

Enhancing Local Capacity in North Richmond and Parchester Village
to Manage and Restore the Lower Rheem Creek Watershed
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ENHANCING LOCAL CAPACITY IN NORTH RICHMOND AND PARCHESTER VILLAGE TO MANAGE AND RESTORE THE LOWER RHEEM CREEK WATERSHED

Natural Heritage Institute and others



Portion of the restoration site at the mouth of Rheem Creek as it enters San Pablo Bay.

PURPOSE

Build community capacity in North Richmond and Parchester Village to effectively manage the Lower Rheem Creek watershed and to restore Lower Rheem Creek

PROJECT GOALS

- ✦ Develop a watershed assessment
- ✦ Create a sustainable adaptive management plan for Lower Rheem Creek
- ✦ Restore the tidal portion of Lower Rheem Creek
- ✦ Build community capacity by engaging and educating local citizens in stream restoration activities and environmental monitoring

AWARD AMOUNT

\$440,870

WATERSHED

Rheem Creek Watershed

COUNTY

Contra Costa County

CALFED REGION

Bay Region

LEGISLATIVE DISTRICTS

US Congress: 7, State Assembly: 14, State Senate: 7 and 9

Benefits to the Bay-Delta System

Rheem Creek is a small stream in western Contra Costa County, surrounded by low income, minority communities. This project involves local residents and local, state, and federal agencies in the restoration, monitoring, and management of Lower Rheem Creek. The project will improve habitats and populations of at-risk species, improve the quality of water entering San Pablo Bay, and provide more natural sediment and nutrient supplies to the Bay. Improved creek conditions will directly benefit the City of Richmond and Contra Costa County. The project builds community capacity by educating and training local citizens in stream monitoring and restoration activities. By involving the local residents in decision-making and management, this project supports CALFED's commitment to environmental justice, including the North Richmond Neighborhood House.

PROJECT OVERVIEW

Rheem Creek is a small stream in western Contra Costa County. The Lower Rheem Creek watershed is largely undeveloped and surrounded by the low income, minority communities of North Richmond and Parchester Village. With more than 400 acres of tidal and freshwater wetlands and undeveloped uplands, the watershed is exceptional in the Bay Area. In the early 1960s, Rheem Creek was routed into a traditional, flood-control-style channel. Grading and flood control levees disrupted the natural hydrology and degraded the riparian and tidal wetlands.

Several project partners are participating in implementing this project. They include the Natural Heritage Institute, the Parchester Village Neighborhood Council, the West County Toxics Coalition, Community Health Initiative, and the Urban Creeks Council. These project partners are working with the local communities to restore Rheem Creek to a meandering channel through its natural floodplain to the mouth of San Pablo Bay. The meander will filter storm water runoff to improve water quality before it enters San Pablo Bay. The project team is also conducting a thorough watershed assessment to support the development of the Lower Rheem Creek Adaptive Management and Monitoring Program to guide long-term decision making for the creek.

The long-term health of the creek and success of the project depend on the commitment of the community to stewardship. Through outreach and education activities, the project team solicits the involvement of local citizens and students in the restoration of the creek and the management of the Lower Rheem Creek watershed. The project partners hold workshops to educate local citizens, provide a venue for sharing concerns and issues related to the management plan, invite participation in restoration implementation activities, and provide training in monitoring protocol and techniques.



This project involves the local community in restoration design.

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Volunteers examining trees in the community.

PURPOSE

Improve water quality and reduce urban runoff into San Francisco Bay

PROJECT GOALS

- ✦ Reduce urban runoff into San Francisco Bay
- ✦ Increase community awareness and participation in local watershed management
- ✦ Monitor impacts of tree growth on runoff quality and quantity

AWARD AMOUNT

\$350,000

WATERSHED

Ettie Street Watershed

COUNTY

Alameda County

CALFED REGION

Bay Region

LEGISLATIVE DISTRICTS

US Congress: 9, State Assembly: 16, State Senate: 9

Benefits to the Bay-Delta System

This project increases community awareness of and participation in watershed management activities through planting trees in an urban watershed and monitoring the water quality impacts of these trees. When mature, these trees will help reduce urban runoff to the Bay-Delta system—runoff that contains contaminants like metals, sediment, oil, grease, bacterial coliform, nitrogen, and phosphorus. Improved water quality in the Bay benefits recreation, waterborne commerce, and wildlife habitat. In addition to water quality benefits, these trees improve the quality of life for West Oakland residents. Trees absorb heat and airborne pollutants, provide habitat, and contribute to neighborhood beautification and property values. The tree-planting project also provides direct benefits to the city of West Oakland, while contributing to broader water quality goals. The Oakland Releaf Watershed Protection Program improves the health of the community while empowering the residents to improve their environment.

PROJECT OVERVIEW

The Ettie Street watershed is located at the eastern edge of San Francisco Bay, in a predominantly commercial/industrial area of the city of West Oakland. Because the area is largely paved, most rainfall runs into storm drains and is pumped into the Bay from the Ettie Street Pump Station. The outflow to the Bay carries metals (copper, cadmium, zinc, and lead), sediment, oil, grease, bacterial coliform, nitrogen and phosphorus from highways, streets, parking lots, and rooftops. Because most of the land in this urban area is developed, the options to regulate flows into the Bay are limited.

Through this project, local residents are planting 1,800 trees. When mature, these trees will reduce annual runoff into the Bay by up to 9 million gallons. Tree planting also provides environmental, social, and economic benefits to local communities. Youth from Urban Releaf, the East Bay Conservation Corps, and the Oakland Unified School District are planting and maintaining the trees, assisting with research and monitoring, and distributing information to the public. Local business owners, residents, and volunteer organizations are also participating in tree plantings and maintenance and learning how to protect the watershed. This project includes a monitoring and assessment program to collect information about different types of trees and planting densities and their effect on runoff volume and quality. Staff from the City of Oakland's Environmental Services Division, U.S. Forest Service Center for Urban Forest Research, and the UC Davis Land, Air and Water Resources Department are providing technical assistance.



The Urban Releaf Executive Director, Kemba Shakur, discussing monitoring results with Qingfu Xiao of UC Davis and William Madison of the City Of Oakland.

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With concrete vertical banks and a channel littered with shopping carts and other miscellaneous items, this stretch of Wildcat Creek represents the state of many urban streams.

AWARD AMOUNT

\$750,000

WATERSHED

Wildcat Creek and San Pablo Creek Watersheds

COUNTY

Contra Costa County

CALFED REGION

Bay Region

LEGISLATIVE DISTRICTS

US Congress: 7, State Assembly: 14, State Senate: 7 and 19

PURPOSE

Design and implement a community-based restoration plan for Wildcat and San Pablo Creeks

PROJECT GOALS

- ✦ Improve aquatic habitat and ecological functions including a demonstration restoration component
- ✦ Reduce the threat of flooding
- ✦ Increase environmental education opportunities

Benefits to the Bay-Delta System

Implementation of this project helps improve aquatic habitat and ecological functions in the Bay to support sustainable populations of diverse and valuable plant and animal species. Endangered steelhead are known to occupy both Wildcat and San Pablo Creeks and are a primary beneficiary of the restoration activities. At the mouths of the creeks, where fresh water mixes with water from San Pablo Bay and San Francisco Bay, a variety of threatened and endangered species would benefit from restoration activities, including California clapper rail, black rail, migratory songbirds, salt marsh harvest mouse, San Pablo vole, and others. Implementation of this project also benefits the local community by reducing the threat of flood damage and by improving water quality.

PROJECT OVERVIEW

Wildcat Creek and San Pablo Creek are among the few remaining free-flowing creeks within the dense urban areas surrounding San Francisco Bay. Both creeks flow through the low-income, small community of San Pablo. Because of the threat of flood damage, the lower reaches of these creeks were once slated by the U.S. Army Corps of Engineers (Corps) to be converted to concrete channels. At the urging of the community, a consensus-based alternative plan that offered both improved flood capacity and habitat benefits was developed and implemented. The Wildcat-San Pablo Creeks Watershed Council (Council) was formed from this design process. Since then, the Council has worked on multiple restoration projects in the watershed and is now developing the Watershed Restoration Action Plan and Priority Projects (WRAPPP) for the highly-urbanized middle reaches of the watershed. The Wildcat-San Pablo Creeks WRAPPP builds on extensive restoration and planning efforts that have already taken place. The Council, in connection with the Urban Creeks Council, is taking the lead and performing the following WRAPPP tasks: conducting project alternatives analysis, conducting public outreach and environmental education activities, determining restoration priorities, and implementing restoration projects.

The Corps is again poised to develop and implement a flood control project within these watersheds. The goal of the WRAPPP is to provide the Corps with a community-supported multi-objective alternative plan for implementation that provides flood damage reduction, habitat improvements, and water quality benefits.

Restoration projects associated with the WRAPPP may include reshaping and/or revegetation of up to 1,000 linear feet of stream, as well as removal of culverts, hydraulic constrictions, or other barriers to fish passage.

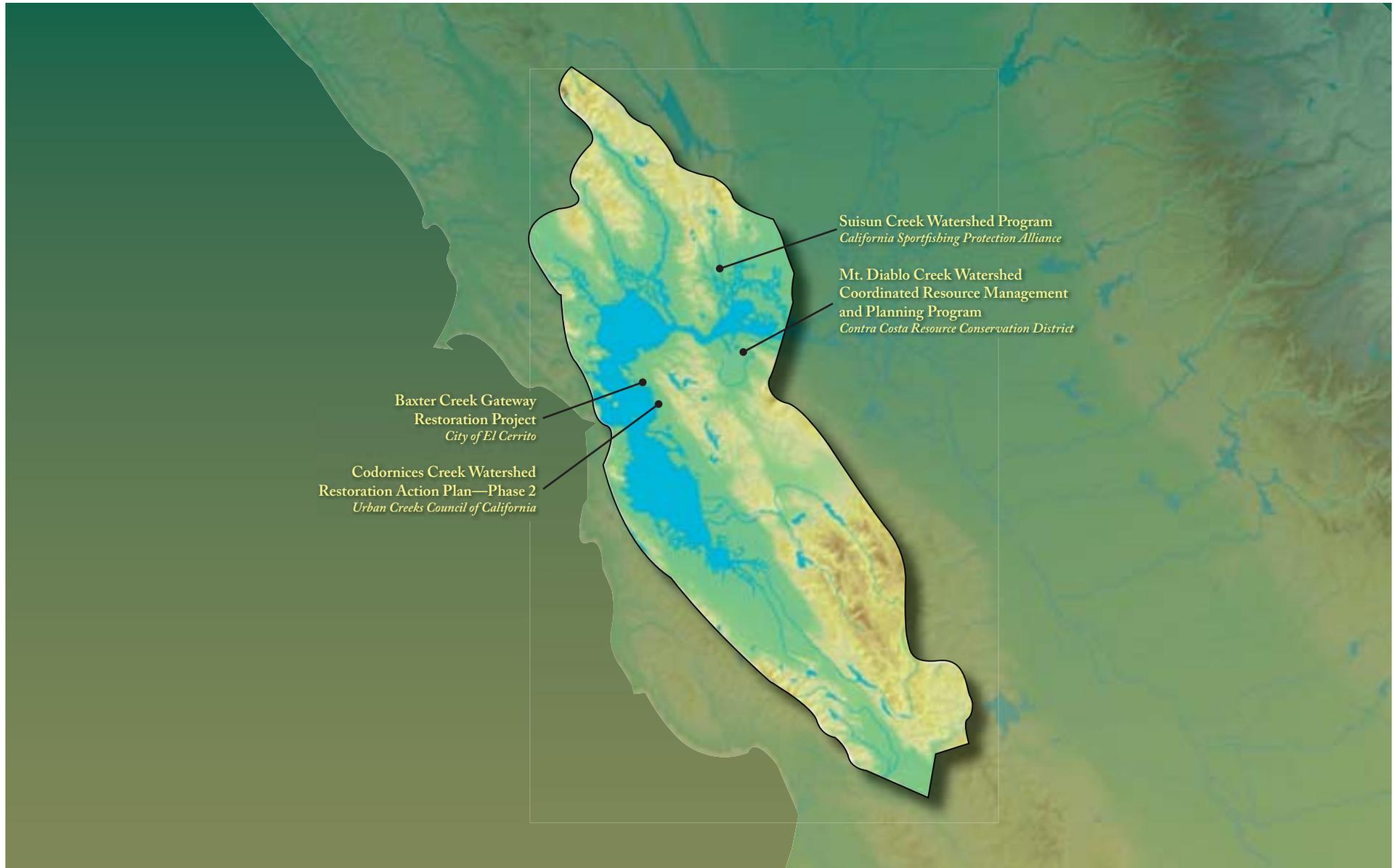


Aerial view of the flatlands of Wildcat Creek and San Pablo Creek. This project targets flood damage reduction and will include a demonstration restoration component.

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BAXTER CREEK GATEWAY RESTORATION PROJECT

City of El Cerrito



Baxter Creek under flood conditions.

