



Position Description

Sierra Nevada AmeriCorps Partnership

Position descriptions are used by the SNAP Program to recruit members. Please complete the following form and submit it with your Host Site Application or Reapplication. If you are applying to host more than one member you will need to submit a separate position description for each position you are applying for unless the positions are exactly the same and will have the same service plan. Please keep this document to one and a half pages or less.

Position Title: *River Monitoring Coordinator*
Host Site: *South Yuba River Citizens League*
Site Supervisor: *Rachel Hutchinson, River Science Director*
Contact: *rachel@syrcl.org 530.265.5961 ext 205*

Position Location:

SYRCL's office is in Nevada City, CA – a lovely town and community in the Sierra foothills. Historic Nevada City is regarded as a cultural, artistic and environmental hub within the Sierra Nevada Range. Once the epicenter of the California Gold Rush, Nevada City—in proximity to the South Yuba River -- is undergoing a multi-decade renaissance as a model community pursuing ecological and economical sustainability through innovative green enterprises, neo-agrarian renewal and watershed restoration. All of our work is conducted in the beautiful and inspiring Yuba Watershed.

Organization Description:

SYRCL is the leading voice for the protection and restoration of the Yuba River and greater Yuba Watershed. Founded in 1983 through a rural, grassroots campaign to defend the South Yuba River from proposed hydropower dams, SYRCL has developed into a vibrant community organization with over 3,500 members and volunteers based in Nevada City.

Since achieving Wild and Scenic status for the South Yuba River in 1999, SYRCL has developed a variety of successful programs for inspiring environmental activism and supporting responsible watershed stewardship. These range from the Wild and Scenic Film Festival to a River Science Program with a large citizen component and strong standing in collaborative forums. Most recently, SYRCL launched the River Ambassadors Program, a volunteer-based initiative to reach out to Yuba River users about to keep the river clean, safe and healthy. River Ambassadors is a response to the uncertain future of management of the State Parks lands along the South Yuba River, and a request from State Parks to be supported by SYRCL's pool of volunteers. SYRCL is also involved in a variety of watershed restoration and protection initiatives.

SYRCL is the leading regional advocate for creating resilient human and natural communities throughout the greater Yuba River basin by restoring creeks and rivers, restoring wild salmon populations, and inspiring and organizing people – from the Yuba's source, to the sea.

Program Description:

SYRCL's River Science Program informs priority issues and restoration opportunities through extensive monitoring, analysis of conditions and trends, and collaborative watershed assessment. The program includes an increasing number of restoration projects that require monitoring and assessment. SYRCL's citizen-based River Monitoring program utilizes over 70 volunteers to collect water quality data on a monthly basis at more than 30 sites throughout the 1,300 square mile watershed. The program also monitors water quality conditions for mine impacted streams and meadow restoration projects. Program volunteers are trained in the identification of sensitive and invasive species, bioassessment, photo documentation, temperature logger deployment, and meadows health assessment. In 2010, the publication of the on-line Yuba River Watershed Information System (www.yubashed.org) created a repository for River Monitoring data and a platform for watershed assessment.

Position Description:

The River Monitoring Coordinator will provide leadership and the primary coordinating capacity for SYRCL's renowned water quality monitoring program. The coordinator will participate in a range of data gathering activities with SYRCL's River Science Program, and take primary responsibility for certain monitoring and reporting tasks, including the coordination of and training of volunteers. The River Monitoring Coordinator will work closely with the River Science Director to implement SYRCL's River Monitoring Plan and to ensure quality of data. The River Monitoring Coordinator will also assist the River Science staff with pre- and post- restoration project monitoring. The River Monitoring Coordinator will work with SYRCL's River Monitoring Plan to collect new data in order to resolve issues around mine land streams, pollution concerns in the Yuba, restoration, dam affected reaches, fish habitat requirements, in addition to bacteria, nutrients and algae. The River Monitoring Coordinator will also provide outreach and education at community events and for school groups.

