

CA B-WET FY14: San Francisco Bay Watershed

GRANT RECIPIENT	PROJECT DESCRIPTION	FUNDED AMOUNT
Friends of the Petaluma River (Student and PD)	<p>“Watershed Classroom” – This project will provide 3 days of faculty training in Project Based Learning and watershed instruction focused on the Petaluma watershed with a field study on the Petaluma River. Teachers will then implement engaging school-year long curriculum about the Petaluma River and Watershed to educate youth in Petaluma about their place in our environment, how their decisions and actions affect their environment and inspire youth to conserve and celebrate the Petaluma Watershed. Students will develop and present information on their projects through the course of the year.</p>	\$54,789
Cycles of Change (Student)	<p>“Blackberry Creek Living Laboratory Sustainability Project” – This project will educate and inspire students to appreciate their watershed through the history of Blackberry Creek including elevated levels of fecal coliform from an abandoned sewer line leaking into a catch basin flowing to the creek. They will use Blackberry Creek as a living laboratory for watershed education including geography, history and ecology; fieldtrip of the creek from headwaters to the San Francisco Bay, observing creek ecosystems at natural, urbanized and restored sites; learn about lifestyle and transportation choices with bicycle field trips to the Bay and Shore Bird Nature Center. Students will present their work and results through at least one public</p>	\$49,340
Golden Gate National Parks Conservancy (Student)	<p>“Project WISE: Watersheds Inspiring Student Education” - A year-long program in San Francisco's Presidio for four high school AP science classes with a primary audience of economically and ethnically diverse students. Most of these students initially show little interest in science and have not had outdoor educational experiences. WISE will provide at least 20 MWEs at the Presidio and the Tennessee Hollow watershed, 271 acres on the eastern portion of the Presidio along with National Parks and Seashores. Lessons include topics of water quality testing and analysis, macro invertebrate biodiversity, watershed geology, mapping, climate and weather, climate change, energy, waste management, air quality testing and marine ecology. Activities include out-planting of hundreds of native plants into wetland and riparian restoration areas, lab work performing water quality testing using NOAA's Estuary Discovery Kit and Non-point Pollution Discovery Kit and an overnight trip to the Point Reyes National Seashore. The program includes two pilot projects: a backpacking trip in Yosemite & Sequoia Kings Canyon National Parks (application limited to 10 students) and a 2 week summer of science internship for 12 students. geology, mapping, climate and weather, climate change, energy, waste management, air quality testing and marine ecology. Activities include out-planting of hundreds of native plants into wetland and riparian restoration areas, lab work performing water quality testing using NOAA's Estuary Discovery Kit and Non-point Pollution Discovery Kit and an overnight trip to the Point Reyes National Seashore. The program includes two pilot projects: a backpacking trip in Yosemite & Sequoia Kings Canyon National Parks (application limited to 10 students) and a 2 week summer of science internship for 12 students.</p>	\$60,000

