

CA B-WET FY 23: Central California

Grant Recipient	Project Description	Funded Amount
<p>Santa Cruz County Office of Education (SCOOE) (Student & Teacher MWEE)</p>	<p>“Relevant Action and Learning for Science (REAL Science)” — REAL Science will incorporate all elements of a Meaningful Watershed Educational Experience (MWEE). REAL Science will increase the scientific and environmental literacy of teachers and students by integrating classroom curriculum with outdoor science and stewardship activities. This will be achieved by providing high quality professional learning opportunities to prepare teacher leaders throughout Santa Cruz County school districts to implement MWEEs with students and share resulting programs with teacher teams at all school sites in the county. REAL Science will advance the Next Generation Science Standards (NGSS), the California Environmental Literacy Standards, and the Ocean and Climate Literacy Essential Principles through engaging students and teachers in outdoor field experiences and classroom activities that will increase understanding and stewardship of these local watersheds, the ocean, and the Monterey Bay National Marine Sanctuary. REAL Science was developed to be consistent with the National Oceanic and Atmospheric Administration (NOAA) principle that knowledge and commitment built from firsthand experience, especially in the context of one’s community and culture, are essential for achieving environmental stewardship. Carefully selected experiences driven by rigorous academic learning standards and nurturing a sense of community, will further connect students with their watershed, help reinforce an ethic of responsible citizenship, and promote academic achievement.</p> <p>The SCCOE County Science Initiative realizes that equity of student access to environmental learning experiences depends on the involvement of the classroom teacher. REAL Science will create a system of support by addressing the need to train teacher leaders at every school site across Santa Cruz County who will then support other teachers’ implementation of MWEE projects, so that ultimately all students will have access to participation. All ten school districts in Santa Cruz County are engaged in implementation of NGSS and Common Core State Standards. New academic achievement standards require shifts in instruction and pedagogy, as well as curriculum. To eventually provide this support to all teachers in all Santa Cruz County schools, the SCCOE County Science Initiative has developed a teacher leader support program. The Teacher Leadership Institute (TLI) is an innovative 5-day summer institute with three follow-up support days during the school year. The Institute supports emerging teacher leaders for science by deepening knowledge, increasing confidence, and enhancing abilities to support the implementation of the Next Generation Science Standards using the local environment as a source of phenomena. The SCCOE County Science Initiative is collaborating with the Pajaro Valley Unified School District (PVUSD) which is planning to submit a B-WET proposal that addresses Priority 2 to provide MWEEs for students. The SCCOE REAL Science B-WET project will include PVUSD teachers in professional learning activities, so that their MWEE experiences can inform the work of teachers in the nine other Santa Cruz County schools districts and contribute to this systemic effort to create equitable student access to MWEEs across grades and districts.</p>	<p>Requested Funding: \$100,000</p>
<p>Ventana Wildlife Society (Student MWEE)</p>	<p>Ventana Wildlife Society's (VWS) strategic goal for Education and Outreach is to instill a conservation ethic and inspire youth to act by fully integrating innovative scientific and ecological education. For this project we will provide planning, curriculum, resources, and transportation for 28 recurring classes throughout the school year for six teachers and their students, as well as two summer sessions of six classes each, to participate in Meaningful Watershed Educational Experiences (MWEEs). This is an increase from our current five school year classes and two summer sessions.</p> <p>Program curriculum focuses on the Salinas and Carmel Valleys and the central coast region as a primary watershed of the Monterey Bay National Marine Sanctuary (MBNMS). Our partners are schools that specialize in serving at-risk teens. We will serve 128 youth at an average cost of \$1,000 per participant. Each class includes one teacher, and some may include a therapist, probation officer or teacher aid. Teachers assist in the development and co-instruction of MWEEs. We will continue to provide pre-program training and teacher support throughout year, as well as develop a new post program training for the teachers we work with to prepare them to plan and lead their own outdoor experiences and develop the community partnerships and resources. With few exceptions' classes take place outdoors on public lands. Should the on-going pandemic make meeting in person possible, we have the capacity to pivot to meaningful virtual programming, as demonstrated this past year.</p>	<p>Requested Funding: \$65,000</p>