Required Qualifications:

A successful River Monitoring Coordinator should have the following qualifications:

- Bachelor's degree in physical or biological sciences with coursework in watershed sciences, aquatic ecology, or related subjects and/or equivalent experience
- Strong interpersonal skills and experience organizing and motivating people
- Good written and verbal communication skills
- Good leadership and team skills
- Ability to multi-task and prioritize
- Organized and attention to detail, especially when assembling materials and equipment for field work
- Experience in biological fieldwork and willingness to work outdoors in strenuous physical activity under diverse weather conditions, such as hiking with equipment, work during high temperatures for up to 8 hours
- Willingness to do office work, data entry and analysis
- Available to work occasional weekends and evenings

- Comfortable in water and river environments
- Valid driver's license
- Personal vehicle available for work assignments with reimbursement

Desired Qualifications:

Additional skills and experiences are:

- Concentrated experience working in west slope Sierra rivers, mountain meadows, or floodplains and wetlands
- River monitoring equipment management and maintenance skills
- Scientific study design, monitoring, and analysis skills
- Experience with flow monitoring and discharge relationships
- Knowledge of terrestrial and aquatic invasive and sensitive native species
- Basic GIS skills
- Demonstrated experience teaching science content

Additional Benefits:

- Participation in the 13th Annual Wild and Scenic Environmental Film Festival
- Rafting tours of the lower Yuba River with training as a Salmon Naturalist
- Networking among hundreds of community organizers and environmental professionals.

Website: www.yubariver.org; www.yubashed.org



Member Service Plan Sierra Nevada AmeriCorps Partnership

Service plans lay the framework for what each member will be doing during their service. Service plans detail the major projects and expected results each member will have. Members review these service plans during the application process to find the position that most closely matches their experience as well as their career goals and professional development needs. SNAP staff understands that service projects will change based on funding availability, staffing, etc. If Host Sites make major changes to their service plans they must contact their Regional Coordinator to discuss what impacts the changes will have on the Members outputs and results. Sites must also consult with their Member about these changes to ensure that members are still receiving the training and hands on experience that was originally included in the Service Plan which the member agreed to. Please complete the following form and submit it with your Host Site Application or Reapplication. If you are applying to host more than one member you will need to submit a separate Service Plan for each Position you are applying for unless the positions are exactly the same.

<p>Host Site: South Yuba River Citizens League (SYRCL) Position Title: Monitoring Coordinator Designated Site Supervisor: Rachel Hutchinson, River Science Director Term of Service: Mid October 2016- Mid September 2017</p>

Organizational Background: The South Yuba River Citizens League (SYRCL) works to protect and restore the Yuba River and the Greater Yuba Watershed through community participation, education, and collaborative approaches to watershed management and restoration. The organization's mission states, "*SYRCL unites the community to protect and restore the Yuba River. Motivated by our love for this watershed, we advocate powerfully, engage in active stewardship, educate the public, and inspire activism from the Sierra to the sea.*" Its River Science Program informs priority issues and restoration opportunities through extensive monitoring and collaborative watershed assessment. SYRCL's citizen-based River Monitoring program began in 1999 and utilizes over 70 volunteers to collect water quality data on a monthly basis at more than 30 sites throughout the watershed. Volunteers are also trained for participation in bioassessment, photo documentation, bacteria sampling, and meadows health assessment. In 2010, the publication of the on-line Yuba River Watershed Information System (www.yubashed.org) created a repository for River Monitoring data and a platform for greater citizen engagement with and collaborative watershed assessment. The River Monitoring Program is considered the heart and core of SYRCL's River Science program, and continues even while an increasing number of restoration projects and more sophisticated assessments are now being conducted.

- Building upon 13 years of baseline data collected by our trained volunteer River Monitors, SYRCL implemented a new, targeted River Monitoring Plan in 2015 throughout the Yuba watershed. The new Plan concentrates on assessing threats and impacts from gold mining; impacts to headwater area streams and meadows; impacts from dams and diversions; and contamination in the form of bacteria and unhealthy algal blooms. SYRCL will use the Monitoring Program data to educate the community about the health of the watershed and implement actions to protect and restore it.

SYRCL's 2012-2015 Strategic Plan commits us to implementing a new Monitoring Plan that builds on the strengths of this large body of data to "detect threats and impacts to the Yuba River and tributaries", and to "demand corrective action or protection measures." As a result, SYRCL partnered with the Sierra Fund and Chico State University Department of Environmental Studies, to thoroughly analyze the past 12 years of monitoring data and to outline a targeted approach to site selection and data collection. The resulting Monitoring Plan details how SYRCL will collect new data with the goal of using it to design real and effective remediation projects to fix identified problems in four major areas of impact:

