

Case Study: Sonoma County Resource Conservation District

Watershed: Sonoma Creek and Petaluma River Watersheds

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Year	Grant Program	Project Title	Watershed	Award Amount	Additional Funding
2011-2014	DOC Watershed Coordination Program	Watershed coordination for the Sonoma Creek and Petaluma River watersheds	Sonoma Creek and Petaluma River Watersheds	\$298,782	\$1,530,286

This case study assesses one grant received by the Sonoma County (RCD) Resource Conservation District for a watershed coordinator position in the Petaluma River and Sonoma Creek watersheds. The findings of this research are based on interviews with stakeholders involved in processes covered by the grants, as well as a review of documents produced for the grants.

Sonoma Creek, Petaluma River, and Russian River Watersheds

The Sonoma Creek Watershed includes 166 square miles, located 45 miles north of San Francisco. Sonoma Creek extends 31 miles from the headwaters at Sugarloaf Ridge State Park to the mouth of the river draining into marshes and tidelands at San Pablo Bay. The three main drainages are Sonoma Creek, Schell Creek, and Carneros Creek. A range of land uses extend across the largely rural watershed including: vineyards, farmlands, grasslands, livestock facilities, three state parks, and a few urban areas. Land use activities directly affect both the water quality and quantity of the Sonoma Creek watershed and subsequently San Pablo Bay. This is particularly notable as Sonoma Creek and its tributaries are one of the few remaining homes in California to endangered steelhead, Chinook salmon, and California freshwater shrimp.

The Petaluma River watershed drains 146 square miles, extending across southern Sonoma County and northeastern Marin County. The City of Petaluma is situated near the center of the watershed. Fifty-six percent of the watershed is comprised of mountainous or upland terrain, 33% is valley, and 11% is salt marsh. The southwest slopes of Sonoma Mountain, southern slopes of Mecham Hill and eastern slopes of Weigand's Hill and Mount Burdell drain to the Petaluma River by way of the following tributaries: Lichau Creek, Lynch Creek, Washington Creek, and Adobe Creek. The Petaluma River flows through the city, and continues through the largest remaining salt marsh in San Pablo Bay, reaching the mouth of the river at the northwest portion of the bay.

The Russian River is an adjacent watershed that stretches across parts of Mendocino County and southern and western Sonoma County. Encompassing nearly 1,500 square miles of urban, forested, and agricultural land and 110 miles of river from its headwaters near Redwood and Potter Valley to the Pacific, the Russian River has 63 species of fish, including three listed as threatened or endangered (Chinook salmon, coho salmon, and steelhead trout). Fish populations are threatened by declining water flows due to drought. Dry conditions have resulted in low

flows causing increases in temperature, low levels of oxygen, and isolated pools of water, which can be fatal to fish. The Mark West watershed, a sub-watershed of the Russian River, is one of five high priority tributaries listed by the California Department of Fish and Wildlife and State Water Resources Control Board¹ with a principle concern of providing additional water for improved stream flow.

Organizations

The Southern Sonoma County RCD formed in 1946 as a local, non-regulatory organization responsible for facilitating natural resource management by means of community involvement, education, technical expertise, and scientific research. The Southern Sonoma RCD forms partnerships with individuals, organizations, and agencies to develop solutions to natural resource management challenges. Grants fund the majority of the RCD budget, although a small portion of financial support (3-5%) is provided by the Sonoma County tax base. While the Southern Sonoma County RCD was the recipient of a watershed coordinator grant, the execution of the grant involved a partnership between the Southern Sonoma RCD and the Sonoma Ecology Center. The Sonoma Ecology Center is a nonprofit organization that focuses on working with communities in the Sonoma Valley to achieve and sustain the ecological health of the valley and its populace. Themes addressed by the Sonoma Ecology Center include water supply and quality, rural character, biodiversity, energy, climate change, and a better quality of life for all residents.

The grant was received by the Southern Sonoma County RCD to fund watershed coordination activities from 2011 to 2014. During this period, the Southern Sonoma County RCD merged with the Sotoyome-Santa Rosa RCD (“the Sotoyome RCD”). With the reorganization and consolidation of these two RCDs, the area encompassed by the newly formed Sonoma County RCD expanded to include sub-watersheds of the Russian River watershed (see Appendix D for grant recipients and partnerships).

The Friends of Mark West, a watershed group focused on the Mark West watershed within the Sotoyome RCD jurisdiction, has developed a collaborative relationship with the Sonoma RCD over time, stemming from their history with the Sotoyome RCD. As a prominent organization in the Mark West watershed, the Friends of Mark West at-times collaborated with a part-time watershed coordinator funded by a Department of Conservation watershed coordinator grant received by the Gualala Watershed Council in partnership with the Sotoyome RCD.

Watershed Coordination Grants

Antecedent Grants

Prior to the watershed coordinator grant received by the Sonoma County RCD, which is the focus of this review, the Sonoma Ecology Center received two consecutive Department of Conservation watershed coordinator grants (2004-2007 and 2008-2011). Both watershed coordinator grants involved working with landowners and community members within Sonoma

¹ https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/cwap_enhancing/

Creek watershed to provide technical assistance to landowners, develop large-scale restoration projects, and acquire project funding, among others endeavors. A working group was convened throughout both grants to discuss watershed-related issues with water agencies, influence policy decisions, and develop long-term relationships between landowners and water agencies. The California bond freeze led to the working group disbanding in 2009. In addition to building relations and developing a working group, the watershed coordinator raised a significant amount of funding to finance restoration and fish habitat improvement efforts in the watershed. During the two antecedent watershed coordinator grants, the watershed coordinator helped to secure \$2,173,815 from 2004 to 2007 and then an additional \$1,146,560 from 2008 to 2011.