<p>The Regents UC- Lawrence Hall of Science (Professional Development)</p>	<p>“Youth Explorations in Oakland Watersheds” – Sixty youth from two middle and two high schools in Oakland will be recruited to participate in this year long program which provides hands-on learning experiences, water quality monitoring, creek restoration & clean-up and field work in the San Francisco Bay Estuary and Farallones National Marine Sanctuary. The project hopes to use this year to kick off long term watershed research at two creeks and estuaries near where the youth reside; Lion Creek and San Leandro Bay around the Arrowhead Marsh and Glen Echo Creek and Lake Merritt in downtown Oakland. Activities may include water monitoring, design/construction/placement of signage regarding watershed pollution, hosting volunteer pollution prevention and habitat restoration events, making a formal presentation to the City of Oakland and SF Bay Water Quality Board. Field work will also include familiarization with the local ecosystem through walking & boating excursions. Students will study heavy metal concentration levels and assess impact on human and aquatic species health. Other research related activities will look at Coliform, Dissolved Oxygen, macro invertebrate, Nitrate/Phosphate (Nutrient) concentrations and measure plastics found at study sites. Students will use PenDragon surveying tools on Palm Treo phones and, following data analysis, use readily available GIS tools to map results for presentation. Students have a goal of presenting at the BrightSTARS poster session at the Fall AGU conference in San Francisco.</p>	<p>\$59,976</p>
<p>Earth Team (Student)</p>	<p>“Aqua Team” – Aqua Team is an intensive stewardship and leadership project for urban teens focusing on watershed education and action. Through this year-long project, twenty Richmond High School students participate in weekly after school meetings and monthly field events with Earth Team educators and professional site partners. Aqua Team students engage in watershed curriculum that links the health of the students’ local community of Richmond, CA with greater marine and coastal environments. Project activities link to California State Science Standards and the project culminates with participating students designing and implementing a service-learning project on their campus or in their community.</p>	<p>\$48,301</p>
<p>Farallones Marine Sanctuary Association (PD)</p>	<p>“Show and Tell: Developing Bay Area Teachers' Capacity to Incorporate Science Communication Projects into Curriculum” – Provide professional development opportunities to Bay Area teachers on ways to integrate the final step of the scientific process, communicating results, into their meaningful watershed activities. The program will consist of a webinar series and a hands-on, day-long summer training. FMSA will develop and implement a webinar series, open to LiMPETS and GFNMS teachers as well as any interested teacher/educator in FMSA's service area. Each webinar will last 60 minutes and cover a different topic on how to help students interpret and share their scientific data in ways that can be easily understood by the general public. The pilot project focuses on working with four Bay Area high schools to develop scientific poster, filmmaking, blogging and other projects intended to help students communicate their LiMPETS experience to the scientific and general communities. The primary objective of Show and Tell is to instruct teachers in best practices to engage students in the final step of the scientific process: communication.</p>	<p>\$20,000</p>
<p>Seven Tepees Youth Program (Student)</p>	<p>“Project WAVES (Watershed Advocacy Via Environmental Studies)”- Promote inner-city youth involvement in stewardship of the San Francisco Bay watershed through watershed education, stewardship training, career counseling and explore careers in environmental organizations and marine sanctuary agencies. Provide a comprehensive introduction to environmental issues, get students excited about and envision new possibilities for themselves through career paths and education. Help students see ways in which they can make valuable contributions to their own community. Students in the 6th grade will learn marine science exploring topics such as animals, marine mammal pathogens, ocean acidification. Students in the 7th grade will develop individual watershed action plans and a group documentary. Students in the 8th grade will apply hands-on field work, habitat restoration, research and career exploration.</p>	<p>\$60,005</p>

<p>Marine Science Institute (Student)</p>	<p>“Student stewards of Redwood Creek Watershed”- Sixth grade students in Redwood City will build perspectives on their local watershed's connection to the ocean through monthly exploration and hand-on activities including 3 stream studies and 2 canoe-based creek studies. Students will practice the scientific method, develop a hypothesis regarding an aspect of watershed, and engage in marine debris reduction and water quality surveys. High school students will become environmental mentors to 6th graders and lead a teacher workshop sponsored by the county Office of Education.</p>	<p>\$30,400</p>
<p>Sonoma County Water Agency (Student)</p>	<p>“Headwaters 2 Ocean Program (H2O)”- H2O is a school year program which provides an experiential, hands-on program for 5th & 6th graders in Title I schools with the Russian River, headwaters, estuaries and lower river as outdoor labs to learn about the river as a regional water resource as well as habitat for endangered coho and threatened Chinook and steelhead. The Water Agency intends for this to become a sustainable component of the Agency's Water Education Program. Teacher training will include use of NOAAs Slippery Sleuth, Ecology by Inquiry, Project WILD Aquatic (Council for Environmental Education) and Project WET, teachers will be trained to raise steelhead and receive a permit allowing transport and rearing. Students will learn the salmonid life history and visit the hatchery to obtain steelhead eggs, grow eggs to fry and release them into approved tributaries. Activities include introduction to watershed ecology, water quality parameters for survival of specified fishes and a question on which water sample could support the fishes. Students will perform water quality testing using provided samples to verify which sample could support the fishes. Fieldwork includes a hatchery visit to learn about hatcheries, water quality data collection at study sites. Subsequent field work will incorporate moving downstream to repeat data collection, observational study of wildlife along with soil samples and analysis.</p>	<p>\$45,539</p>
<p>Salmon Protection and Watershed Network (SPAWN) (Student and PD)</p>	<p>“Headwaters to Sea Professional development for educators”- The Story of Our Steelhead, will work with every public school in the Ventura River Watershed.</p>	<p>\$41,884</p>