<p>Save the Whales (Student MWEE)</p>	<p>“Bees, Butterflies, and Blue Whales: Teaching South Monterey County Students about Ecosystem Resilience” — Save The Whales is proposing to partner with Frank Ledesma Elementary School in Soledad, a Title 1 school, to provide a meaningful watershed educational experience for approximately 84 children in grade 5. The proposed program focuses on culturally diverse, low-income, and underserved children in southern Monterey County. South County children are typically provided far fewer extracurricular educational opportunities than children in other parts of the county, due to their geographic remoteness. This remoteness, coupled with the added isolation of COVID-19, has made the educational situation for children in Soledad especially grim. The 5th grade teachers at Frank Ledesma Elementary School have been doing the best they can with little guidance and very few resources. The B-WET project proposed for 2021/2022 follows two successful years of B-WET programming in South County and is intended to provide a special extracurricular program for a smaller, more focused group of children who have been especially impacted, educationally, by the COVID pandemic.</p> <p>This year’s driving question is: <i>“What is ‘ecosystem resilience,’ and what can I do to help make ecosystems more resilient to climate change and other stressors?”</i> To help students answer that question, we have designed a mix of classroom (both in-class and distance learning) and outdoor activities that focus on two different ecosystems, using bees and butterflies (land-based) and blue whales (ocean) as platforms for discussing watersheds, the connection between land and sea, urban runoff, marine debris, the Monterey Bay National Marine Sanctuary, and the importance of stewardship. The program will provide regular student “contact” every 2-4 weeks over the course of one school year and will consist of the following components: 1) Teacher Orientation; 2) Save The Whales’ WHALES ON WHEELS WOW™ program, “Land and Sea Watershed Model”; 3) WOW™ “Land and Sea Trash Timeline Game”; 4) NOAA Marine Debris Art Contest; 5) “WOW™ “Blue Whales: Gardeners of the Ocean”; 6) Peer-to-Peer Sharing: Blue Whales Video from 5th Grade Students in Watsonville; 7) WOW™ “Dee The Beautiful Whale”; 8) Outdoor Activity: Schoolyard Litter Pickup; 9) WOW™ “Pollinators and Ecosystems”; 10) Our Water Our World’s “Squish No Squish Game”; 11) Outdoor Activity: Plant a Butterfly Garden; 12) Outdoor Activity: Butterfly Garden Stewardship; 12) Field Trip: Salinas River State Beach; 13) Final Reflection. Each element of the project will reinforce and build upon the lessons learned previously. The project cost per student is \$593. This year’s driving question is: <i>“What is ‘ecosystem resilience,’ and what can I do to help make ecosystems more resilient to climate change and other stressors?”</i> To help students answer that question, we have designed a mix of classroom (both in-class and distance learning) and outdoor activities that focus on two different ecosystems, using bees and butterflies (land-based) and blue whales (ocean) as platforms for discussing watersheds, the connection between land and sea, urban runoff, marine debris, the Monterey Bay National Marine Sanctuary, and the importance of stewardship. The program will provide regular student “contact” every 2-4 weeks over the course of one school year and will consist of the following components: 1) Teacher Orientation; 2) Save The Whales’ WHALES ON WHEELS WOW™ program, “Land and Sea Watershed Model”; 3) WOW™ “Land and Sea Trash Timeline Game”; 4) NOAA Marine Debris Art Contest; 5) “WOW™ “Blue Whales: Gardeners of the Ocean”; 6) Peer-to-Peer Sharing: Blue Whales Video from 5th Grade Students in Watsonville; 7) WOW™ “Dee The Beautiful Whale”; 8) Outdoor Activity: Schoolyard Litter Pickup; 9) WOW™ “Pollinators and Ecosystems”; 10) Our Water Our World’s “Squish No Squish Game”; 11) Outdoor Activity: Plant a Butterfly Garden; 12) Outdoor Activity: Butterfly Garden Stewardship; 12) Field Trip: Salinas River State Beach; 13) Final Reflection. Each element of the project will reinforce and build upon the lessons learned previously. The project cost per student is \$593.</p>	<p>Requested Funding: \$69,895</p>
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Grant Recipient	Project Description	Funded Amount
Ventura Unified School District. (Student & Teacher MWEE)	<p>“Ventura River Action Network (V-RAN)” — The overarching goal of this project proposal is to create a long-lasting interdisciplinary, tiered and place-and-project based environmental education program for Ventura Unified School District science teachers and their students that builds stewardship for the Ventura River Watershed and the Santa Barbara Channel, including CINMS. V-RAN builds upon the EECCOA Program (previously funded by CA NOAA BWET), and the support of an experienced network of research professionals working to remove the Matilija dam.</p> <p>V-RAN will successfully increase environmental, climate, energy, and ocean literacy for middle and high school students over a 3 year period, particularly youth who are socio-economically unprivileged. V-RAN will adopt the EECCOA curriculum to VUSD learning objectives supported by place-based MWEs, youth citizen science, and action-oriented project-based learning. The teachers will be able to select, adopt and use as most appropriate lessons for their students’ grade-level. The result will be students’ understanding of how natural systems such as the hydrosphere, atmosphere and biosphere interact and proceed through cycles that humans depend upon, benefit from, and can alter. V-RAN will illustrate with local relevant examples such as the impacts of the Matilija dam on the Ventura River Watershed, the region’s wildfires, drought, ocean acidification, and plastic pollution through in-class or virtual instruction, youths’ participation in field research, habitat restoration, and students designs of solutions to reduce their school or home environmental footprint.</p>	Requested Funding: \$99,858