PURPOSE

Restore a portion of Baxter Creek and provide a setting for educational lessons and community involvement

PROJECT GOALS

- ✦ Restore and maintain the stretch of Baxter Creek at the City of El Cerrito's northern gateway to offer benefits for wildlife, improve water quality, and reduce flooding impacts
- ✦ Build the community's capacity to maintain and manage the Baxter Creek and other San Francisco and Bay Area watersheds and encourage stewardship by developing watershed-wide programs for education and outreach, monitoring, and maintenance
- ✦ Integrate amenities along Baxter Creek that facilitate ongoing education, participation, and training related to watershed stewardship and restoration

AWARD AMOUNT

\$492,042

WATERSHED

Baxter Creek Watershed

COUNTY

Contra Costa County

CALFED REGION

Bay Region

LEGISLATIVE DISTRICTS

US Congress: 7 and 10, State Assembly: 14,
State Senate: 7 and 10

Benefits to the Bay-Delta System

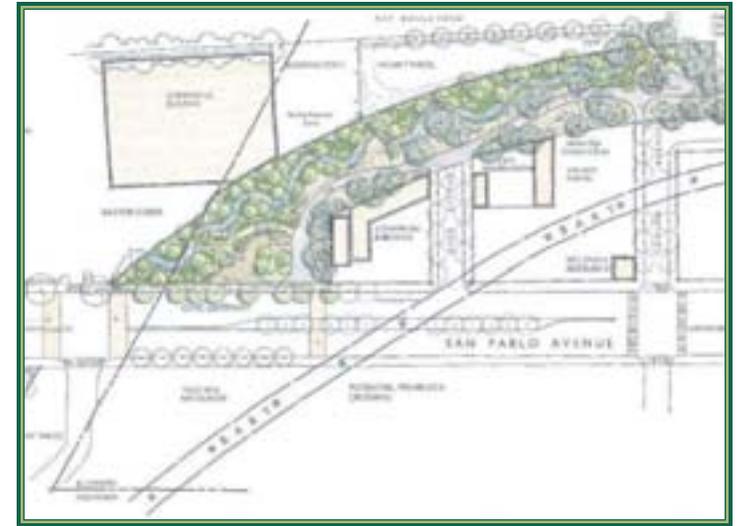
Restoration of the Baxter Creek Gateway site will enhance riparian habitat and improve water quality in the creek, which will lead to improved conditions downstream in San Francisco Bay, an important nursery area for marine, estuarine, and anadromous fish. The local community will benefit from the community-based outreach and education program intended to increase community awareness of Baxter Creek and to encourage community protection of its watershed. The Baxter Creek project provides local government benefits as it strengthens and builds linkages between local organizations to increase local watershed management capacity and to sustain long-term stewardship of the creek.

PROJECT OVERVIEW

Baxter Creek, located in the San Francisco Bay watershed, flows through densely urbanized west Contra Costa County. It is publicly accessible at five parks and open space areas. Three main branches of Baxter Creek originate in underground springs beneath the El Cerrito and Richmond hills and drain the watershed through the main channel into San Francisco Bay. The Baxter Creek Gateway Restoration Project will restore approximately 750 feet of channelized Baxter Creek to increase riparian habitat and improve water quality, and provide outreach to the surrounding community on the value of creeks and watersheds.

The Baxter Creek Gateway Restoration Project culminates a 6-year effort by the community and local government to acquire and restore the gateway property at the highly urbanized border between Richmond and El Cerrito. This project restores a 750-foot stretch of Baxter Creek to create a 950-foot meandering stream and riparian corridor. Restoring native plants on the creek banks will reduce erosion potential, improve aesthetics, guide access, suppress the establishment of invasive nonnative species, and increase wildlife habitat values. The restored creek will include a functional floodplain that will provide a diversity of aquatic habitats.

The project provides increased opportunities for public access to parklands and education among the local community on the value of watershed protection. The restoration site extends the Ohlone Greenway, a regional pedestrian and bicycle trail, to the Central Richmond Greenway, another multi-use trail that will eventually connect to the San Francisco Bay Trail. In partnership with The Watershed Project and Friends of Baxter Creek, the project also includes an outreach and education program to expand an existing watershed awareness program. The outreach activities are designed to involve the local community in implementing and maintaining the restoration project, to demonstrate and interpret watershed functions, and to change individuals' everyday behaviors that affect the water quality of the Bay.



The final schematic site plan for the Baxter Creek Gateway site. Construction estimated to begin July 2005.

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CODORNICES CREEK WATERSHED RESTORATION ACTION PLAN—PHASE 2

Urban Creeks Council of California



Urban Creeks Council staff member Kristen Van Dam records longitudinal profile survey data on Codornices Creek along the Berkeley/Albany city line.

PURPOSE

Implement priority actions recommended in Codornices Creek Watershed Restoration Action Program Plan—Phase 1

PROJECT GOALS

- ✦ Increase the extent of salmonid habitat in Codornices Creek by eliminating migration barriers without decreasing channel capacity
- ✦ Improve overall creek quality to encourage the continuation and health of the remnant steelhead population
- ✦ Implement a permanent community- and science-based watershed program for the protection and restoration of the creek

AWARD AMOUNT

\$482,500

WATERSHED

San Francisco Bay Watershed

COUNTY

Alameda County

CALFED REGION

Bay Region

LEGISLATIVE DISTRICTS

US Congress: 9, State Assembly: 14, State Senate: 9

Benefits to the Bay-Delta System

This ecosystem restoration project alleviates major barriers to fish migration on Codornices Creek (including steelhead populations), improves instream habitat for riparian wildlife populations through bank stabilization projects, and works with residents and other agencies to improve the suitability of habitat. Local property owners benefit through riparian vegetation demonstration projects that stabilize streambanks, enhance instream habitat, and apply sound principles of habitat restoration to their properties. This project’s stream survey protocols and user-friendly data storage contribute to the technical improvement of watershed planning throughout the state. Citizen participation in monitoring programs and a strong outreach component of the project build local benefits through increased capacity for good watershed stewardship.

PROJECT OVERVIEW

Codornices Creek flows from the Berkeley hills, through North Berkeley, under Interstate 80, and into the San Francisco Bay mudflats. Codornices Creek is one of the most open streams in the area and hosts a remnant steelhead run, making it one of the best native salmonid restoration opportunities in the East Bay. In 2002, the CALFED Watershed Program funded Phase 1 of this program. A watershed-wide assessment and prioritization of actions for restoring the stream and its steelhead run were completed in Fall 2004. The plan can be downloaded from the UCC webpage.

Phase 2 of the program meshes with three other important efforts to restore the creek. An Urban Streams Restoration grant is providing support to establish a new stream meander and riparian buffer in the part of Codornices Creek that was severely channelized during World War II. Concurrently, the Union Pacific Railroad is preparing to expand conveyance under its tracks, an area where constriction has led to sediment buildup. In a third related project, Caltrans is planning to increase conveyance capacity where the creek flows under Interstate 80 to eliminate flooding upstream.

The Urban Creeks Council project team works with landowners along Codornices Creek who express a desire to make their backyards “fish friendly” through riparian vegetation restoration demonstration projects. Streambank stabilization projects reduce erosion at priority sites along the creek that are contributing substantial amounts of sediment to the stream, degrading salmonid habitat by smothering spawning gravels and filling in pools needed for juvenile rearing. A primary component of this project is the remediation of fish passage barriers, particularly the current limiting barrier at Albina Avenue. This limiting barrier, a result of the streambed downcutting, is causing the surface elevation of the outfall plunge pool to be too low for fish to navigate. Downstream tailwater grade control structures are being installed to raise the water level. Additionally, the installation of baffles, which add depth and roughness to the flow, are being considered to alleviate fish exhaustion at suitable sites. Community outreach and education are conducted through workshops, digital media, school programs, presence at festivals, printed materials, and a website.



Top view of a 12" rainbow trout/steelhead in Codornices Creek inside the Curtis Street culvert.

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Friends of Mt. Diablo Creek conducting the first GPS survey of the creek as part of Contra Costa County's volunteer creek monitoring program.

PURPOSE

Develop a citizen-based watershed management plan using a local, consensus-based planning process

PROJECT GOALS

- ✦ Facilitate and improve coordination, collaboration, and assistance among government agencies, local organizations, and individuals with an interest in resource conservation
- ✦ Conduct a watershed assessment
- ✦ Develop a watershed management plan
- ✦ Provide education and outreach to support the efforts of individuals and organizations to become better stewards of their natural resources
- ✦ Build strong working relationships to ensure support and long-term sustainability of local watershed activities
- ✦ Create a citizen-based water quality monitoring program

AWARD AMOUNT

\$227,117

WATERSHED

Suisun Bay Watershed

COUNTY

Contra Costa County

CALFED REGION

Bay Region

LEGISLATIVE DISTRICTS

US Congress: 7 and 10, State Assembly: 11, State Senate: 7

Benefits to the Bay-Delta System

This project brings together diverse stakeholders in the Mt. Diablo Creek watershed to develop a plan to help ensure the long-term ecological health and function of the watershed. The planning process is expected to build public and agency support for restoration actions that will directly benefit steelhead trout in the watershed and other important species that use or pass through Suisun Marsh. Education and outreach activities will build awareness of watershed issues, instill pride and sense of place, and inspire individuals and organizations to become better stewards of their natural resources. The citizen monitoring component will provide benefits to the cities and the Contra Costa Clean Water Program by helping identify and reduce sources of stormwater pollution and non-point source pollution. The U.S. Navy will also benefit from the information gathered, and from the increased participation of the local community in managing the watershed.

PROJECT OVERVIEW

The Mt. Diablo Creek watershed extends from Mt. Diablo to Suisun Bay and is Contra Costa County's fourth largest watershed. Land uses within the watershed include ranchlands, urban areas, a state park, tidal marshland, and an EPA Superfund Site (the Naval Weapons Station Seal Beach Detachment Concord). The Mt. Diablo Creek watershed is unique in Contra Costa County in that it contains no structural modifications for flood control. Recently, steelhead trout have been found in a headwater tributary, and two downstream perennial reaches of Mt. Diablo Creek may provide suitable rearing habitat. Currently, no watershed management plan for Mt. Diablo Creek exists, and there is crucial need for increased public awareness and participation in the decision-making processes that will determine the watershed's future.

The Contra Costa Resource Conservation District is conducting the Mt. Diablo Creek Watershed Coordinated Resource Management and Planning (CRMP) Program to develop a watershed management plan for the Mt. Diablo Creek watershed. This plan is being developed by stakeholders using a voluntary, locally controlled, consensus-based planning process, and will contain recommendations of voluntary actions regarding flood management, water quality, recreation and other issues. Other ongoing studies, when combined with the results of this project, will provide a baseline that will serve to enhance local watershed management science by filling gaps in existing knowledge and understanding about natural habitats, species, and stream functions. Further, because parts of the watershed are relatively undisturbed, the watershed may serve as a reference site for watershed restoration throughout the county.

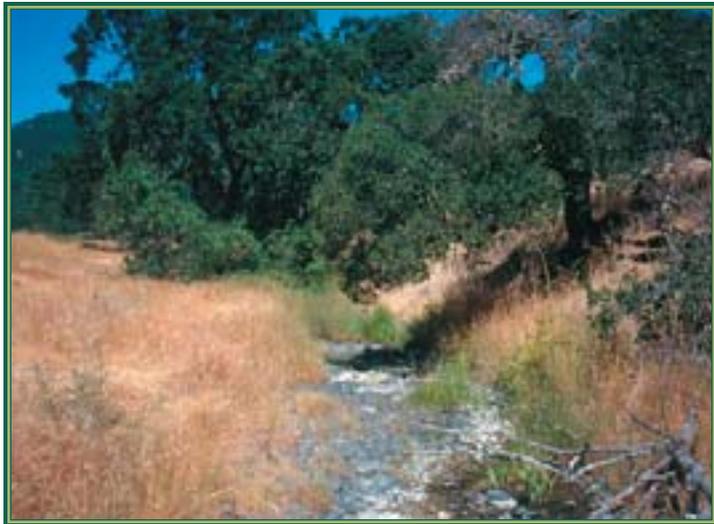
This project involves numerous activities, including a citizen-based water quality monitoring program, a summary of existing scientific information about current watershed conditions, a stream channel assessment, and an outreach and education effort. The project will educate planning group participants and other citizens about watershed functions and current conditions in the Mt. Diablo Creek watershed. The Mt. Diablo Creek watershed CRMP process will build local community capacity for watershed management by providing a forum for stakeholders representing diverse interests to develop a plan for the entire watershed. This plan eventually will result in the design and implementation of watershed improvement activities to maintain and restore ecosystem function and protect and improve water quality in the Mt. Diablo Creek watershed.



Springtime view of Donner Creek—tributary and headwaters of Mt. Diablo Creek.

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A lack of riparian cover contributes to early summer dryness of this tributary to Suisun Creek.

