



Position Description Sierra Nevada AmeriCorps Partnership

Sierra Streams Institute – Nevada City, CA	
Position Title:	Type:
River Scientist	<input checked="" type="checkbox"/> Full Term <input type="checkbox"/> Half Term

Organizational Background: Sierra Streams Institute is a watershed science organization based in Nevada City, California, dedicated to increasing watershed stewardship capacity throughout the Sierra Nevada region and beyond. Founded in 1996 as Friends of Deer Creek, SSI has grown to become an important voice in the regional scientific community. We work with local, state, and federal agencies as well as universities and community groups to find solutions to the problems that afflict Deer Creek and other watersheds (Yuba, Bear) throughout the region that share the challenges resulting from a century and a half of gold mining, development, and agriculture. SSI's emphasis on rigorous science, data collection and community engagement provides the basis for restoration decisions that are made on behalf of Sierra watersheds, and makes us a valuable partner of local and state government agencies. Current active projects include monthly water quality monitoring in the Deer Creek and Bear River watersheds, forest health projects on both federal and private lands focusing on reducing high-severity fire likelihood while boosting general climate change resilience, vegetative restoration utilizing both native planting and process-based restoration techniques, mine waste remediation, studies on the impacts of mine waste on human health, and education programs focused on building forest health literacy in youth and private landowners.

Number of Member Positions at this Site: 1

Site Supervisor's Name(s) and Title(s):

- Jeff Lauder, Ecologist and Interim Executive Director

Position Description: The River Scientist will work with staff scientists and community scientist volunteers and interns on projects throughout the Deer Creek and surrounding watersheds. The goal of this position is for the River Scientist to guide a season of water quality monitoring while focusing on one particular research question of their choice within the context of identifying restoration sites based on site resilience to various stressors. The project should result in one scientific journal article for submission for publication and dissemination to the community. The specific field of study is

flexible, but will primarily focus on water quality, ecological, climate, and/or land use data, affording the opportunity for training in each of these fields, including accessing data using tools such as google earth engine.

The River Scientist will oversee monthly water quality monitoring, macroinvertebrate and algae collection, annual habitat assessments, and other ecological surveys with guidance from the Water Quality Lab Manager, and will also take the lead on: identifying macroinvertebrates and assisting community scientists in the lab; using chemical, biological, and physical data as indicators of health and restoration success; processing water quality, nutrient, bacteria, and/or algae samples; developing maps of monitoring and restoration sites using GIS, using GIS to analyze spatial data, and using GIS to make maps for outreach and presentations; data entry, data and statistical analysis of various datasets, report writing; monitoring the results of restoration projects; presenting research results to community members and the public in both local and regional conference venues; conducting outreach to citizen scientists, recruiting and supporting citizen scientists; participating in recruiting and organizing stakeholders and volunteers to participate in watershed monitoring and restoration projects; help organize the Sierra College Science Speaker series. The River Scientist will also have the opportunity to assist on other watershed restoration and assessment projects, should time allow, such as forest health assessments, vegetative restoration, and monitoring restoration success.

Site-Specific Training Provided: The River Scientist will have opportunities for training in volunteer coordination and community science, statistical analysis, data science, and data presentation and interpretation within the R statistical programming environment. They will receive training and guidance in research project development including: question development, data review and management, and report writing, as well as data dissemination via public lectures, conferences, and article publication.

Things to Note:

Required Qualifications:

- College degree with a focus and interest in biology, ecology, hydrology, geology, chemistry, environmental science or a related field.
- Ability to work independently, with other staff, and a diverse group of volunteers and interns.
- Strong written and oral communication skills; strong computer and organizational skills.
- Knowledge of the scientific method, strong data and statistical analysis skills.
- Ability to hike through creeks and vegetation (occasionally poison oak or Himalayan blackberry) and be on your feet for up to 10 hours a day to perform monitoring and habitat assessments. Ability to carry monitoring equipment that weighs up to 50 lbs.
- Ability to work in the office sitting at a computer station, or in the lab sitting and/or standing to process samples and/or working at a microscope, for up to 8 hours a day.
- Willingness to occasionally work early in the morning (before 6:00A.M.), in the evening (after 6:00P.M.), and on weekends to complete monitoring and assessment projects.
- Ability to drive for up to 8 hours a day to access monitoring sites and required trainings across the Sierra Nevada.

Desired Qualifications:

- Experience using data analysis and statistical software packages (R, SPSS, JMP, Sigma Plot, PCORD, Minitab, etc) and ArcGIS software.
- Experience performing habitat assessments and ecological surveys, conducting water quality

monitoring, and processing samples in a lab.

- Experience leading groups in the field and/or teaching in a classroom or field setting.
- Experience with on-the-ground restoration projects that involve the local community.
- Access to a personal vehicle

WORK HOURS		
8-hour days	10-hour days	10+ hour days
89%	10%	1%
Housing Offered through Site: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Vehicle provided for Placement Site work: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

TYPE OF WORK							
Field Work <i>(field surveys, planting, invasive pulls, maintenance, etc.)</i>	Office Work <i>(lab analysis, data entry, GIS, writing, etc.)</i>	Travel <i>(travel to field work and project Sites)</i>	Restoration and Assessment <i>(water quality monitoring, habitat restoration, fish surveys, etc.)</i>	Education <i>(teaching, citizen science, etc.)</i>	Volunteer Recruitment & Management	Member Training <i>(Site-specific training, conferences, and development opportunities)</i>	Other <i>(gear and equipment maintenance, outreach, etc.)</i>
15%	30%	5%	25%	2.5%	10%	10%	2.5%