks such as trail construction and invasive species management.

Did AREMP help you get your current position or send you on a new career trajectory? AREMP certainly helped with the landing of my current position. Things such as working with GPS in the field, calibrating equipment, coordinating field duties and general field work experience helped with my resume and skills required to land my current position. After working with AREMP via the SCA I pursued an opportunity with a non-profit, the New England Forestry Foundation (NEFF), to explore the non-profit side of the conservation world. The skills I learned with NEFF were also quite valuable to helping me land my current position. Working with AREMP helped solidify my decision to work in conservation. It wasn't my first field work experience, but was my first with such a large scale operation and long term impact. It helped launch me on a trajectory that consisted of several short term positions that got me to where I am now.

Previous SCA Interns—Where are they now?

Eli Tome (2012)

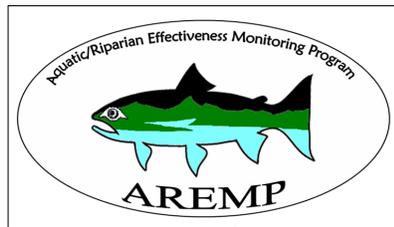
Education: Bloomsburg University of Pennsylvania (2013)

Current Job: Student at University of Oregon, MS Community and Regional Planning with a focus on Environmental Planning and Policy (expected to graduate 2015)

Did AREMP help you get your current position or send you on a new career trajectory? AREMP helped me get an internship doing field work with the Chesapeake Bay Foundation in Harrisburg, Pennsylvania last summer through the knowledge and experience I gained in the field. AREMP also helped me get in to grad school I'm sure by showing I had real-world experience. AREMP was also the most fun job I've had and I miss it every day. I hope to get a job after graduate school doing more stream morphology research. This summer I'm hoping to work with a professor at the UO doing stream research on the John Day. I'm considering taking up a second masters in Environmental Studies with a focus on Stream Morphology.



Eli collecting stream channel morphology data.



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<http://www.reo.gov/monitoring/watershed-overview.shtml>

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