PURPOSE

Implement priority elements of the Suisun Creek Watershed Program (SCWP) to enhance habitat and improve land management practices

PROJECT GOALS

- ✦ Improve collaboration between public and private parties by increasing local community capacity
- ✦ Evaluate the potential for improving Lake Curry to provide a reliable water supply that also benefits coldwater fish in Suisun Creek
- ✦ Work with property owners to eradicate invasive nonnative plant species and replant riparian habitats with native species that support fish and wildlife
- ✦ Implement the Fish Friendly Farming Program on agricultural lands

AWARD AMOUNT

\$580,000

WATERSHED

Suisun Bay Watershed

COUNTY

Napa and Solano Counties

CALFED REGION

Bay Region

LEGISLATIVE DISTRICTS

US Congress: 1 and 7, State Assembly: 8,
State Senate: 2 and 4

Benefits to the Bay-Delta System

The Suisun Creek watershed drains portions of Napa and Solano Counties and flows into Suisun Marsh and Suisun Bay. Working with local landowners and agencies, the SCWP helps improve water quality through direct actions with landowners and improves land management practices by agricultural and rural residential owners. The backbone of this project is outreach to residents with a goal of increasing their capacity to effectively manage their watershed and resources. Education topics include watershed stewardship, resource conservation, erosion control, and fish-friendly farming practices. This project also incorporates invasive species removal and native plant revegetation demonstration projects at volunteered sites throughout the watershed to build the local knowledge base in addressing the widespread invasive plant problem, bringing benefits to the local community as well as Bay-Delta users. Improved local water quality in the Suisun Creek watershed can reduce the area's dependence on Delta water imports. The project also yields local benefits to the agricultural interests in the watershed, and to recreational users in the watershed and downstream in the Delta.

PROJECT OVERVIEW

The Suisun Creek watershed is a 56-square-mile drainage in Napa and Solano Counties that flows into Suisun Marsh and Suisun Bay. Suisun Bay is listed as a Class I impaired water body. However, the Suisun Creek watershed is one of the few Bay Area watersheds without major urbanization, and it currently supports wild steelhead. The SCWP was started in 2000 as a partnership between local landowners interested in protecting Suisun Creek and the nonprofit California Sportfishing Protection Alliance. These partners, along with elected officials, environmental and agricultural groups, resource agencies, and other stakeholders, directed the development of the Suisun Creek Watershed Plan. The plan identified a number of integrated priority actions that are now being implemented.

To increase the reliability of the local urban water supply and provide coldwater releases for steelhead, SCWP is evaluating changes to the management operations of Lake Curry. Several invasive plants—*Arundo donax*, Himalayan blackberry and blue periwinkle—are overtaking the native plant species in the riparian corridor. In collaboration with local landowners, SCWP is developing an eradication program and educating landowners on effective removal and revegetation techniques through demonstration projects. Pre- and post-project monitoring provides data on the effectiveness of these techniques. The results are shared with other watershed communities.

Agricultural landowners are also participating in the Fish Friendly Farming Program, which has been highly successful in the Russian, Navarro, and Napa River watersheds. Through a series of workshops, farmers learn about effective watershed management practices that can be implemented on their agricultural land. These practices can improve habitat and water quality and reduce excess sediment loading. While agriculture is the primary land use in the watershed, rural residential development is on the rise. Outreach materials and workshops for non-farming landowners cover rural road maintenance and management, fire hazard reduction, water conservation, pesticide use, erosion control, and creek care. These integrated outreach and education programs are leading to increased local stewardship and improved environmental quality.



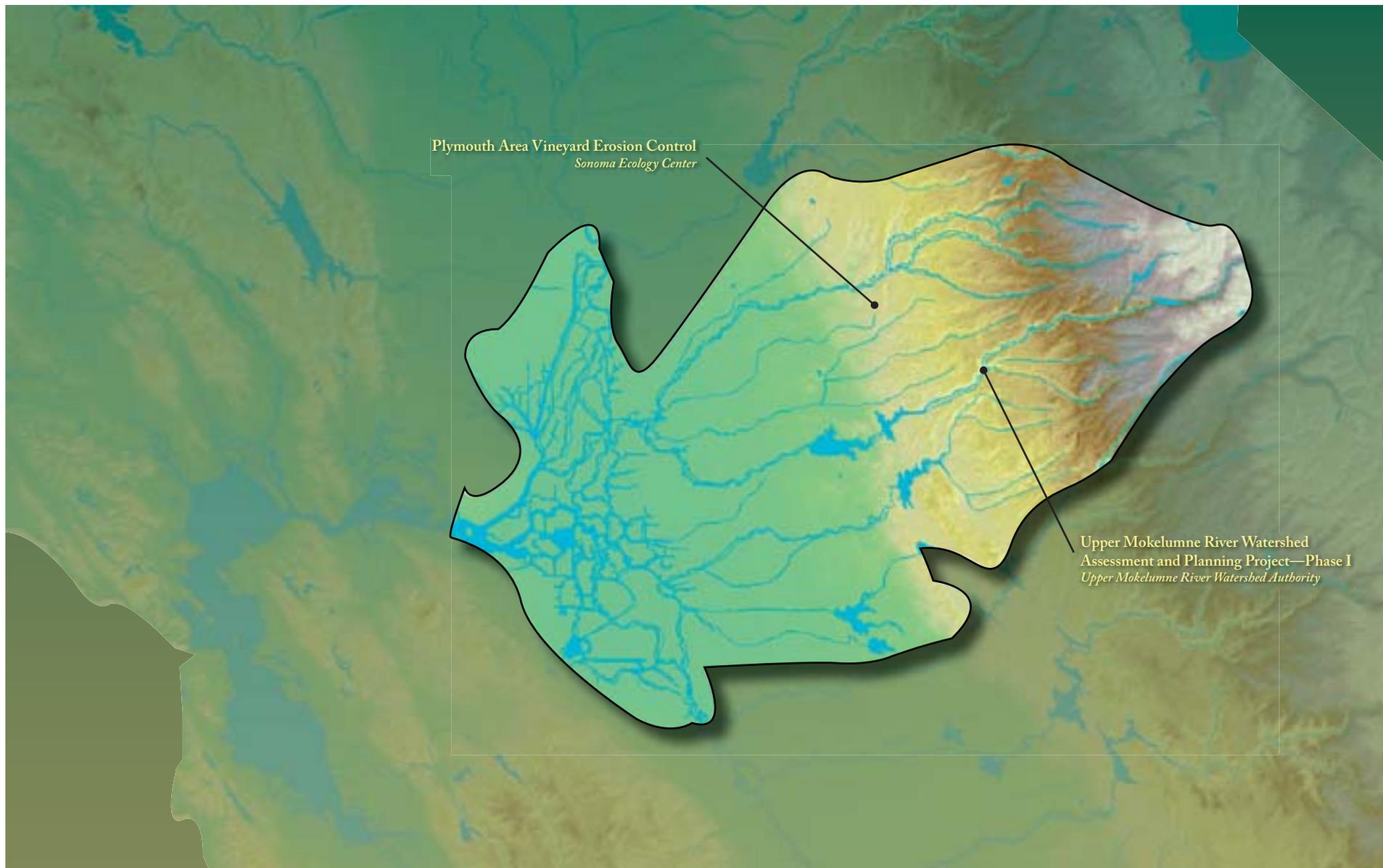
Downstream section of the same tributary with well-shaded, cool-water steelhead rearing habitat.

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PLYMOUTH AREA VINEYARD EROSION CONTROL

Sonoma Ecology Center



Rainfall simulator preparation; the rainfall rate is set at about 1 inch per hour.

PURPOSE

Protect the water quality of local creeks by promoting vineyard erosion control in the Shenandoah Valley and adjacent areas

PROJECT GOALS

- ✦ Conduct site assessments to analyze soils and erosion potential
- ✦ Conduct stream water quality and stage monitoring to assess the current contribution of vineyard and non-vineyard erosion to stream water quality
- ✦ Develop an education and outreach component that demonstrates the need for erosion control measures in the area
- ✦ Hold sustainability assessment workshops for growers in Amador County
- ✦ Implement erosion control strategies at test sites and monitor their effectiveness

AWARD AMOUNT

\$468,500

WATERSHED

Upper Cosumnes River Watershed

COUNTY

Amador County

CALFED REGION

Delta Region

LEGISLATIVE DISTRICTS

US Congress: 4, State Assembly: 4, State Senate: 1

Benefits to the Bay-Delta System

The Plymouth Area Vineyard Erosion Control project studies the impacts of vineyard erosion in the Shenandoah Valley in Amador County and enlists the help of community members in protecting the health of their local water resources by educating them about the function and health of the larger Cosumnes River watershed. By reducing erosion and sedimentation and by determining which erosion control measures work best, this project directly improves the surface water quality of local streams, the Cosumnes River, and ultimately, the Bay-Delta system. As part of the project, a pamphlet summarizing the effectiveness of each implemented erosion control strategy, management concerns, and costs will be created and widely distributed. Local growers will benefit from increased knowledge of different treatment methods. The information can be shared with growers in similar areas, such as the Central Coast and Sonoma-Napa regions. Local groundwater users will also benefit through increased protection for local aquifers.

PROJECT OVERVIEW

In recent years, the rural areas surrounding the City of Plymouth, located in the Shenandoah Valley in Amador County, increasingly have been converted to vineyards. Easier-to-farm bottomlands are already in production, so farmers are turning steeper slopes into areas of winegrape production. The slopes are within the drainage basins of Pigeon Creek and Big Indian Creek, both of which are tributaries to the Cosumnes River, and their soils are highly volcanic. While some grape growers in this region have voluntarily implemented erosion control strategies, little, if any, monitoring has been done to evaluate the effectiveness of these strategies. Few data exist regarding the impact of vineyard development on the shallow groundwater of this area, the nutrient and sediment loads in Pigeon Creek and Big Indian Creek, and water quality in general.

The Plymouth Area Erosion Control Project investigates vineyard erosion in the Shenandoah Valley and adjacent areas, the contribution of this erosion to water quality in local creeks and groundwater, and the effectiveness of several vineyard erosion control measures at volunteer demonstration sites around the watershed. The initial stage of this project assesses actual current contribution of vineyard and non-vineyard erosion to stream water quality through stream monitoring to provide a baseline data set.

Local winegrape growers play a large role in this project, as volunteer growers are implementing the erosion control measures at demonstration sites on their own land. Workshops are being held to educate growers about erosion processes, impacts, and control strategies, and to select which erosion control strategies each grower will implement at which sites. This project uses rainfall simulation, a convenient and easily replicated methodology, to evaluate erosion and associated sediment, nutrient, and pesticide transport at each site. Additional stream monitoring is used to assess the value of the erosion control strategies in protecting groundwater and surface water.

Public outreach and follow-up workshops will be conducted to educate the general public about the overall need for watershed protection, the effects of various land use practices on watershed processes, and the role of erosion control in watershed protection.



Rainfall simulation has begun. Samples will be collected as soon as runoff begins.

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Using a collaborative process, this project reflects the knowledge and interests of the Mokelumne River watershed communities.

PURPOSE

Establish an assessment methodology, select a preferred tool/model for evaluating drinking water threats, identify applicable existing data, and design a data collection strategy to prepare for the Phase II watershed assessment and plan for the Upper Mokelumne River watershed

PROJECT GOALS

- ✦ Develop a science-based, stakeholder-supported watershed assessment methodology
- ✦ Create a database to compile existing data needed to conduct a watershed assessment.
- ✦ Build a stakeholder-supported monitoring and data collection program designed to fill identified data gaps

AWARD AMOUNT

\$200,000

WATERSHED

Upper Mokelumne River Watershed

COUNTY

Alpine, Amador, and Calaveras Counties

CALFED REGION

Delta Region

LEGISLATIVE DISTRICTS

US Congress: 3; State Assembly: 4, 10, and 25;

State Senate: 1

Benefits to the Bay-Delta System

The Upper Mokelumne River watershed is a significant source of drinking water and is a key tributary to the Bay-Delta. This project develops a stakeholder-supported and stakeholder-implemented watershed data collection and monitoring program to establish a baseline for a watershed assessment of the Upper Mokelumne River. This effort provides benefits to water users by identifying areas in need of source water protection and any negative impacts on beneficial uses of surface water. The local community will benefit from improved local drinking water conditions and improved recreation opportunities. In addition, local governments will have better information for making land use decisions. The protocol developed through this project will serve as a model for other watersheds and could be integrated into the overall CALFED science and monitoring program.

PROJECT OVERVIEW

The Upper Mokelumne River watershed is a source of drinking water for millions of Californians and is a key tributary to the Sacramento–San Joaquin River Delta. The watershed encompasses 578 square miles in Alpine, Amador, and Calaveras Counties on the western slope of the Sierra Nevada and is home to many threatened and endangered fish and wildlife species. Though water quality in the watershed is generally good, local citizens have identified significant threats to the support of several beneficial uses. Issues of concern include protection and enhancement of public drinking water supplies and resource-based recreation, restoration of riparian and aquatic habitat, and protection of water quality from the impacts of timber harvesting, hydropower production, wildfires, and land development.

The Upper Mokelumne River watershed currently lacks comprehensive, data-based documentation of threats to the watershed, its sources, and potential impacts on different beneficial uses. This project is the first phase of the assessment process, and calls for the development and implementation of a stakeholder-supported assessment and data collection methodology. Potential threats to currently supported uses will be identified by stakeholders and addressed in the data collection and monitoring plan. In a subsequent phase, a watershed assessment will be completed based on the systematic interpretation of objective data collected in this phase using the stakeholder-supported assessment methodology. Building and achieving stakeholder support for the assessment methodology and data collection strategy is essential to obtain acceptance of the management actions and a commitment to work collaboratively to implement them.

An important expected outcome of the project is a better cooperative environment within which future management decisions affecting beneficial uses within the Upper Mokelumne River watershed can be made. The collaborative nature of this project will allow watershed stakeholders to develop a vision for how the various beneficial uses can be balanced to achieve conditions acceptable for every stakeholder. After the assessment is completed, stakeholders can identify locations where restoration or protection projects are most critical using the assessment results for guidance. The technical approaches developed as part of this project represent a means to measure current progress toward implementing the vision.