Creek Lands Conservation (Student MWEE)	<p>“Central Coast Youth Environmental Stewardship Capacity Building Program (Central Coast YES)” - Creek Lands Conservation proposes to develop an immersive 5-day environmental/climate literacy program for middle school students, prioritizing students from disadvantaged communities, and culminating in direct capacity building assistance for local school districts to deliver the program equitably. In the first year of this 3-year program, CLC will develop and deliver three 5-day sessions and a train-the- trainer/professional development program (T3/PD). In year 2, trained graduates will deliver three 5-day sessions with CLC assistance. In year 3, the program will transition for delivery within local school districts. District educators that graduate from T3/PD will deliver three 5-day sessions with CLC assistance. CLC will leverage BWET funding and program effectiveness data to identify and acquire funding from new sources to sustain the program after the BWET grant period of performance.</p>	Requested Funding: \$75,000
One Cool Earth (Student MWEE)	<p>“San Luis Obispo County Climate Education Capacity Building” - San Luis Obispo County nonprofit One Cool Earth proposes a two-part project to build capacity for teaching climate literacy in the classroom. First, One Cool Earth will facilitate the development and operation of an Environmental Education Coalition to increase climate literacy at a county level, and second, One Cool Earth will undertake strategic planning to increase internal capacity to reach additional schools with climate literacy programming and improve program impact at 29 schools county-wide. One Cool Earth, a San Luis Obispo County, CA nonprofit, mainstreams environmental education by building outdoor classrooms at public schools and hiring trained, passionate educators to teach weekly, project-based lessons directly to students at 29 public schools.</p> <p>The program will reach 11,000 students with a 7-part meaningful watershed educational experience during the 2022-23 school year. Our curriculum focuses on food, water, waste and their connection to climate change and watershed health. We promote student leadership with our Green Teams that take on specialized projects to make meaningful impacts on their campuses, including low-carbon food production through organic gardening as well as waste diversion, recycling and composting. Students also take on projects to advocate for more environmental campus policies and practices, such as banning styrofoam, improving waste systems, and saving water. In addition, we train, model lessons for, and resource (with funding, curriculum, supplies and local connections) hundreds of teachers involved in our program, magnifying our school-site impact. We work with school administrators and leadership in seven districts to institutionalize policies that support environmental education and model environmental practices.</p>	Requested Funding: \$60,720
Sequoia Riverlands Trust (Teacher MWEE)	<p>“S.E.E.D Capacity Building for Climate Literacy in Tulare County” - For this project, Sequoia Riverlands Trust is applying on behalf of the Sequoia Environmental Education Directive (SEED) to hire a part-time Coordinator. This Coordinator will work with S.E.E.D. member organizations, as well as local educators, administrators, districts, and other for-profit and non-profit organizations in Tulare County to create a framework for locally- relevant climate-related curriculum for grades K-12. By doing so, the Coordinator will bring together many organizations and individuals to build a network of stakeholders interested in the future of climate literacy in the region.</p> <p>This program will only serve to increase equitable and meaningful access to climate-related curriculum and resources, not only to resources provided by the S.E.E.D. network but also to national resources available through NOAA, the EPA, and other related organizations, and will increase the capacity of teachers to provide meaningful climate- related education to youth in the county. This will also lead to an increase in knowledge of accessible and available meaningful watershed educational experiences for teachers across Tulare County, and will ultimately lead to a much more climate literate and resilient population.</p>	Requested Funding: \$83,588

CA B-WET FY 23: Northern California		
Grant Recipient	Project Description	Funded Amount
Cotati-Rohnert Park Unified School District (Student & Teacher MWEE)	<p>Students Understanding Peoples, Environments and Resources (SUPER) — The Cotati-Rohnert Park School District (CRPUSD) and partners are proposing to design and implement the professional learning program, Students Understanding Peoples, Environments and Resources (SUPER), for 3rd, 4th, 5th grade teachers for the seven elementary schools of CRPUSD.</p> <p>The project is driven by this question: “How does the intersection of humans and the environment impact communities?” Through the three-year project, students, teachers, administrators, and local environmental education educators will experience and research answers to that question together through the implementation of Meaningful Watershed Educational Experiences (MWEEs) on the school sites, the local watershed community to the Pacific coast. Participating teachers from Year 1 will take on leadership roles in Years 2 and 3 in order to provide a sustainable professional learning structure beyond the life of the grant.