1. **Mine land streams:** The tributaries of the Sacramento River are the source of 80% or more of total mercury flowing into the Bay-Delta, much of it from abandoned mines in the Yuba Watershed. We have already begun to monitor and assess water quality in run-off from abandoned mines and identify remediation actions. We have also received a grant from the Rose Foundation to begin monitoring to protect against newly proposed mines in the watershed. Additional resources will allow us to purchase the specialized assessment equipment and expend the level of effort necessary to rank pollution sources and developing feasible and scientifically defensible remediation plans.
2. **Dam affected reaches:** Dams and diversions throughout the watershed are largely the result of old mining infrastructure and they continue to impact streams and rivers through unnaturally low or variable flows. SYRCL has led the conservation interests in the relicensing of Yuba dam projects with the Federal Energy Regulatory Commission and our new Monitoring Plan directs targeted monitoring which will inform processes to effectively bring about protection and restoration through state and federal regulations.
3. **Development Impacts in the Upper South Yuba River Watershed:** The upper South Yuba River is a sensitive high-elevation environment with multiple sources of potential impact on water quality and habitat including impacts from Interstate 80, ski resorts, the transcontinental railroad, the trans-Sierra Nevada Fuel Pipeline, and discharge from a wastewater treatment facility. Any impacts or changes to the headwaters area can have effects on the entire South Yuba River, and yet the upper Yuba River is not receiving adequate protection.
4. **Bacterial Contamination of Recreational Waters:** Due to the impacts described above and other uses including run-off from dispersed agricultural activities, unhealthy algal blooms and bacterial contamination are an increasing threat to the quality of recreation, habitat and water resources of the Yuba. The Monitoring Plan directs SYRCL to work closely with the Regional Water Quality Control Board, academic institutions and other groups to carry out targeted monitoring to assess complex ecological conditions, and to apply what is learned to simple and effective programs for protection and restoration.
5. **Nutrient and Chemical Run-off:** Nutrient and chemical inputs from a variety of anthropogenic sources may be contributing to water quality issues, including algal blooms, low oxygen levels and toxicity. The desired outcomes of this area of investigation are to determine the source, frequency, and distribution of nutrient and chemical concerns in our watershed and to use that information to support direct actions by SYRCL to protect the river from nutrient and chemical

sources that degrade water quality. If nutrients and chemicals are found to be persistent, data will be shared with the SWRCB for the purposes of determining 303(d) listing under the Clean Water Act.

- 6. Invasive and Sensitive Species:** The spread of invasive species and the decline of sensitive species in the Yuba River watershed are occurring with rate and patterns that are not known, and without an understanding of these changing conditions, we are will not be able to effectively protect and restore watershed health.

Additional Monitoring and Assessment Goals for SYRCL in 2016-2017:

- Continue baseline water quality monitoring throughout the Yuba River watershed
- Provide solid training and quality assurance to volunteers and data collection efforts
- Implement an additional year of continuous temperature monitoring (thermographs) as a means of assessing potential salmon habitat in the upper watershed
- Collect baseline data on hydrology (stream gages) and Foothill Yellow Legged Frogs in two creeks that would be impacted by proposed mine re-openings
- Test for metals and sediment contamination in mine impacted streams
- Test for nutrient contamination due to dispersed agricultural activities in the riparian corridor
- Evaluate the relationship between nutrients, pH, dissolved oxygen, temperature, flow and periphyton at intensive study sites
- Update and maintain data and documents in the Yuba River Watershed Information System, at www.YubaShed.org.
- Compile a report that examines 2016 River Monitoring Data for compliance with the state-approved Quality Assurance Project Plan
- Report the results of SYRCLs River Monitoring program in a variety of educational forums
- Collaborate with the Restoration Coordinator on data collected for the Invasive/Sensitive Species Program – mapping, monitoring, eradication, and/or conservation
- Conduct monitoring at project sites and assist with restoration project monitoring at Hammon Bar planting site and meadow restoration sites
- Assess the health of candidate sites for meadow restoration and invasive weed removal

Member Service Plan Overview and Outcomes: The Monitoring Coordinator will participate in the full range of data gathering activities of SYRCL's River Science Program and will take primary responsibility for certain monitoring and reporting tasks. The Monitoring Coordinator will work closely with the River Science Program Director on monitoring plans to ensure quality of data. They will also work with the River Science staff to assist with pre- and post- restoration project monitoring. The Monitoring Coordinator will work with the Science Team (including Board of Directors) to prepare data for inclusion in assessment reports and educational displays.

Service Position Major Projects:

1. Watershed Restoration and Assessment:

- a. Priority Project:** Water Quality Monitoring; *Includes training from the previous AmeriCorps member followed by data analysis and reporting for year 2016 and assisting with the planning, coordination, and implementation of Monitoring Plan for 2016-2017. Storm event sampling over the winter months will provide excellent*

experience in monitoring during various conditions. Monthly monitoring of parameters include pH, air and water temperature, conductivity, turbidity, dissolved oxygen content, and metals. In addition, water quality monitoring includes several site visits to sample algae and bacteria. Temperature loggers are deployed at key sites throughout the watershed in the spring.