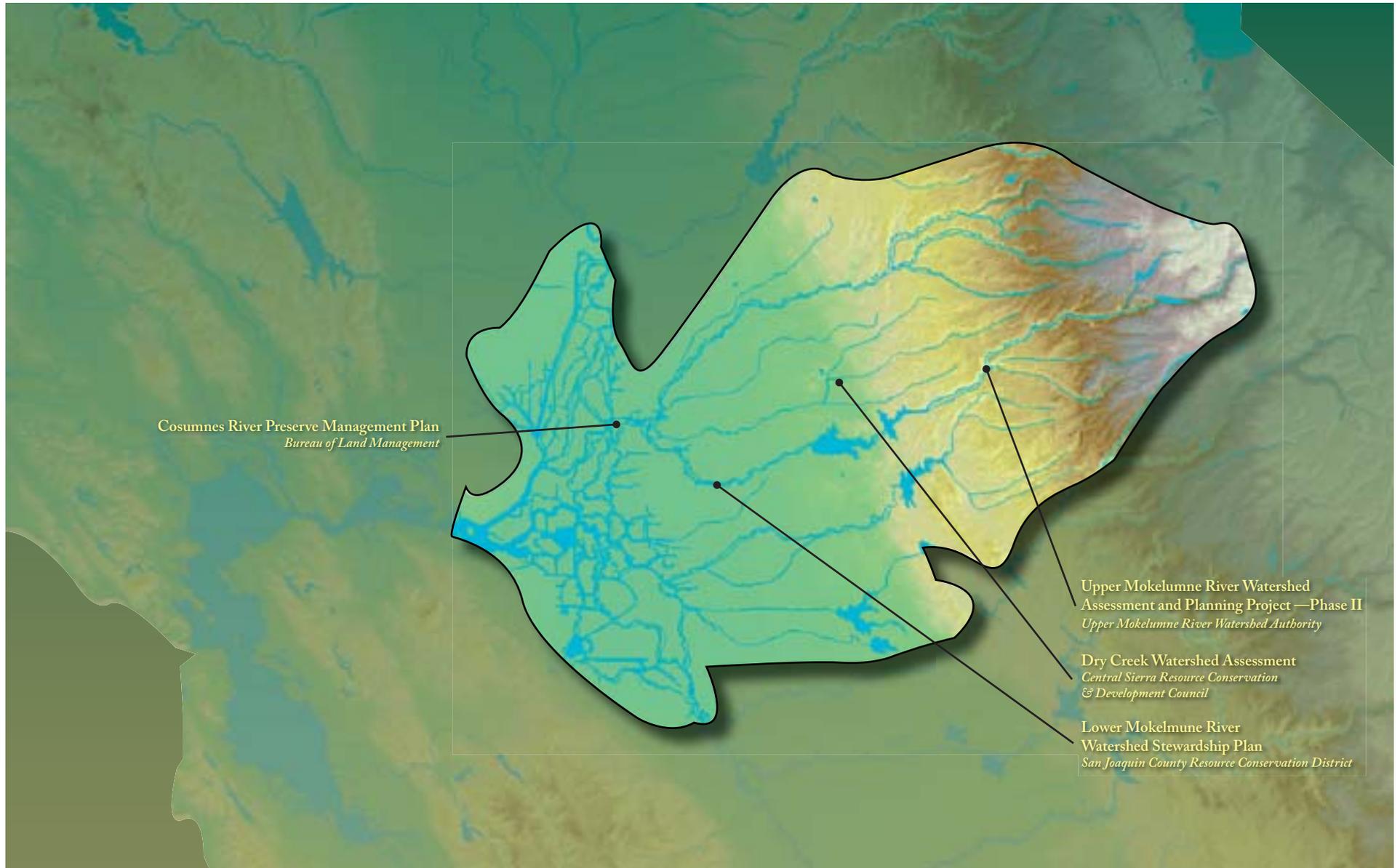


A critical piece of the UMRWAP is the development of a tool to assess threats to the drinking water supply.

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COSUMNES RIVER PRESERVE MANAGEMENT PLAN

Bureau of Land Management



The Cosumnes River Preserve incorporates local agriculture into habitat enhancement for sensitive species.

PURPOSE

Improve watershed management for the Cosumnes River Preserve management area

PROJECT GOALS

- ✦ Prepare a comprehensive watershed management plan, including management direction and an action-oriented protection and restoration plan in collaboration with partner agencies and organizations, and with input from local watershed stakeholders
- ✦ Develop a GIS database to consolidate existing data, facilitate ongoing monitoring, and provide for long-term sustainability of management actions
- ✦ Implement community-based education and stewardship programs to build local support and capacity for conservation and restoration

AWARD AMOUNT

\$692,150

WATERSHED

Lower Cosumnes and Lower Mokelumne River Watersheds

COUNTY

Sacramento and San Joaquin Counties

CALFED REGION

Delta Region

LEGISLATIVE DISTRICTS

US Congress: 3 and 11; State Assembly: 10, 15, and 26;

State Senate: 1 and 14

Benefits to the Bay-Delta System

Building on substantial past and ongoing investment made by CALFED and other funding entities, the Cosumnes River Preserve adds to the greater watershed of the Bay-Delta system through efforts to restore ecological health and improve water management within the lower Cosumnes watershed. The Cosumnes River Preserve Management Plan consolidates the findings and practices of 16 years of successful cooperative management to develop new restoration strategies, reaffirm successful restoration techniques, and support watershed conservation. Developing a management plan collaboratively improves coordination among Preserve partners. The scientific findings and adaptive management techniques resulting from this project are applicable to other parts of the watershed and other watersheds, contributing to the health of the Bay-Delta system as a whole.

PROJECT OVERVIEW

The Cosumnes River Preserve partnership is developing a comprehensive management plan for the Cosumnes River Preserve, which includes 13 miles of the lower Cosumnes River corridor and more than 40,000 protected acres in the lower Cosumnes watershed and northeast Delta. The Preserve encompasses natural and restored habitats (riparian valley oak forest, wetlands, vernal pools, grasslands, streams), as well as managed wetlands, agricultural lands, and rangeland.

Past strategic planning has resulted in activity plans for managed wetlands, grazing, organic rice farming, and weed management. No plans exist for riparian restoration and public use. This effort will focus on developing an integrated management plan, addressing the “on-ground” management of these important uses and values. Local community meetings will be used to identify important social and community concerns and define desired future conditions. The proposed project develops and refines goals and objectives from diverse partnerships into a single comprehensive plan that will improve management efficiency, develop adaptive management protocols, and better integrate the groups in the watershed.

Development of the management plan includes outreach to the local community and relevant agencies and organizations in the watershed. Dissemination of information through public meetings during the planning process, newsletter updates, and periodic public events at the Preserve are opportunities to carry out watershed education and foster sound stewardship.



Restoration activities at the Preserve provide opportunities for education and community involvement.

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Stream restoration/community education project site at Minnie Provis Park on Sutter Creek near the City of Sutter Creek.

AWARD AMOUNT

\$225,000

WATERSHED

Dry Creek Watershed

COUNTY

Amador County

CALFED REGION

Delta Region

LEGISLATIVE DISTRICTS

US Congress: 4, State Assembly: 4, State Senate: 1

PURPOSE

Develop a dynamic stakeholder group to evaluate the Dry Creek watershed and develop plans to improve water quality, water supply reliability, and ecosystem quality in the watershed

PROJECT GOALS

- ✦ Build a formal, broad-based, collaborative organization of stakeholders
- ✦ Increase awareness and understanding of natural processes in the watershed and the impacts these processes have downstream and to the Bay-Delta
- ✦ Improve the capacity of the community to manage its watershed by providing stakeholders with the knowledge and tools to make responsible land use and resource decisions
- ✦ Assemble data and produce reference documents on the Dry Creek watershed that will assist with watershed planning

Benefits to the Bay-Delta System

The Dry Creek watershed is located in the Upper Mokelumne River watershed federal hydrologic unit, which is a significant source of drinking water and a key tributary to the Delta. The Dry Creek Watershed Assessment project contributes to the goals of the CALFED Water Quality Program by addressing surface water quality concerns in the Dry Creek watershed. This project also helps by identifying ways to improve water quality in the Upper Mokelumne River watershed, which will lead to improved habitat downstream for self-sustaining anadromous fish populations. Other benefits of the project include outreach and education programs to increase awareness of overall watershed health, encouragement of stakeholder participation, and creation of a sense of ownership among the local community.

PROJECT OVERVIEW

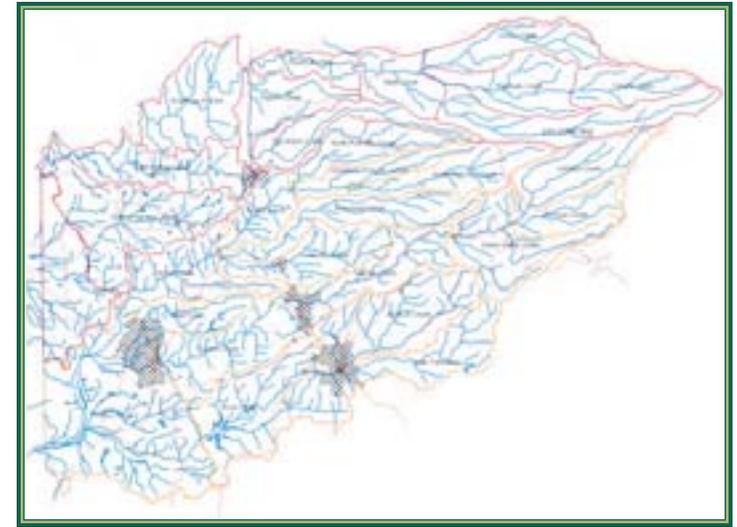
The Dry Creek watershed covers more than 300 square miles between the Upper Mokelumne River watershed and the Upper Cosumnes River, primarily in Amador County. Stakeholders in the Dry Creek watershed have expressed concern that surface water quality in their watershed may be threatened. Stormwater runoff, degraded ecosystem quality, discharge from mines, timber management practices, agriculture, urbanization, elevated water temperature, and waste discharge are key factors in degraded water quality in the watershed.

This project creates a new watershed organization, the Dry Creek Watershed Association (DCA), to assess the Dry Creek watershed and address concerns identified by stakeholders. The Central Sierra Resource Conservation and Development Council—a partnership among representatives of five counties, numerous cities, several private and public entities, and other special interest groups—is working together to develop the DCA. In addition to developing the Dry Creek Watershed Assessment, the DCA will:

- ✿ establish priorities among a variety of watershed concerns expressed by stakeholders,
- ✿ gather knowledge through education workshops to assist the DCA assessment,
- ✿ develop an inventory of current watershed conditions,
- ✿ assess water quality pollutants through monitoring,
- ✿ synthesize existing studies and data into a reference document for watershed planning, and
- ✿ engage public agencies to help address watershed issues.

The desired outcomes of the Dry Creek Watershed Assessment are to address the concerns expressed by the watershed stakeholders and improve water quality, water supply reliability, and ecosystem quality in the watershed.

The DCA is reaching out to watershed stakeholders through organized meetings and watershed tours to promote awareness, encourage dialogue, and increase a shared understanding of natural and human-made processes in the Dry Creek watershed and the impacts these processes have in the watershed and downstream in the Delta. The next phase of this project will develop a formal watershed management plan and begin implementation of corrective measures to protect and restore the Dry Creek watershed.



The Dry Creek planning area contains the tributaries of Dry Creek (gold) and the Cosumnes River within Amador County (red). Major communities are checked on the map.

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LOWER MOKELUMNE RIVER WATERSHED STEWARDSHIP PLAN

San Joaquin County Resource Conservation District



Growers filling out the Lodi Winegrape Growers workbook, in which farmers examine their on-farm practices. A similar workbook for walnut growers is being developed.

AWARD AMOUNT

\$1,377,884

WATERSHED

Mokelumne River Watershed

COUNTY

San Joaquin County

CALFED REGION

Delta Region

LEGISLATIVE DISTRICTS

US Congress: 11, State Assembly: 10, State Senate: 5

PURPOSE

Enhance overall watershed health and water quality

PROJECT GOALS

- ✧ Improve water quality
- ✧ Reduce non-point source pollution from agricultural and urban/suburban areas
- ✧ Develop and strengthen community partnerships needed to further implement the Lower Mokelumne River Watershed Stewardship Plan
- ✧ Increase awareness of watershed issues
- ✧ Increase wildlife and riparian habitat
- ✧ Build capacity for future watershed projects

Benefits to the Bay-Delta System

The Mokelumne River is the largest eastside tributary to the Bay-Delta, draining approximately 661 square miles. Implementing this project benefits the Bay-Delta through improved water quality, ecosystem restoration, and increased capacity of residents to understand issues and promote practices that contribute to a healthy watershed. Grape and walnut growers will benefit from improved management practices and accrued returns from a successful market-based strategy developed through this project. Downstream water users will gain from the improved water quality in the Mokelumne River. Improved water quality also will provide benefits to recreational users of the Delta waters in of the project area and downstream. The added monitoring data will help local governments and state agencies develop more effective policies and programs related to natural resource management of the lower river.

