



**Guadalupe-Coyote
Resource Conservation District (GCRCD)**
An independent special district of the State of California

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Community Grant Application

This document has been provided in Microsoft Word format to facilitate applicant use, but may be converted to a .pdf document for submittal purposes. Please complete all lines; if something doesn't apply, enter "N/A". Handwritten applications are acceptable. In compliance with the Americans with Disabilities Act (ADA), please contact the District at gcrcd@gcrcd.org if you would like to request assistance or accommodations to complete the application.

Section A: Application Information

Project Name: Stevens Creek Water Quality Monitoring Project

Applicant (Legal Name of Organization): Grassroots Ecology

Website: www.grassrootsecology.org

Federal EIN: 81-3707643

Street Address: _____
3921 E. Bayshore Rd. Palo Alto, CA 94303

Mailing Address: _____
same as above

Grant Contact:

Name/Preferred Pronouns: Junko Bryant (she, her, hers)

Title: Assistant Director

Email: junko@grassrootsecology.org

Phone: (650) 419-9880

Purpose of Grant: To conduct monthly water quality monitoring at 7 Stevens Creek sites while involving and educating local student volunteers in watershed stewardship; and to share findings with the public locally as well as statewide through the California Environmental Data Exchange Network (CEDEN).

Beginning and Ending Project Dates: July 1, 2021 to June 30, 2022

Grant Amount Requested: \$ 5,000

Total Project Cost: \$ 12,775

Section B: Project Description

Please enter answers under each question. For purposes of this application, the term “project” refers to either a program or project. These answers will help inform reviewer assessment of the application. The Community Grant Policy and the Community Grant Application Review scoring sheet are available for viewing on the [Community Grant Program](#) page.

1. Describe the proposed project, including goals, proposed methods and implementation strategies, and list measurable outcomes.

The project will conduct monthly water quality monitoring of 7 Stevens Creek sites while involving and educating student volunteers in watershed stewardship. Findings will be integrated into a longitudinal data set for Stevens Creek starting in 2004, and shared with the public to inform local stream restoration, pollution prevention, and landscape resilience efforts.

Goals:

- Monitor the water quality of Stevens Creek
- Identify and alert local municipalities and community members to potential water quality issues and anomalies including illegal dumping.
- Build the skills, knowledge, and experience of diverse local students so that they continue to act as Community Scientists and Watershed Stewards
- Contribute data to regional and statewide watershed monitoring data repositories including the California Environmental Data Exchange Network (CEDEN)

Methods/implementation strategies:

- Grassroots Ecology staff provide training, education, shadowing, and supervision of student volunteers, preparing them to collect physical and chemical water quality data.
- Student volunteers use scientific equipment, including a turbidimeter and YSI probe, to track pH, temperature, specific conductance, dissolved oxygen, turbidity, and nitrates at 7 Stevens Creek sites on a monthly basis.
- Staff conduct pre-monitoring equipment calibration and maintenance as well as post-monitoring data management/quality control to ensure data reliability
- Grassroots Ecology staff share data with local municipalities, Valley Water, CEDEN (California Environmental Data Exchange Network), and the general public through our website, and incorporate relevant findings into our watershed education programs.

Measurable outcomes:

- 16 student volunteers receive training, education, and hands-on experience in water quality monitoring and creek science
- 7 Stevens Creek sites monitored for 5 water quality parameters
- 12 monthly data postings to Grassroots Ecology website/CEDEN database

2. Is this project a portion of a larger project? If so, please include a description of the larger project and how this component fits into it.

The project represents an integral piece of our Community Science program, which engages the community to steward 5 watersheds of the San Francisco Peninsula and South Bay through regular monitoring of water chemistry data and benthic macroinvertebrate biodiversity. We have provided Community Science opportunities and watershed education along Stevens Creek since 2004, pausing all Community Science events for volunteer groups as of March 2020 due to COVID. In lieu of volunteer events, our primary method for collecting monthly water quality data is through our student volunteer programs.