- i. Projected Hours:** 410 hours
- ii. Total Estimated Outcome:** 1300 sq. mi. assessed

b. Priority Project: *Invasive/Sensitive Species Watch; Recruit and train volunteers for documenting of invasive and sensitive species in the Yuba Watershed.*

- i. Projected Hours:** 80 hours
- ii. Total Estimated Outcome:** 1300 sq. mi. assessed

c. Priority Project: *Foothill Yellow-Legged Frog Survey; coordinate and conduct surveys of Foothill Yellow-Legged frogs, tadpoles, and egg masses in the spring and fall.*

- i. Projected Hours:** 60 hours
- ii. Total Estimated Outcome:** 0 acres

d. Priority Project: *Maintain stream gages; Take discharge measurements and ensure gage performance for creeks that are impacted from legacy mining and would be impacted from proposed upstream mining.*

- i. Projected Hours:** 100 hours
- ii. Total Estimated Outcome:** 0 acres

e. Priority Project: *Willow/Cottonwood Monitoring; Conduct quarterly monitoring of a 5 acre area on the lower Yuba River, Hammon Bar. Monitoring includes looking at canopy cover, woody debris accumulation, fine sediment deposition, and overall vegetation vigor of 3 native willow species.*

- i. Projected Hours:** 20 hours
- ii. Total Estimated Outcome:** 5 acres assessed

f. Priority Project: *Mapping; Use Google Earth Pro and ArcGIS to maintain up to date spatial database for monitoring and restoration sites. Create tours of the Yuba River watershed highlighting sites, conditions and projects. Work with interns from Sierra College to produce various maps and products supporting the River Science Program.*

- i. Projected Hours:** 40 hours
- ii. Estimated Outcome:** 0.2 acre assessed

g. Priority Project: *Outreach; Represent SYRCL at events, setting up a booth, promoting programs, educating the public about the Yuba River watershed and procurement of donations for the RM Program in 2016-2017. Includes assistance in coordinating and direct participation in restoration and stewardship projects.*

- i. Projected Hours:** 20 hours

ii. **Estimated Outcome:** 0 acres

Watershed Restoration and Assessment Totals:

1. **Total Projected Hours:** 730 hours
2. **Total Estimated Outcome:** 1300 acres assessed

2. Watershed Education and Outreach

- a. **Priority Project:** Water Quality Monitoring; *Prepare and deliver at least one intensive 8 hour training for incoming River Monitors and an intensive 8 hour training about the theory which includes training from the previous AmeriCorps member followed by data analysis and reporting for year 2016 and assisting with the coordination of Monitoring Plan (see above 1.a.).*
 - i. **Projected Hours:** 120 hours
 - ii. **Estimated Outcomes:** (Complete one of the following for this project)
 1. **Presentations:** (Presentations and/or Service Learning projects of at least 30 minutes in which the member will be able to query participants with a pre and post -test): 15 people
 2. **Outreach:** (Educational Outreach in which members will be able to ask participants if the outreach conducted increased their level of understanding): 50 people

- b. **Priority Project:** Invasive/Sensitive Species Watch (see above 1.b.).
 - i. **Projected Hours:** 80 hours
 - ii. **Estimated Outcomes:**
 1. **Presentations:** (Presentations and/or Service Learning projects of at least 30 minutes in which the member will be able to query participants with a pre and post-test): 20 people
 2. **Outreach:** (Educational Outreach in which members will be able to ask participants if the outreach conducted increased their level of understanding): 50 people

- c. **Priority Project:** Salmon Tours; *Become trained as a salmon naturalist and provide education to school kids and public participating in Salmon Tours of the lower Yuba River in October and November. Includes tours of Hammon Bar Riparian Enhancement site.*
 - i. **Projected Hours:** 80 hours
 - ii. **Estimated Outcomes:**
 1. **Presentations:** (Presentations and/or Service Learning projects of at least 30 minutes in which the member will be able to query participants with a pre and post-test): 35 people
 2. **Outreach:** (Educational Outreach in which members will be able to ask participants if the outreach conducted increased their level of understanding): 100 people

- e. **Priority Project:** Outreach; *Represent SYRCL at events, setting up a booth, promoting programs, educating the public about the Yuba River watershed and procurement of donations for the RM Program, 2016-2017 (see above 1.e.)*
 - i. **Projected Hours:** 200 hours
 - ii. **Estimated Outcomes:**
 - 1. **Presentations:** (Presentations and/or Service Learning projects of at least 30 minutes in which the member will be able to query participants with a pre and post-test): 0 people
 - 2. **Outreach:** (Educational Outreach in which members will be able to ask participants if the outreach conducted increased their level of understanding): 50 people