PROJECT OVERVIEW

This project implements part of the Lower Mokelumne River Watershed Stewardship Plan, a 3-year stakeholder-led effort that identifies and addresses important watershed issues. One major issue in the watershed is the removal or loss of natural riparian vegetation. Rearing habitat for Chinook salmon suffers from a lack of riparian shade and cover, particularly in the lower reach of the river. This project establishes a permit clearinghouse for restoration efforts—both privately and publicly funded—and is being implemented in coordination with the City of Lodi, the Lodi-Woodbridge Winegrape Commission, UC Extension, consultants, and East Bay Municipal Utility District. It facilitates efforts to protect, enhance, and restore riparian habitat by helping landowners determine the type of restoration best suited to their property, and assisting in installation. The anticipated results of riparian habitat restoration are improved conditions for spawning salmonids; improved habitat for wildlife, including some special-status species; improved water quality resulting from buffer strips between agriculture and the water, lessening of chemical input; streambank stabilization and erosion control; and reduction of invasive nonnative plants.

To monitor success of the project, baseline data on specific water quality parameters are collected downstream. Because part of the project encourages integrated pest management, vineyard pest numbers also are monitored. Many incentive programs exist for winegrape growers, but few are focused on increasing the value of the grape by using sustainable farming practices. The project includes a market-based program that rewards growers financially for being good watershed stewards. If successful, the program will be expanded to other growers.

The outreach component of the project includes citizen monitoring, school programs, media campaigns, and self-assessment materials. Increased public awareness of priority watershed issues is a primary step toward the overall goal of a healthy watershed. Self-assessment programs for urban and suburban residents and agricultural producers explain important watershed issues like water and habitat quality, ecosystem function, and non-point source pollution. Using the Lodi Winegrape Grower's Workbook as a model, workbooks are underway for growers of walnuts, the second largest agricultural crop in the watershed. It will help them evaluate practices such as water management and pesticide use that affect watershed health and water quality. Follow-up contacts after materials are sent encourage awareness of issues, participation in the self-assessment, and behavior changes.



The Lodi Lake Docents educate the community on watershed function, and use the watershed model to demonstrate how non-point source pollution affects our watersheds.

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The UMRWAP develops understanding of threats to water quality in the watershed.

AWARD AMOUNT

\$750,000

WATERSHED

Upper Mokelumne River Watershed

COUNTY

Alpine, Amador, and Calaveras Counties

CALFED REGION

Delta Region

LEGISLATIVE DISTRICTS

US Congress: 3; State Assembly: 4, 10, and 25;

State Senate: 1

PURPOSE

Develop a technically defensible, stakeholder-supported watershed assessment and watershed management plan for the Upper Mokelumne River watershed

PROJECT GOALS

- ✧ Provide support for local land use and resource management decision-making
- ✧ Create a better informed and cooperative decision-making structure for management
- ✧ Increase local capacities for integrated, comprehensive watershed management
- ✧ Develop performance measures and indicators for protection of beneficial uses
- ✧ Fill critical gaps in existing data on indicators of watershed health and establish a continuing data collection program for the watershed
- ✧ Provide outreach to the broader watershed community on issues pertaining to watershed health and water quality

Benefits to the Bay-Delta System

The UMRWAP provides significant benefits to the Upper Mokelumne River watershed community by fostering collaboration and coordination among multiple watershed stakeholders—including local, state, and federal agencies, residents, commercial interests, recreationists, environmental organizations, and landowners—to develop a watershed assessment and management plan for watershed protection and restoration. Local benefits will also include improved recreational opportunities and improved protection for local groundwater supplies. Other benefits are ongoing resources for a variety of stakeholders, including a framework to guide timber harvest plans (timber industry), state and federal resource plans (U.S. Forest Service and Bureau of Land Management), local land use plans (local governments), operation plans and schedules (hydroelectric operations), and source water protection plans (local water supply districts).

PROJECT OVERVIEW

The Upper Mokelumne River watershed is an important eastside tributary to the Sacramento–San Joaquin River Delta. The watershed is home to many threatened and endangered fish and wildlife species, provides a source of drinking water for millions of Californians, and is a four-season recreational playground for many more. Land and water resource management decisions in the watershed are made by a variety of public and private entities, and this project aims to create a better-informed and cooperative decision-making structure to guide land use and resource management activities. Members of the Upper Mokelumne River Watershed Authority include the Alpine County Water Agency, Amador County Water Agency, Calaveras County Water District, Calaveras Public Utility District, East Bay Municipal Utility District, Jackson Valley Irrigation District, and Alpine, Amador, and Calaveras Counties.

This project represents Phase II of the UMRWAP. Phase I developed a watershed assessment methodology, compiled a database of existing information, and developed a stakeholder-supported monitoring and data collection plan needed for conducting a watershed assessment. Phase II develops the watershed assessment and a watershed management plan to increase local capacity for integrated, comprehensive watershed management. The intent of Phase II is to develop a better understanding of the water bodies in the watershed and to identify the factors that may threaten or impair water quality. Tasks included in this phase are:

- ✿ monitoring and other data collecting activities designed to fill critical data gaps in existing data on indicators of watershed health;
- ✿ assessing the Upper Mokelumne River watershed using stakeholder-supported watershed assessment methodology;
- ✿ developing a tool/model for assessing threats to drinking water supply;
- ✿ developing a watershed management plan; and
- ✿ conducting continuing stakeholder and community outreach.

The UMRWAP has led to improved interagency relationships and a better understanding of stakeholder interests. Ultimately, implementation of the actions identified in the watershed management plan will restore and protect a variety of beneficial uses. The plan will also provide technically defensible guidance for local, state, and federal decision-making through existing processes. In this way, the achievement of watershed improvement will not be dependent upon the availability of continued grant funding.



The UMRWAP process and resulting watershed management plan will be a template for watersheds throughout the state.

CONTACT INFORMATION

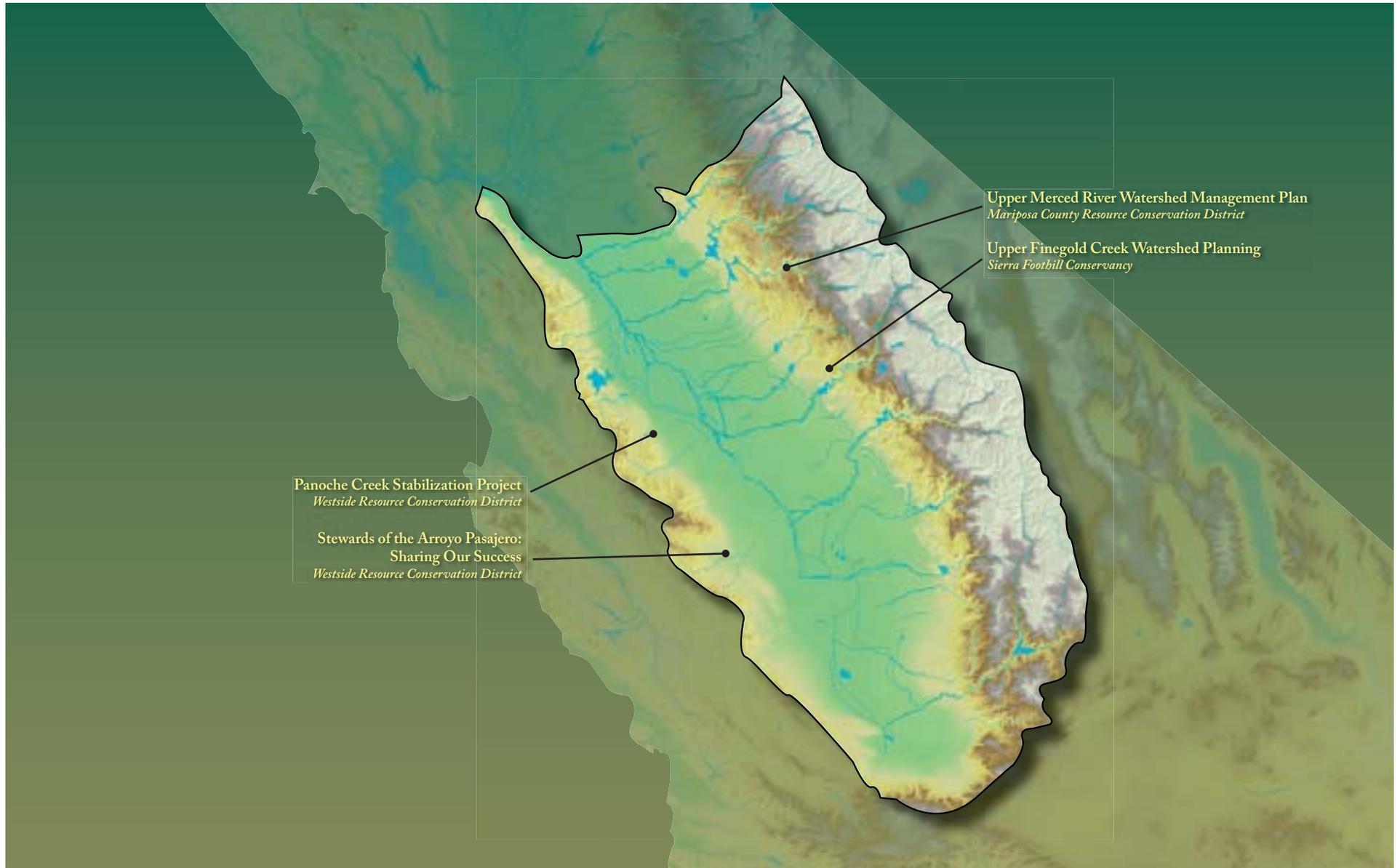
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PANOCHÉ CREEK STABILIZATION PROJECT

Westside Resource Conservation District



Low-flow crossing, panoramic view.

PURPOSE

Design a stable, permanent low-flow crossing at North Avenue and Panoche Creek

PROJECT GOALS

- ✦ Reduce sediment and contaminants
- ✦ Stabilize streambanks in the vicinity of the low-flow crossing

AWARD AMOUNT

\$200,000

WATERSHED

Panoche Creek and Silver Creek Watersheds

COUNTY

Fresno County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 20, State Assembly: 30, State Senate: 16

Benefits to the Bay-Delta System

The Panoche Creek and Silver Creek watersheds are located approximately 35 miles west of Fresno. The Water Quality Program Plan identifies the watersheds as the largest source of selenium-laden runoff to the San Joaquin River. Through stabilization of an earthen stream crossing, this project reduces contaminated sediment flow through the watershed, and ultimately in the San Joaquin River and Bay-Delta system. A reduction in contaminated runoff from westside San Joaquin River tributaries generally benefits wildlife habitats downstream. This locally led, collaborative project will educate the local community about watershed values and construct and monitor an innovatively designed stream crossing. Monitoring results will provide Caltrans, Fresno County Public Works, and other agencies with information to implement effective crossings in other areas of the San Joaquin Valley. Local landowners, residents, and businesses benefit directly by obtaining a stable crossing to reach their homes, businesses, and agricultural land.

PROJECT OVERVIEW

The Panoche Creek and Silver Creek watersheds are located in western Fresno County, approximately 35 miles west of Fresno. Panoche Creek and Silver Creek originate in the Coast Range and ultimately drain through the San Joaquin River to the Bay-Delta. Over the past 50 years, residents of the watershed have been subjected to frequent flooding that has caused extensive agricultural damage, erosion, and sediment transport in and beyond the watershed's boundaries. The constituents of the sediment include selenium, boron, salts, and other minerals that cause surface and subsurface water quality concerns.

This project creates a low-flow crossing over Panoche Creek at North Avenue through a cooperative and collaborative effort between local landowners and technical experts facilitated by the Panoche Creek–Silver Creek Coordinated Resource and Management Planning team (CRMP). The crossing, located approximately 4 miles downstream of Interstate 5 and 1.5 miles upstream of the California Aqueduct, is privately maintained. There are more than 30 low-income residents who must use this crossing to reach their homes. In addition, the crossing provides access to three major industrial/commercial businesses and to 1,000 acres of productive agricultural land. The current temporary earthen crossing is often washed out by storm events, contributing a significant amount of contaminated sediment to Panoche Creek. Stabilization of this crossing will dramatically decrease the erosion rate of this section of Panoche Creek and will decrease the volume of sediment reaching downstream agricultural lands, the City of Mendota, the San Joaquin River, and the Bay-Delta.

Design of the crossing is more technologically advanced than crossings that have been installed in the past. The improved design will address the problems attributable to the geology and hydrology in the western San Joaquin Valley. Installation and monitoring of this demonstration project will provide California Department of Transportation (Caltrans), Fresno County Public Works, and other agencies with information to implement effective creek crossings in other areas of the San Joaquin Valley. The CRMP is an open public process in which all information gathered by monitoring is circulated for public use. The results of this project will be made available to citizens and organizations throughout California via the CRMP website, which is hosted by the California Department of Water Resources Watershed Program.



Approaching the low-flow crossing.

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STEWARDS OF THE ARROYO PASAJERO: SHARING OUR SUCCESS

Westside Resource Conservation District



Domengine Creek meanders within Ragged Valley.