Students who participate in this project will do so as part of a comprehensive 8 to 16-week internship focused on habitat restoration and natural resource conservation. Through hands-on education, field work, and individual projects, our student volunteers will develop their environmental science skills and knowledge as well as their budding identities as environmental stewards. The water quality monitoring component of the program presents a unique opportunity for students to participate in a longitudinal scientific study, contributing to a data set that goes back to 2004.

3. Will this grant be used to leverage funding for another grant or funding request? If yes, please explain.

We are constantly on the lookout for grant opportunities to support our Community Science and Internship programs for young adults. As grant funding for these types of programs is limited, in the absence of grants we must subsidize them using unrestricted funds from private donors. The proposed grant would be leveraged to satisfy matching fund requirements most grantors have so that we could raise more dedicated funding for the project.

4. Are there other organizations and/or partners participating in the project? If yes, please describe their role and level of participation.

Collaborating entities include:

- The Cities of Cupertino, Sunnyvale, Mountain View, and Los Altos who are supportive of our Habitat Restoration and Community Engagement/Education programs. We currently contract with the Cities of Cupertino and Los Altos to provide habitat restoration and community engagement and education programs at City parks and preserves, though contracts do not cover water quality monitoring.
- Valley Water, with whom we have an encroachment permit that allows us access to creek monitoring sites.
- Two and four-year colleges including Foothill/DeAnza Community Colleges and Mission College, as well as local high schools, who we work with to recruit and support student volunteers

5. What is the need, problem, and/or opportunity to be addressed? Who else is addressing it?

In the heart of Silicon Valley, Stevens Creek provides habitat to a diversity of wildlife including birds, mammals, amphibians, insects, and fish—including the endangered steelhead trout. On its roughly 20-mile trip from the foothills to the bay, Stevens Creek flows through four major cities

including parks and open spaces, residential neighborhoods, major roads and highways, and global tech companies—draining nearly 30 square miles of wild and urban lands. Given its proximity to the urban/suburban environment, human impacts on water quality and creek health are many including:

- Non-point source pollutants like trash, pet waste, pesticides, and other chemical run-off from roads and residential areas
- Fish barriers, including a major dam at the Stevens Creek Reservoir
- Increased fine sediment loads in the water from decreasing spawning habitat for steelhead trout
- Anoxic water released from dam causing concern for toxic mercury bioaccumulation in wildlife
- Climate change impacts, which include increased frequency and severity of storm events, drought, and warming temperatures

The project uses a community-inclusive science based approach to monitor, understand, and reduce the ongoing negative human impacts on the Stevens Creek watershed. Though regional and county collaborative monitoring efforts have occurred for years in order to gain understanding of the health of the Bay and its contributing watersheds, they have occurred annually at most, missing fluctuations in water quality measures throughout the year and limiting how quick or targeted we can be in our response to water quality issues that arise.

To increase our understanding of watershed health trends and expedite our response to water quality issues, Grassroots Ecology collects monthly water quality data on local watersheds including Stevens Creek. In 2012 Grassroots Ecology (formerly the Acterra Stewardship Program) became the non-profit overseeing the Stevens and Permanente Creek Watershed Council, adopting the Council's established creek monitoring program into our Community Science programming and continuing to contribute to their data set going back to 2006—ultimately expanding this model to 5 local watersheds. We are the sole entity conducting regular water quality monitoring and watershed education on these watersheds.

6. How will the project provide a natural resource conservation benefit to the District and/or its constituents?

The data we collect will help guide local watershed improvement efforts, including where and how to target our habitat restoration projects and green stormwater infrastructure. Continuing to add to a long-ranging data set on water quality will also help our community examine the impacts of climate change on local watershed health over time, and plan/act accordingly to mitigate these impacts.

Water quality monitoring activities will be leveraged to provide local community college students with hands-on experience and skill building in natural resource management during a time when internships, field trips, and labs are especially scarce due to COVID; and develop/inspire new and diverse environmental stewards who are empowered to take care of our local ecosystems for future generations.