</p> <p>The proposed project will provide targeted professional learning necessary to bring place-based environmental literacy education into student-centered, NGSS aligned classrooms. It will directly build upon the work from early partnerships with the Laguna de Santa Rosa and the Center for Environmental Inquiry. The proposal also targets the project-based learning partnership that the district has had with Sonoma State University School of Education. The project aligns with the district’s 5 year plan which targets building the capacity of multilingual students through contextualized and universally designed learning experiences. The intent is to get students outside multiple times to develop their academic language and communication skills. The proposed project will provide targeted professional learning necessary to bring place-based environmental literacy education into student-centered, NGSS aligned classrooms. It will directly build upon the work from early partnerships with the Laguna de Santa Rosa and the Center for Environmental Inquiry. The proposal also targets the project-based learning partnership that the district has had with Sonoma State University School of Education. The project aligns with the district’s 5 year plan which targets building the capacity of multilingual students through contextualized and universally designed learning experiences. The intent is to get students outside multiple times to develop their academic language and communication skills.</p>	Requested Funding: \$99,425
Solano County Superintendent of Schools (Student MWEE)	<p>“Spinning Salmon Monitoring Project” - Students and teachers in the Spinning Salmon Monitoring Project will join a team of federal and academic researchers and become crucial scientific partners in an effort to solve a mystery that threatens salmon populations throughout California's Central Valley. By engaging with this project, students will define issues that matter to their community as they learn more about their local watershed, make observations of salmon in a classroom aquarium, and submit data to the science team. Students will integrate their learning experiences as they draw direct connections between content learning, their observations and data, and their Meaningful Watershed Educational Experiences (MWEEs).</p> <p>300+ youth will have access to MWEEs by engaging in this Youth-Focused Community and Citizen Science (YCCS) project. With the collaboration of community partners focused on environmental stewardship methods, students will engage in MWEEs within their local watershed. The Spinning Salmon Monitoring project will train 60 teachers, with a focus on recruiting teachers who service BIPOC, low-income, multi-lingual, and/or systems-impacted youth. By focusing on teacher training and ongoing mentoring, this project will allow for a self-sustaining model at the end of the grant period. Materials developed as part of this program will support teachers in making necessary shifts in instruction for engagement with all three dimensions of the Next Generation Science Standards (NGSS) as well as California's Environmental Principles and Concepts (EP&Cs).</p>	Requested Funding: \$100,000
Santa Clara County Office of Education (Student MWEE)	<p>“Student and Professional Learning to Advance Stewardship for H2O (SPLASH!)” - The Santa Clara County Office of Education will deliver a high- quality professional learning model to middle school teachers to provide meaningful watershed experiences via project-based learning opportunities to students in Gilroy Unified School District and Morgan Hill Unified School District. SPLASH! will build teacher capacity to provide culturally relevant teaching while building teacher content knowledge about the watershed to support environmental stewardship during virtual, blended, or in person learning.</p> <p>Teachers and students in the SPLASH! project will investigate the local watersheds surrounding their schools, neighborhoods, and region to learn how this watershed feeds into and affects the larger Monterey Bay National Marine Sanctuary (MBNMS). They will utilize data and research to guide their focus on an issue related to the local watershed and develop learning and projects that support their increased knowledge and stewardship of this area. To do this, teachers will engage students in activities that spark their curiosity and cause them to ask thought-provoking questions about the data and explore the various methods of creating data visualizations to better communicate their findings with their classmates and others. Teachers can guide students with formulating questions they may have about this issue and have students plan investigations and field studies to find out more. The SPLASH! project will emphasize Meaningful Watershed Educational Experiences (MWEE) through hands-on, experiential learning and the use of research, data collection, and analysis. Teachers and students will learn from local experts from Walden West and the San Jose State University’s (SJSU) Bay Area Environmental Science Institute (BAESI) about watershed science and human impacts that affect the Monterey Bay National Marine Sanctuary (MBNMS).</p> <p>20 lead teachers and 600 students per year will be involved in SPLASH! The total project cost is \$4983 per teacher a year. The total project cost is \$166.10 per student per year.</p>	Requested Funding: \$99,941
Marin County Office of Education (Student & Teacher MWEE)	<p>“Climate Change Across the Curriculum (CCAC)” - Climate Change Across the Curriculum (CCAC) will support TK-5 teachers in Sonoma and Marin Counties to work with scientists, community partners, and classroom educators to integrate climate change into existing curricula. This "train the trainers" program will shift the existing model for classroom climate education and teacher professional learning away from addressing climate change as a discrete topic, and instead will use an interdisciplinary approach that engages teachers and students in learning and local stewardship opportunities in collaboration with community partners. This work will scale up as lead teachers work as mentors to their colleagues as we engage cohorts of teachers in the program. CCAC will support teachers in two northern California counties that collectively serve over 100,000 students.</p>	Requested Funding: \$75,000