PURPOSE

Develop a watershed management plan for the Domengine watershed

PROJECT GOALS

- ✦ Involve local landowners and communities in watershed education programs
- ✦ Reduce sediment transport downstream and decrease runoff and erosion rates
- ✦ Implement best management practices and monitoring plans on local farms and ranches

AWARD AMOUNT

\$55,550

WATERSHED

Domengine Watershed

COUNTY

Fresno County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 20, State Assembly: 30, State Senate: 15

Benefits to the Bay-Delta System

The Domengine watershed, located in the San Joaquin Valley, is substantially impaired. Runoff flooding during major storms causes problems at local drinking water treatment plants and adds sediment and selenium to the California Aqueduct. This project will markedly decrease inflow of sediments and pollutants into local water sources and the Aqueduct. Implementing best management practices, improving grazing management, and developing long-term planning for the watershed will benefit both local water supply treatment plants and water users in Southern California who receive water from the Aqueduct. Flood damage reduction, local rangeland improvements, and improved grazing conditions are additional benefits to the local community. Wider public benefits will come from improvements to the riparian corridors, reduction of excess erosion, and removal of nonnative invasive species.

PROJECT OVERVIEW

Located in the San Joaquin Valley, adjacent to the California Aqueduct and Interstate 5, the 142-square-mile Domengine watershed is substantially impaired. Heavy rainfall and natural erosion that has been accelerated by the decline of rangeland and lack of riparian vegetation have moved massive amounts of sediment to the valley floor. Runoff flooding during major storms causes problems at local drinking water treatment plants and adds sediment to the California Aqueduct. In 1997, a major storm washed out a bridge crossing at Arroyo Pasajero Creek and Interstate 5. The event killed motorists and rushed sediment and contaminants into the California Aqueduct. As a result, the Arroyo Pasajero Coordinated Resource Management and Planning Program (CRMP) was formed with the mission to improve erosion and sediment control through improved land management practices in the Arroyo Pasajero watershed. In 2001, landowners in the Domengine watershed, adjacent to the Arroyo Pasajero, asked to be included in the CRMP because the two watersheds share consistent goals and objectives. By coordinating their efforts, the landowners and the CRMP are maximizing their effect in the watershed.

In collaboration with the CRMP, the Domengine watershed landowners are preparing a regional watershed plan. The plan identifies best management practices for improving farm and ranch operations, such as better distribution of cattle to reduce grazing impacts on the watershed and better stream channel and bank protection to reduce erosion and flooding. The associated regional monitoring plan identifies protocols for training landowners, sampling, and data collecting methods that measure the effects of the implemented activities. Following the guidelines of the watershed plan, individual farm and ranch plans and associated individual monitoring plans are being developed with specific actions appropriate to each property. Activities in the plans include: installing improved water systems; fencing areas parallel to major drainages; stabilizing stream banks with native riparian plants, berms and matting; and removing invasive plants such as yellow starthistle and tamarisk.

The CRMP is offering annual workshops to continue educating local landowners on watershed monitoring practices such as GPS mapping, watershed assessment, and monitoring tools and protocols. Annual tours of completed projects are offered to the public to publicize improved watershed management practices.



Example of Ragged Valley mass wasting into Domengine Creek.

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Water quality monitoring training day on Upper Finegold Creek.

PURPOSE

Improve water quality and water quantity, and protect habitat in the Finegold Creek watershed

PROJECT GOALS

- ✦ Conduct a watershed assessment to identify resource problems that affect water quality and watershed health
- ✦ Develop a watershed protection plan
- ✦ Plan priority projects to implement the watershed protection plan
- ✦ Encourage watershed stewardship among local landowners

AWARD AMOUNT

\$109,388

WATERSHED

Finegold Creek Watershed

COUNTY

Madera County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 19, State Assembly: 25, State Senate: 14

Benefits to the Bay-Delta System

This project promotes watershed stewardship among local landowners by developing a watershed assessment and watershed management plan to identify priority projects that will improve the water quality, water quantity, and habitat protection in the Finegold Creek watershed. Finegold Creek is a major source of water for the San Joaquin River. Reducing erosion and pollutant levels in the Finegold Creek watershed through a community-based, collaborative process will directly benefit the landowners in the watershed. Local landowners will also benefit because of decreased fire threat and reduction of property loss attributable to erosion. This project improves water that flows into the San Joaquin River and benefits the users of this water. The project also will improve collaboration among agencies and stakeholders in the Finegold Creek watershed and educate landowners about best management practices to reduce soil erosion.

PROJECT OVERVIEW

Upper Finegold Creek comprises a major portion of the Millerton Area watershed and is a source of water for the San Joaquin River. The watershed encompasses 165,000 acres, most of which are under private ownership and zoned for agriculture. The Millerton Area Watershed Coalition, formed in 1998, is currently expanding to include a greater diversity of stakeholders working to better manage the watershed. A local steering committee, chaired by a local citizen, has been formed. The goal of the steering committee is to work with the local agencies, Native American representatives, and other stakeholders to develop a sense of stewardship in the watershed that will lead to a cooperative effort to improve its quality.

The soils in the watershed are of poor quality, and erosion that is causing degradation of water quality is occurring because of land-use activities, poorly constructed culverts, and runoff from 90 miles of paved roads. Additionally, fuel load in the watershed is extremely high, which creates the potential for fires and further erosion. This project is intended to reduce the potential for further watershed degradation by analyzing the Finegold Creek watershed, developing a management plan to identify stressors and other barriers to watershed health, and outlining an action plan and timetable for project implementation to improve water quality and quantity, and terrestrial and aquatic habitat protection. Identification of restoration projects that could be implemented by local contractors is expected to lead to an improvement in the local economy.



Performing dissolved oxygen (DO) analysis on Upper Finegold Creek.

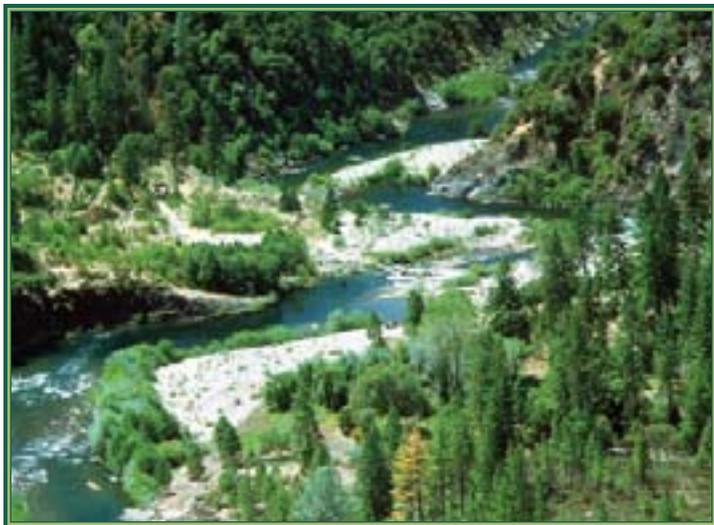
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UPPER MERCED RIVER WATERSHED MANAGEMENT PLAN

Mariposa County Resource Conservation District



The Upper Merced has been designated a Wild and Scenic River.

AWARD AMOUNT

\$199,825

WATERSHED

Upper Merced River Watershed

COUNTY

Mariposa County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 19, State Assembly: 25, State Senate: 12

PURPOSE

Develop a management plan for the Upper Merced River watershed

PROJECT GOALS

- ✦ Create a framework for an Upper Merced River Watershed Plan
- ✦ Establish a formal structure for the Upper Merced River Watershed Council
- ✦ Develop monitoring and assessment protocols for the Upper Merced River

Benefits to the Bay-Delta System

The Upper Merced River flows from its source above the Yosemite Valley, through the Sierra Nevada and the foothills to Lake McClure, and finally into the San Joaquin River and the Sacramento-San Joaquin Delta. It provides a permanent flow of high quality water into the Bay-Delta system. This project improves collaboration among agencies and stakeholders in the Upper Merced River watershed, and educates landowners about ways to reduce wildfires and control nonnative invasive species. Local landowners will benefit from improved watershed health and a reduced threat of wildfires. Implementation of this project will also benefit the Bay-Delta system by addressing nonnative plant species and reducing sedimentation that can follow large wildfires.

PROJECT OVERVIEW

The Upper Merced River watershed encompasses approximately 660,000 acres. The majority of the watershed is public land, including a large portion of Yosemite National Park. The Upper Merced River flows through the Yosemite Valley and is designated as a Wild and Scenic River. The river flows from the western slopes of the Sierra across the Central Valley to join the San Joaquin River, and then flows north to join the Delta near Antioch. The watershed is a key natural resource with significant recreation value.

In an effort to protect the valuable resources of the Upper Merced River watershed, the Mariposa County Resource Conservation District previously implemented Phase I of the watershed plan. Phase I initiated the watershed management planning process and formed a watershed council. This project funds Phase II, which creates a formal structure for the Upper Merced River Watershed Council, develops the framework for a long-range, watershed-wide management plan, and expands participation in the watershed planning process and in community-based education. Education efforts are designed to energize citizens to become stewards of the watershed and are focused on two major threats: wildfires and nonnative invasive species. This project also includes a water quality monitoring component that will establish a sound baseline data set and make the data publicly available. Restoration efforts will be aided by the coordination and expansion of baseline water quality monitoring.

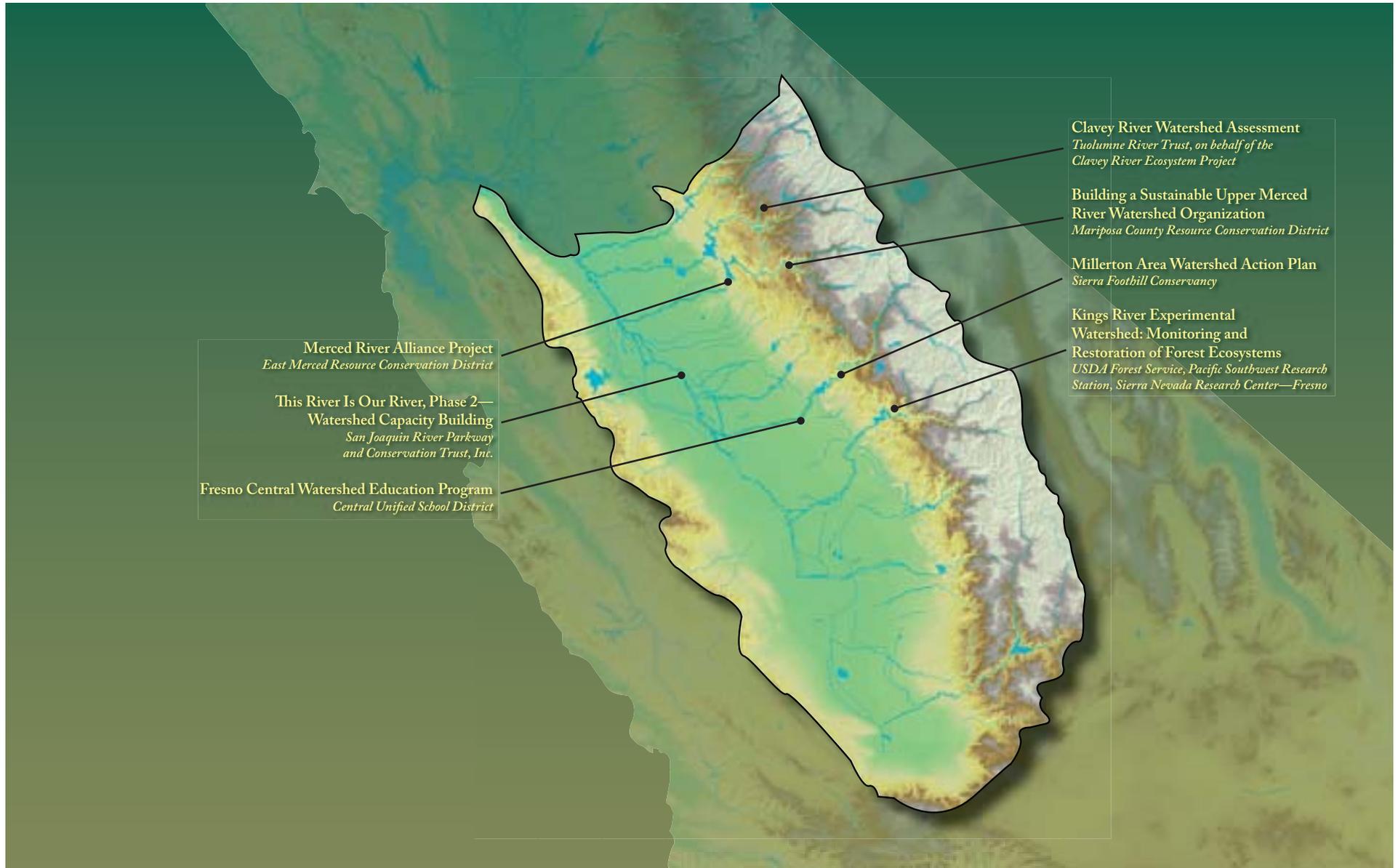


Volunteers learn about water quality monitoring protocols.