7. Which Area(s) of Strategic Focus in GCRCD's Long Range Plan will be served by this project?

Biodiversity, Water Quality, Climate Change, and Public Engagement

8. How will the project help the District meet its goals for the indicated Areas of Strategic Focus?

Goal: Promote **biodiversity** through the conservation and protection of natural habitats and ecosystems that provide a variety of ecosystem services including protection of water resources, maintenance of soil health, contributions to climate stability, and improved resiliency after natural disasters. *Strategies supported:*

- Provide education and technical assistance to watershed stakeholders to maintain healthy and sustainable native plant and wildlife populations
- Encourage the installation of green stormwater infrastructure and the maintenance of natural habitat areas within urban areas.
- Collaborate with regional partners to develop or improve wildlife linkages and corridors.

The project supports this goal by:

- Collecting and sharing water quality data that can be used to guide conservation and protection of local habitats and ecosystems in the Stevens Creek watershed
- Involving student volunteers in monitoring as one component of a comprehensive internship program in habitat restoration, native biodiversity preservation, and sustainable land management

Goal: Contribute to improvements in **water quality** available for the benefit of wildlife and aquatic habitat within District watersheds. *Strategies supported:*

- Encourage producers and communities to develop and implement practices that benefit soil and water resources.
- Collaborate with government entities (in our case, City governments), and other watershed stakeholders (e.g. local colleges and their students) to maintain and improve soil health to minimize erosion and sedimentation.

The project supports this goal by:

- Collecting and sharing water quality data that can be used to guide conservation and protection efforts for the benefit of wildlife and aquatic habitat within the Stevens Creek watershed
- Collaborating with local City governments, community colleges, universities, and individual students to collect and share data
- Building public awareness of human impacts on the Stevens Creek watershed and creek ecosystems including erosion, sedimentation, and pollution

Goal: Contribute to regional **climate change** efforts by raising public awareness of the need for individual action, while recognizing and addressing the differences in capacity of individual communities and populations to respond to requests for action. *Strategies supported:*

- Provide public outreach and education on the potential impact of climate change on local wildlife.

The project supports this goal by:

- Contributing to a longitudinal data set of water quality measures that can contribute to our understanding of climate change impacts on local creek and ecosystem health and opportunities to build climate resilience
- Providing education to college students on the potential impact of climate change on local wildlife and how these impacts can be measured and mitigated

Goal: Ensure the **public** is aware of the role watersheds play in maintaining a healthy and resilient community, and the personal importance of preserving healthy ecosystems. *Strategies supported:*

- Expand existing outreach and education programs to homeowner associations, community organizations, and educational institutions.
- Ensure programs and projects provide specific outreach to BIPOC communities and other traditionally-underserved populations

The project supports this goal by:

- Providing education and hands-on learning opportunities to diverse college students on the role watersheds play in maintaining a healthy and resilient community, and the importance of preserving healthy ecosystems.
- Expanding opportunities available to local students, with an emphasis on community colleges that serve a high percentage of BIPOC communities, first generation immigrants, and/or first generation college students. In fall 2020 we extended our College Internship program into the school year to increase accessibility to community college students, given that four-year college students home for the summer had previously comprised the majority of our college student volunteers. The program quickly filled to capacity, and nearly half of the 50 students who applied were first generation college students. Of those, we were able to offer fall internships to 16 students—9 of them first generation. The proposed grant would help us keep our internship program operating during the school year, thereby enhancing its availability to underserved students.
- Sharing what we learn with the public, and leveraging our findings for our various other Education and Community Engagement programs, including our Youth Stewards Program at McClellan Ranch Preserve in the upper Stevens Creek watershed, and free Naturalist Talks for the community, currently offered virtually.

9. What are the anticipated challenges to the successful completion of the project?

Our internship programs for young adults—including the water quality monitoring component—are 100% outdoors, socially distanced, and implemented with small stable groups of students. While this framework allows us to operate safely and minimize risk of COVID transmission, we would need to adjust in the event of another Shelter in Place mandate and/or a strong resurgence in COVID that we determine poses a risk to our students, staff, or community. In that event, we would shift programming online as we have in the past, which would delay or prevent monthly data collection of water quality measures and reduce the level of hands-on

experience students are able to gain in water quality monitoring and natural resource conservation.

10. How will this project incorporate the principles of environmental justice, which call for “fairness, regardless of race, color, national origin or income, in the development of laws and regulations that affect every community’s natural surroundings, and the places people live, work, play and learn”? (Cal EPA).