Watershed Education Totals:

Total Projected Hours: 480 hours

Total Estimated Outcomes:

- 1. **Presentations:** 70 people
- 2. **Outreach:** 300 people

3. Volunteer Recruitment and Support:

- a. **Priority Project:** Water Quality Monitoring; *Includes training from the previous AmeriCorps member followed by data analysis and reporting for year 2016 and assisting with the coordination of Monitoring Plan (see above 1.a.).*
 - i. **Projected Hours:** 100 hours
 - ii. **Estimated Outcomes:**
 - 1. **Number of Volunteers Recruited:** 80 volunteers
 - 2. **Total # of Hours Served by Volunteers:** 2000 hours

- b. **Priority Project:** Invasive/Sensitive Species Watch (see above 1.b.).
 - i. **Projected Hours:** 48 hours
 - ii. **Estimated Outcomes:**
 - 1. **Number of Volunteers Recruited:** 80 volunteers (same as 3a)
 - 2. **Total # of Hours Served by Volunteers:** 800 hours

- c. **Priority Project:** Mapping; *Use Google Earth Pro and ArcGIS to maintain up to date spatial database for monitoring and restoration sites (see above 1.d.).*
 - i. **Projected Hours:** 20 hours
 - ii. **Estimated Outcomes:** (Complete one of the following for this project)
 - 1. **Number of Volunteers Recruited:** 2 volunteers
 - 2. **Total # of Hours Served by Volunteers:** 50 hours

- d. **Priority Project:** Outreach; *Represent SYRCL at events, setting up a booth, promoting programs, educating the public about the Yuba River watershed and procurement of donations for the RM Program, 2016 (see above 1.e.)*
 - i. **Projected Hours:** 10 hours

ii. Estimated Outcomes:

- 1. Number of Volunteers Recruited:** 5 volunteers
- 2. Total # of Hours Served by Volunteers:** 25 hours

Volunteer Recruitment and Support Totals:

Total Projected Hours: 178 hours

Total Estimated Outcomes:

- 1. Number of Volunteers Recruited:** 87 volunteers
- 2. Total # of Hours Served by Volunteers:** 2,875 hours

4. Resource Attainment: (Please note that members can complete no more than 170 hours of Resource Attainment Activities. Resource Attainment activities must raise money that goes directly to member service projects. Members may NOT raise general funds, write federal grants, or write grants to cover your site's cash match.)

a. Priority Project: *Research, identify and apply for resources to support river monitoring program supplies within the current year's activities*

i. Projected Hours: 86 hours

ii. Estimated Outcomes:

- 1. Number of Donations (Grants, Services, Goods, etc):** 10 donations
- 2. Dollar Amount of Donation:** \$3000

Resource Attainment Totals:

Total Projected Hours: 86 hours

Total Estimated Outcomes:

- 1. Number of Donations:** 10 donations
- 2. Dollar Amount of Donation:** \$3000

5. Member Training and Development: (Please note that members can complete no more than 240 hours of training.)

a. SNAP Specific Trainings: Required SNAP Member Orientation, Spring Training and Service Projects, Fall Training and Sierra Nevada Alliance Annual Conference, and Graduation

i. Projected Hours: 130 Hours

b. Site Specific Orientation: *AmeriCorps member will be oriented on the following:*

- Overview of SYRCL's Citizen Monitoring Programs, bioassessment methods, hydrologic monitoring and standard water quality monitoring and associated databases
- Watershed Issues
- YubaShed.org website and collected data on it
- SYRCL's salmon campaign

i. Projected Hours: 20 Hours

c. Site Specific Training:

- River monitoring procedures
- Quality Assurance Project Program
- River monitoring sites and locations
- Strategies for working with Citizen Volunteers
- Equipment Storage and Maintenance
- Data Management, Report Generation, and Analysis using Microsoft Access and Excel
- Bioassessment Procedures
- Bacteria Sampling Protocols
- Metals Sampling Protocols
- Discharge Sampling Protocols
- Invasive and sensitive native species of the region
- Temperature Logger and Deployment Instructions
- Meadows Assessment Overview
- Storm event Sampling Protocols
- Web-based information systems and GIS
- Restoration Project Training

i. Projected Hours: 76 Hours

Member Training and Development Totals:

Total Projected Hours: 226

Total Hours: 1700

Percentage Totals:

Watershed Restoration and Assessment: 43% (730 hours)

Watershed Education and Outreach: 28% (480 hours)

Volunteer Recruitment and Support: 10% (178 hours)

Resource Attainment: 5% (86 hours)

Member Training and Development: 14% (226 hours)