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Merced River Alliance Project
East Merced Resource Conservation District

This River Is Our River, Phase 2—
Watershed Capacity Building
*San Joaquin River Parkway
and Conservation Trust, Inc.*

Fresno Central Watershed Education Program
Central Unified School District

Clavey River Watershed Assessment
*Tuolumne River Trust, on behalf of the
Clavey River Ecosystem Project*

Building a Sustainable Upper Merced
River Watershed Organization
Mariposa County Resource Conservation District

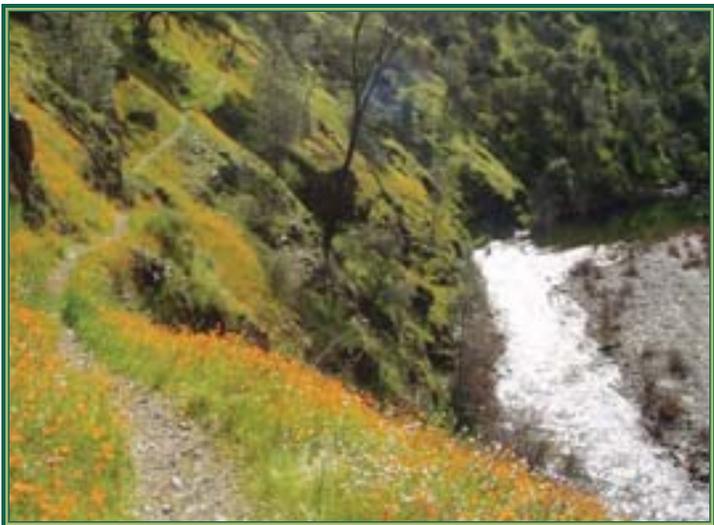
Millerton Area Watershed Action Plan
Sierra Foothill Conservancy

Kings River Experimental
Watershed: Monitoring and
Restoration of Forest Ecosystems
*USDA Forest Service, Pacific Southwest Research
Station, Sierra Nevada Research Center—Fresno*



BUILDING A SUSTAINABLE UPPER MERCED RIVER WATERSHED ORGANIZATION

Mariposa County Resource Conservation District



PURPOSE

Build the sustainability of the Upper Merced River Watershed organization to better manage the cultural, scenic, and natural resources of the watershed

PROJECT GOALS

- ✦ Establish a watershed center to support outreach activities for visitors and residents
- ✦ Complete a scientific literature search for the Merced River watershed
- ✦ Continue yellow starthistle removal demonstration project
- ✦ Implement citizen water quality monitoring program
- ✦ Prioritize tasks that will lead to improved stewardship of the Upper Merced River watershed

Mariposa County's economy relies heavily on visitors who come to the watershed to enjoy recreational opportunities, such as hiking along the Merced River.

AWARD AMOUNT

\$271,080

WATERSHED

Merced River Watershed

COUNTY

Mariposa County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 19, State Assembly: 25, State Senate: 14

Benefits to the Bay-Delta System

The Upper Merced River watershed is largely within Mariposa County in the central Sierra and encompasses 700,000 acres, including Yosemite National Park. Improving the sustainability of the Upper Merced Watershed organization will increase public awareness and understanding of watershed health issues; improve collaboration among local residents, government agencies, and visitors to the watershed; and ensure long-term support for the organization and the watershed. The priority activities of the stakeholders are to establish a watershed center, implement watershed monitoring and assessment protocols, improve scientific literature compilation and information sharing, and continue the removal of invasive yellow starthistle. Support of the Upper Merced River Watershed organization will benefit the visitors and stakeholders in the watershed by encouraging better watershed management practices to protect the scenic, cultural, and natural resources of the watershed.

PROJECT OVERVIEW

The Upper Merced River watershed is located largely within Mariposa County in the Central Sierra and encompasses 700,000 acres. Most of the land is managed by one of three federal agencies, each of which has its own management plans and resource practices. However, more than 100,000 acres are privately owned and used for widely dispersed residences, ranching, or logging. Mariposa County is sparsely populated and its economy depends on the three million tourists who visit the Yosemite National Park in the upper watershed each year. Mariposa County is a rural financial hardship county and its economic health is dependent on the health of the watershed. Visitors and residents must be educated in watershed processes and stewardship if their impact on the watershed is to be positive.

In an effort to extend capacity building, outreach, and education to watershed visitors and Merced River stakeholders, the Upper Merced River watershed (UMRW) organization is establishing a watershed center that will serve as an operations hub for the URMW organization and enhance its visibility and credibility. The center will provide public space for outreach and educational programs, volunteer workshops, and training programs.

Stakeholders in the watershed are focused on three priority projects that will be enhanced by the watershed center. The first priority is to continue the yellow starthistle removal demonstration project to remove the fast-growing nonnative invasive plant that is choking out native plants and habitat. A second priority is to monitor water quality. Volunteer citizen monitors “adopt” a monitoring site on the Merced River and tributaries and conduct quarterly water quality testing. This systematic monitoring will lead to a better understanding of URMW watershed processes and expand the core of trained volunteer stewards. A third priority is to search for, compile, and share scientific literature about the watershed. The literature search addresses a key need identified by the stakeholders to share and coordinate data among agencies or stakeholder interests. A stakeholder committee is reviewing the scientific literature and identifying gaps in existing research. Stakeholders and agencies can then work together to fill the gaps.



Volunteer citizen monitors learn about water quality sampling.

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CLAVEY RIVER WATERSHED ASSESSMENT

Tuolumne River Trust, on behalf of the Clavey River Ecosystem Project



God's Bath, a Clavey River swimming hole, with rushing waters of spring flows.

PURPOSE

Develop a detailed watershed analysis for the Clavey River to provide the basis for long-term protection and management of the watershed

PROJECT GOALS

- ✧ Determine existing conditions in the watershed
- ✧ Define desired future condition of the watershed
- ✧ Identify and prioritize projects and management actions to move the watershed to the desired future condition
- ✧ Build community capacity to understand and participate in management of the Clavey

AWARD AMOUNT

\$774,927

WATERSHED

Clavey River Watershed

COUNTY

Tuolumne County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 19, State Assembly: 25, State Senate: 14

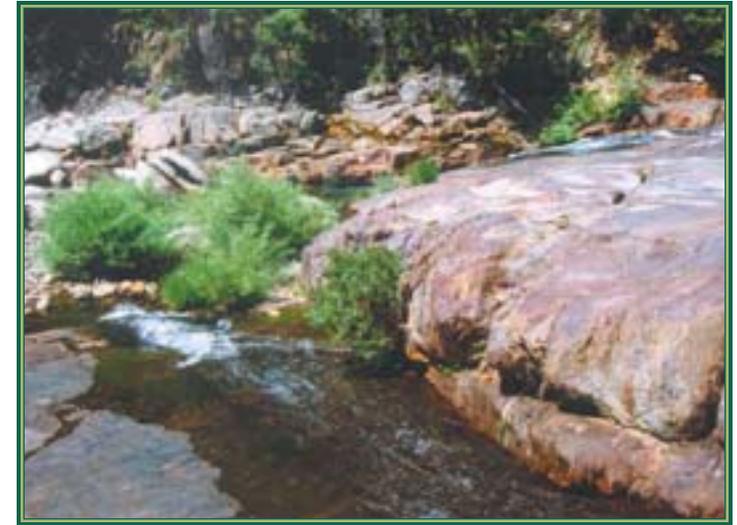
Benefits to the Bay-Delta System

The Clavey River is one of the longest remaining free-flowing rivers in the Sierra Nevada. It supports many terrestrial and aquatic plant and animal species, and is an important component of the regional water supply. It is tributary to the Tuolumne River, which is captured by Don Pedro Reservoir for agricultural and urban water supplies. The goal of the Clavey River Watershed Assessment project is to define existing conditions and build community capacity for better watershed management. Primary benefits of this project will be to the Stanislaus National Forest and the public who use the forest for recreation. Recreational and water users of the Tuolumne River and Don Pedro Reservoir will also benefit from this project. Overall, the watershed analysis will increase knowledge about the Clavey River and recommend management actions that will be of use to management efforts for all Sierra streams. Recommended actions in the watershed analysis will lead to improved water quality, healthier fish populations, and improved ecosystem conditions within the Bay-Delta system.

PROJECT OVERVIEW

The Clavey River, a tributary of the Tuolumne River, is located in Tuolumne County northwest of Yosemite National Park. It is one of the longest remaining free-flowing rivers in the Sierra Nevada. The Stanislaus National Forest manages 92% of the watershed, and 8% is privately owned. The Clavey River watershed supports many terrestrial and aquatic plant and animal species, including a unique variety of rainbow trout and nearly 8,000 acres of old-growth forest. However, the watershed is threatened by the multiple demands on its resources from local communities and the growing urban populations of the Central Valley and Bay Area. Poor roads, seasonal grazing, logging practices, recreation, and the incursion of nonnative noxious weeds jeopardize the health of the Clavey watershed. The Clavey River Watershed Analysis will document the Clavey's resource values so the values can be better protected and restored. The analysis will help build community understanding and participation in managing the watershed and has the potential to be used as a reference for similar stream restorations in the Bay-Delta system.

A group of local stakeholders, The Clavey River Ecosystem Project (CREP), initiated the watershed analysis. They continue to play an important role in overseeing and participating in the project and informing and educating other stakeholders and interested parties. CREP is working with a professional facilitator to guide the project to completion. The watershed analysis consists of three key sections: desired conditions, existing conditions, and prioritized recommended actions and projects. A Science Review Team will provide peer review and technical guidance to the watershed analysis, including assistance in refining data collection, assessment, and adaptive management. Throughout the development of the watershed analysis, stakeholders will be involved through interviews, focus groups, public meetings and workshops, and an interactive website. The anticipated result is a watershed analysis with broad support in the community and a community with greater capacity to manage its watershed.



The Clavey River in July.

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FRESNO CENTRAL WATERSHED EDUCATION PROGRAM

Central Unified School District



Central Unified School District students monitor San Joaquin River water quality as members of a Clean Water Team.

PURPOSE

Implement a place-based environmental education program that enhances student learning and develops responsible stewards in the San Joaquin River watershed

PROJECT GOALS

- ✧ Train teachers in the Watershed Education Program
- ✧ Involve students in watershed restoration and monitoring projects
- ✧ Develop and implement community outreach program

AWARD AMOUNT

\$364,497

WATERSHED

San Joaquin River Watershed

COUNTY

Fresno County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 19, State Assembly: 29 and 30,

State Senate: 14

Benefits to the Bay-Delta System

The Central Unified School District is located in a rapidly growing area of Fresno in the heart of the San Joaquin Valley. The Fresno-Central Watershed Education Program (WEP) is educating thousands of students to better understand their environment and watershed, and fostering their commitment to stewardship at a young age. Their restoration projects along the river and tributaries provide learning experiences as well as lasting environmental improvements. In addition to the direct benefits to the school district, employees, and students, the education curriculum provides benefits to the Fresno community through improvements in watershed understanding among local residents and organizations. WEP is sharing its resources and experience through collaboration with educational, environmental, community, and government organizations, providing public benefits both locally and statewide.

PROJECT OVERVIEW

The Central Unified School District is located in Fresno in the heart of the San Joaquin Valley. For several years, significant resources have been directed to restoration of the San Joaquin River. Through the Fresno-Central Watershed Education Program (WEP), students and teachers are learning about the significance of the San Joaquin River and its relationship to the Bay-Delta system, and participating in restoration projects on the river and its tributaries. The rapid growth of the district has meant that more schools and teachers want to participate in WEP than can be supported.

This project is providing WEP with the resources to reach more students and teachers, and to fully integrate environmental education into the classroom curriculum. Nearly 90 additional teachers are training in the WEP curriculum and implementing the program in the classroom. An additional 3,000 students are participating in environmental education. A lending library that includes tools and equipment for restoration projects has been established. In collaboration with several community partners, students are applying their classroom lessons in hands-on restoration and monitoring activities on the river and its tributaries. These activities include planting native vegetation and trees; removing nonnative invasive plants; installing irrigation systems; removing trash, tires, and debris for disposal; and maintaining and monitoring existing restoration areas. Students are also performing monthly water quality tests and bioassessments of macroinvertebrates on the San Joaquin River. Selected restoration projects are consistent with the San Joaquin River Parkway Master Plan.

Students are taking their learning to the community. In collaboration with local watershed organizations, students are developing presentations to share within and outside of the San Joaquin River watershed. They are developing a website, informational brochure, and monthly electronic newsletter to educate and involve the community in the watershed.



Working with community partners and government agencies, Central Unified School District students assist in environmental restoration projects.

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KINGS RIVER EXPERIMENTAL WATERSHED: MONITORING AND RESTORATION OF FOREST ECOSYSTEMS

USDA Forest Service, Pacific Southwest Research Station, Sierra Nevada Research Center—Fresno



Sampling stream invertebrates, which are good indicators of stream condition.

PURPOSE

Collect valuable and pertinent data for Sierra Nevada headwater streams and their associated watersheds needed to assess ecosystem health and the effects of management, and demonstrate how this information may be applicable to other local watersheds

PROJECT GOALS

- ✦ Quantify the variability in characteristics of headwater stream ecosystems and their associated watersheds
- ✦ Evaluate the effects of forest management and fire and fuel reduction treatments on the watersheds' riparian vegetation and stream chemical, physical, and biological conditions
- ✦ Make data and methods accessible to the public for analysis and use in other similar watersheds

AWARD AMOUNT

\$661,000

WATERSHED

Upper Kings River Watershed

COUNTY

Fresno County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 21, State Assembly: 29, State Senate: 14

Benefits to the Bay-Delta System

The Kings River drains the western slope of the Sierra Nevada and is the main drainage basin between the San Joaquin and Kaweah Rivers in the San Joaquin Valley. This research project makes a significant contribution to the understanding of the small Sierra streams that contribute to the Bay-Delta system and the forest management practices required to keep such watersheds healthy. The nature of the research makes it applicable to other watersheds throughout the Sierra Nevada with similar fire and ecosystem management concerns. The project contributes to the objectives of the CALFED Water Quality Program by increasing the database and understanding of source watersheds to the Bay-Delta. The Kings River Experimental Watershed project combines industry, government agencies, universities, and community organizations in its research study, thus promoting collaboration among many local watershed interests.