Grassroots Ecology is committed to our role in addressing the barriers and inequities that exclude people from environmental activities, under the premise that all people have the right and responsibility to be stewards of their local lands, waters, and communities. We recognize that historical oppression and ongoing social injustice impact all aspects of our lives, including access to the outdoors and meaningful engagement with nature. Read our full Diversity, Equity, and Inclusion Statement [here](#). The project will uphold and advance these values by engaging local students who are racially, culturally, and socioeconomically diverse in stewardship of the creeks and watersheds in the areas where they live, work, and attend school.

11. Does this project have a data-driven component to address impacts from climate change? If so, please describe.

The project contributes to a longitudinal data set of water quality measures (pH, temperature, specific conductance, dissolved oxygen, turbidity, and nitrates), contributing to our understanding of the impacts of climate change on local creek and ecosystem health associated with warming temperatures, increasingly severe storm events, reduced flows, etc.

12. How will the project be sustained after the grant has concluded? Will the results provide a basis for additional projects or programs?

Our consistency in water quality monitoring data collection and community watershed education along the Stevens Creek watershed since 2004 attests to our firm commitment to carrying on this project into the future. Our Community Science and Internship Programs for young adults, both of which undergird this project, are two of our core programs that we will continue to raise support for through a combination of government sources, foundation grants, and individual donations. As mentioned earlier, we are constantly on the lookout for grant opportunities that can fund these programs, but generally we must heavily subsidize them using the limited unrestricted funds we have from donors and general operating grants. The proposed GCRCDC grant would be a rare source of dedicated funding for the project that we hope will inspire the support of other institutional funders.

13. How will project results be made available to the public?

Grassroots Ecology staff will integrate data gathered into our existing database and share data with local municipalities, Valley Water, and CEDEN (California Environmental Data Exchange Network), as well as with the general public through our website and watershed education programs.

- 14. Add or attach any supplemental information you believe is important for the reviewers and/or approving authority to be aware of in assessing your application.**

Stevens Creek water quality data visualized on Tableau Public:

https://public.tableau.com/views/StevensCreekWQM_16058925996260/StevensCreekWaterQualityMonitoring?:language=en&:display_count=y&:origin=viz_share_link

Section C: Project Budget

Please enter project budget information in the following table. If including indirect costs, please only apply the percentage to the "Personnel" and "Operating Expenses" line items. The total in the "Grant Funding" column should be \$5,000.00 or less. Add additional lines as needed.

Line Item Description	Grant Funding	Matching Funds *	Project Totals
Personnel Costs (list position/hours/hourly wage):			
<i>Ecologist 208 hours *\$55 per hour</i>	\$4,000	\$7,440	\$11,440
Operating Costs (list general categories):			
<i>WQ equipment and supplies</i>	\$1,000	\$335	\$1,335
Personnel and Operating Expenses Subtotal:			
Indirect Costs (list percentage)			
Contractual Costs: (list firm name, if known)			
Total	\$5,000	\$7,775	\$12,775

* Match is not required but may make the project more competitive.

Section E: Project Deliverables and Due Dates

Please complete the following task table. Add or subtract task lines as needed.

Task #	Task Description	Task Deliverables	Estimated Completion Dates
1	Recruit and train student volunteers	Copy of training materials	June 30, 2022
2	Monthly water quality monitoring	Field hours log (student volunteers, staff) Equipment calibration log List of equipment and supplies purchased	June 30, 2022
3	Data management	Data posted to public website and submitted to CEDEN	June 30, 2022

Section D: Additional Attachments


Indicate those attachments included as part of your application.

Copy of a current IRS determination letter indicating 501(c)3 tax-exempt status

Section E: Application Signature

I certify that the information contained within this application is true and correct to the best of my knowledge, and that I am authorized to sign on behalf of the applicant.

Authorized Signature



Print Name/Title

Alex Von Feldt, Executive Director

Application Date

March 22, 2021

Submit the application and attachments electronically to gcrd@gcrd.org by 11:59 p.m. on March 22, 2021. Please contact Executive Director Stephanie Moreno at the same email address if you have any questions.