PROJECT OVERVIEW

The Kings River drains the western slope of the Sierra Nevada and is the main drainage basin between the San Joaquin and Kaweah Rivers in the San Joaquin Valley. Although 60% of California's water originates in small streams in the Sierra Nevada, very little is known about how these streams are affected by management activities at the source. These stream systems are considered the most altered and impaired habitats of the entire Sierra, yet quantitative information is not available to define appropriate management for them.

The Kings River Experimental Watershed project (KREW) is a long-term study to collect, quantify and evaluate information about Sierran headwater streams and their associated watersheds. Two sites typical of the southern Sierra Nevada and forested headwaters, which contribute substantially to the Bay-Delta system, were selected for study, Providence Creek and Bull Creek. KREW examines the physical, chemical, and biological attributes of the atmospheric, terrestrial, and aquatic systems of the project's eight watersheds. The study addresses all areas of the CALFED Watershed Program: ecological, physical, social (management methods and effects), and emergent (effects on watershed processes from wildlife and land use). It also incorporates CALFED's suggested monitoring parameters. Outreach to local stakeholder groups and educational entities is integrated throughout the study, both to inform the community and to elicit input and comments.

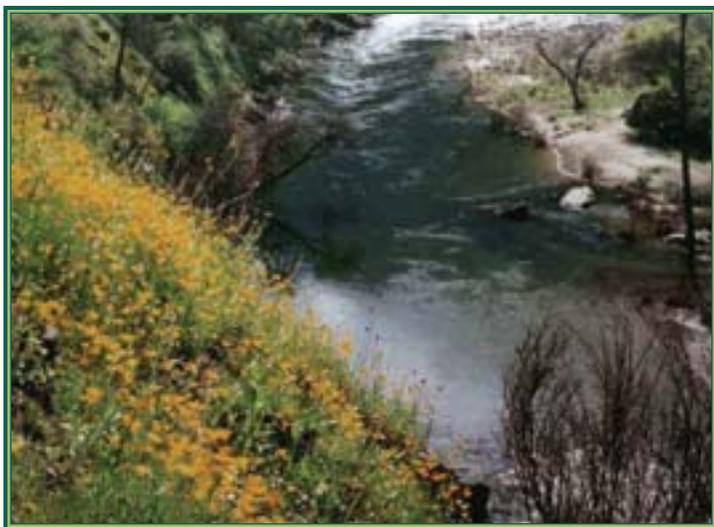
The study will fill a significant data gap and serve as a model for other watersheds, leading to development of better land use and fire management strategies and management practices. KREW is implemented and jointly funded by the Pacific Southwest Research Station of the USDA Forest Service. It is located on the Sierra National Forest and Southern California Edison lands.



Each experimental stream has a large and small flume to accurately measure streamflow.

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The Upper Merced River canyon below El Portal.

AWARD AMOUNT

\$2,299,730

WATERSHED

Merced River Watershed

COUNTY

Merced County

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 18 and 19, State Assembly: 14 and 25,
 State Senate: 12 and 14

PURPOSE

Create an alliance under which stakeholders representing the upper and lower reaches of the Merced River watershed can collaboratively address watershed-wide issues

PROJECT GOALS

- ✦ Establish baseline populations of birds, fish, and macroinvertebrates in the Merced River
- ✦ Create a long-term sustainable alliance among stakeholders, agencies, communities, and students in the upper and lower reaches of the Merced River
- ✦ Foster the perception of the watershed as a single unit with unique reaches
- ✦ Develop and prioritize collaborative projects and leverage funding opportunities
- ✦ Promote acceptance of water quality monitoring in the lower reach
- ✦ Promote watershed management and stewardship activities among local communities and schools in both reaches

Benefits to the Bay-Delta System

The Merced River is a tributary to the San Joaquin River, and is a major freshwater contributor to the Delta. The Merced River Alliance Project provides a vehicle for stakeholder groups in the upper and lower reaches of the Merced River watershed to work together to manage their shared resource and produce mutual management benefits. Establishing this innovative watershed partnership leverages stakeholder stewardship and management efforts to more effectively plan, implement, and manage on behalf of the entire Merced River watershed community. Restoration plans resulting from this project will provide added value to affected landowners and to wildlife habitat in the area. In addition, this project develops important data of transferable value to neighboring watersheds. The river-wide management action recommendations will provide a significant opportunity to improve the effectiveness of collaborative, community-based watershed management in general, with resulting public and local government returns. The data gathered through the baseline assessment will be valuable for several state and federal programs.

PROJECT OVERVIEW

The Merced River drains the Merced River watershed and originates in Yosemite National Park. It flows southwest through the Sierra Nevada before joining the San Joaquin River in the Central Valley, ultimately reaching the Bay-Delta. The New Exchequer Dam bisects the Merced River into upper and lower reaches. Watershed functions and values in both reaches have changed because of several factors, including water storage and diversion, land use conversion, exotic plant and animal species, mining, non-point source pollution, riverbank alterations, discharge from sewage treatment plants, and recreational uses. Multiple restoration and management actions are planned and underway in both reaches of the Merced River. However, political jurisdiction lines, differing terrain and land use, and the dam have hindered local ability to recognize the entire basin as a single unit.

The Merced River Alliance Project joins the two independent watershed management efforts for the upper and lower reaches of the Merced River by creating an umbrella under which the East Merced Resource Conservation District and Merced River stakeholders (representing the lower reach of the watershed) and the Mariposa County Resource Conservation District and the Upper Merced River Watershed Council (representing the upper reach) can address watershed-wide issues collaboratively, while allowing the two groups to continue work in their own reaches.

This project addresses several key issues identified for the Merced River watershed: a) limited coordination between agencies and watershed groups working in the lower and upper reaches of the watershed; b) a lack of baseline biological data in both reaches upon which to base management decisions, project selection, and project prioritization, and c) a lack of watershed issue awareness in local communities, schools, and government, along with significant stakeholder resistance to water quality monitoring in the lower reach.

This project is the first phase of a unified comprehensive local effort to enhance the Merced River watershed, teach residents and others about the watershed, and attract involved support for future projects. The main thrust of the project is to develop a baseline inventory of watershed conditions that will allow all stakeholders—including agencies—to work from a single source of scientific data. The result will be more connected and interrelated decisions and actions that will enhance the entire watershed. This community pool of information will form the basis for gauging performance and for adjusting management for the benefit of the entire system.



Bioassessment training for local residents in the lower reach of the Merced River.

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MILLERTON AREA WATERSHED ACTION PLAN

Sierra Foothill Conservancy



Millerton Lake area of the Upper San Joaquin River surrounded by the distinctive Table Mountains.

AWARD AMOUNT

\$200,000

WATERSHED

Millerton Area Watershed

COUNTY

Fresno and Madera Counties

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 19 and 21, State Assembly: 25 and 29,
State Senate: 14

PURPOSE

Conduct an in-depth assessment and develop a watershed protection action plan of the Millerton Area watershed

PROJECT GOALS

- ✦ Coordinate and train volunteers to monitor water quality and to conduct field surveys
- ✦ Conduct a watershed assessment to be used as a basis for developing a watershed protection plan
- ✦ Develop a watershed protection action plan that identifies stressors and other barriers to watershed health
- ✦ Outline an action plan and timetable for project implementation to improve water quality and quantity and to protect terrestrial and aquatic habitat
- ✦ Build the capacity of the Millerton Area Watershed Coalition

Benefits to the Bay-Delta System

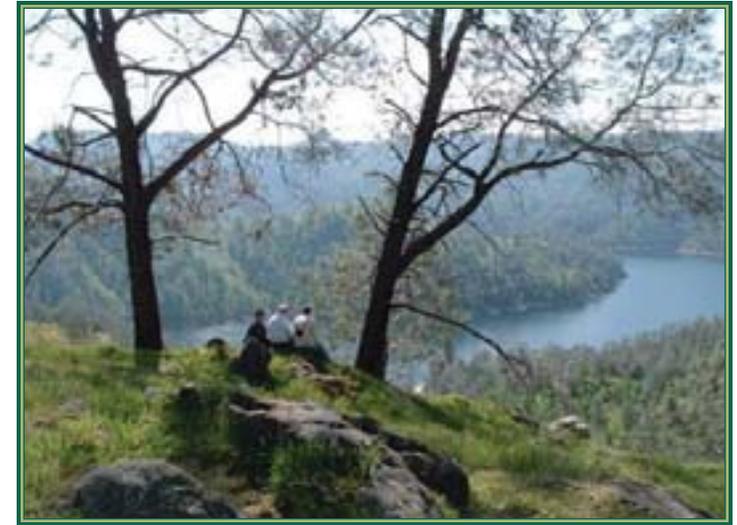
The Millerton Area watershed is a significant source of water for the San Joaquin River. The Millerton Area Watershed Coalition's development of a watershed action plan is an important step toward building the capacity of local communities to assess and manage their watersheds. The project includes numerous activities such as funding locally led watershed monitoring, assisting local watershed groups in addressing common issues, and ensuring effective communication and implementation among local, state, and federal government agencies and stakeholder groups. Effective planning will lead to watershed stewardship, maintenance, and restoration. Area residents will benefit directly from improved water quality, water supply, and ecosystem and habitat values, as will users of water from the San Joaquin River, including citizens, stakeholders, and tribal organizations.

PROJECT OVERVIEW

The Millerton Area watershed consists of approximately 148,000 acres on both sides of the San Joaquin River between Friant Dam and Kerckhoff Dam in Fresno and Madera Counties. In 2001, the Sierra Foothill Conservancy facilitated the creation of the Millerton Area Watershed Coalition (MAWC), a community-based watershed stakeholder group. All landowners in the watershed have been invited to participate in a multi-phased process to develop a watershed protection action plan. Phase I and Phase II have been completed or are in progress. The Millerton Area Watershed Action Plan represents Phase III of the process.

The overall purpose of this project is to conduct an in-depth baseline study of creeks that make up the watershed and use collected data and existing literature and research to develop a watershed assessment that will be the basis for developing a comprehensive watershed protection action plan.

The purpose of the plan is to clearly identify specific problems and threats to watershed health and to recommend actions for protection, restoration, and ongoing management of the watershed. It will include detailed information about watershed conditions, urgent needs, and major areas of concern and will recommend restoration projects and other measures needed to protect the watershed. High priority implementation projects will be identified collaboratively by stakeholders.



The Millerton Lake area provides many recreation opportunities.

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THIS RIVER IS OUR RIVER, PHASE 2—WATERSHED CAPACITY BUILDING

San Joaquin River Parkway and Conservation Trust, Inc.



San Joaquin River near Ball Ranch.

PURPOSE

Increase public awareness of the health of the San Joaquin River, and increase involvement in local restoration efforts

PROJECT GOALS

- ✿ Assess current awareness of San Joaquin River restoration planning efforts
- ✿ Increase the number of students and community members familiar with the conditions of and restoration plans for the nearest reach of the San Joaquin River or tributary in their area

AWARD AMOUNT

\$300,000

WATERSHED

San Joaquin River Watershed

COUNTY

Calaveras, Contra Costa, Fresno, Madera, Mariposa, Merced, San Joaquin, Stanislaus, and Tuolumne Counties

CALFED REGION

San Joaquin Valley Region

LEGISLATIVE DISTRICTS

US Congress: 10, 11, 18, 19, 20, and 21; State Assembly: 15, 17, 25, 26, 29, and 31; State Senate: 5, 12, 14, and 16

Benefits to the Bay-Delta System

The public opinion research conducted in This River Is Our River, Phase 2 will provide new information about what residents know about the San Joaquin River Basin and the various restoration planning efforts underway. The research also will determine how the public prefers to receive information about San Joaquin River issues. This information will be of value to local governments and organizations, the CALFED Bay-Delta Program, and other state and federal agencies. Much of the information will be transferable to the Sacramento River Basin and will be helpful in conducting education programs about the Delta and its tributaries. Implementing effective outreach and education projects will benefit the health of the local and regional ecosystems by engaging the community in important work already in progress.

PROJECT OVERVIEW

This River Is Our River, Phase 2 (TRIOR2) builds on the previous work of Phase 1 to expand public support for a variety of restoration planning efforts on the San Joaquin River and its major tributaries. There are currently numerous restoration planning efforts on the San Joaquin River and its major tributaries, ranging from studies to reduce dissolved oxygen in the Stockton Deep Water Ship Channel to restoration plans developed out of the settlement negotiations of *Natural Resources Defense Council v. Rogers* (USBR/FWUA). Groups also have developed reach-specific restoration plans on the major tributaries of the San Joaquin River. Broad-based public support will be necessary for funding and construction of these many planned projects.

Phase 1 of this project used surveys to gauge public knowledge about issues related to the San Joaquin River in Fresno County and Madera County, and a media program to increase the awareness within the two counties. TRIOR2 will continue to use public opinion research, but will expand its survey area from two counties to nine. The results of the surveys will help direct decisions on implementing effective outreach and community education projects. The goal is to develop an effective campaign that successfully educates a large community about San Joaquin River issues and the restoration planning efforts currently underway by various stakeholder groups.



San Joaquin River from Ledger Island.

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