Throughout their participation in the CALFED Watershed Program, the Sonoma Ecology Center participated in CALFED informational gatherings in Sacramento. These gatherings were coined by one informant as the “coalition of the willing,” because if you were able to attend the meeting, you received “insider” information on the grant program and selection criteria for the next grant cycle. These meetings were open to anyone with time and support to attend. During the gatherings, participants learned of the Category 2 preference² for funding, which included watersheds located within the Bay-Delta Program Solution Area that previously have not received a watershed coordinator grant. The 2011 to 2014 Department of Conservation Watershed Coordinator Program supported well-developed proposals for watershed coordinators within those watersheds. This led the Sonoma Ecology Center to negotiate with the Sonoma RCD to collaboratively create a work plan for the third round of watershed coordinator grants. The RCD became the grant applicant in order to increase the likelihood of receiving the grant because of the Category 2 grant proposal preference for those watersheds that have not previously received funding.

Sotoyome RCD, prior to merging with the Southern Sonoma RCD, applied for a 2011-2014 watershed coordinator grant in collaboration with the Gualala River Watershed Council. During the first year of the grant, the two organizations realized the geographic distance between them posed a challenge. The partnership dissolved following “phone meetings [that] were unproductive leading to miscommunications and unfulfilled tasks,” according to the final report. The Gualala River Watershed Council maintained a watershed coordinator in the Gualala River watershed (covered by an independent case summary report³). The Southern Sonoma RCD and the Sotoyome RCD merged while the Southern Sonoma RCD held a 2011-2014 watershed coordinator grant, which is the focus of this report.

² Category 2 funding included “...watersheds located within the Bay-Delta Program Solution Area that previously have not been successful in placing watershed coordinators because of limited CALFED Program objectives on which to develop a competitive proposal. The Program will place emphasis on supporting well-developed proposals for watershed coordinators within these watersheds...Applications from Category 1 and Category 2 watersheds will be evaluated independently of applications from Category 3 watersheds. Approximately 80% of funds will be made available to support qualifying competitive proposals for watershed coordination in Category 1 and Category 2 watersheds. Approximately 20% of funds will be made available to support qualifying competitive proposals for watershed coordination in Category 3 watersheds” (Watershed Coordinator Grant RFP, 2010).

³ The watershed coordinator grant received by the Gualala River Watershed Council is presented as a separate case study within this Department of Conservation study.

Watershed Coordination Grant (2011-2014)

Sonoma County RCD received a Department of Conservation watershed coordinator grant for 2011 to 2014. The contract was extended in 2014 as part of the Drought Emergency Response Extension to specifically address the impacts of drought on groundwater and surface water supplies. Sonoma County RCD developed an educational program for the grant extension, which focused on water supply and conservation practices, as well as project development with landowners to promote “wise water use.” Following the conclusion of the grant, a watershed coordinator was briefly funded by the Department of Commerce. The Sonoma RCD does not currently provide a watershed coordinator for the Petaluma River, Sonoma Creek, nor Russian River watersheds. Nonetheless, the Sonoma County RCD remains involved in the aforementioned watersheds along with several active watershed groups (e.g., Friends of Petaluma River, Friends of Mark West, etc.) developing levee permits, assisting dairy producers with best management practices, and providing technical assistance to landowners.

The watershed coordinator grant received by the Sonoma County RCD was used to hire a coordinator who apportioned time between the Petaluma River and Sonoma Creek watersheds. The overall purpose of the grant was to improve water quality, quantity, and conservation; improve the health of the watershed, including restoration of wildlife habitat; and advance stakeholder coordination and watershed planning. Mechanisms for achieving these broad goals included conducting work in collaboration with regulators and policy makers on behalf of the communities in the watershed. The RCD collaborated closely with the Sonoma Ecology Center, which positioned their efforts in the Sonoma Creek watershed.

The efforts in the Russian River watershed and the Sonoma County RCD’s partnership with the Friends of Mark West were not mentioned in the final report prepared by Sonoma County RCD for the Department of Conservation. However, stakeholders’ reported that the Friends of Mark West submitted a letter of support for watershed coordination with an expectation of a certain level of collaboration between the watershed coordinator and the Friends of Mark West.

Documents and information gleaned from interviews suggest confusion regarding the role of the watershed coordinator in the Russian River, specifically the Mark West subwatershed, due to infrequent contact and minimal watershed initiatives undertaken in the Mark West watershed by the watershed coordinator. It appears that the letter of support by Friends of Mark West was for the Sotoyome RCD prior to their consolidation with the Southern Sonoma RCD. Therefore, the Mark West watershed was to be included in the scope of the 2011 to 2014 Department of Water Conservation watershed coordinator grant received by the Gualala Watershed Council, which was working in partnership with the Sotoyome RCD at the time. Owing to confusion among informants as to the role of the watershed coordinator in part due to the joining of the two RCDs, and with each RCD working on separate 2011 to 2014 watershed coordinator grants, we present lessons learned from the Mark West watershed in addition to the Sonoma Creek and Petaluma River watersheds.

Coordination Grant Processes and Outcomes

The 2011-2014 Southern Sonoma RCD watershed coordinators were tasked with improving the overall watershed health of the Petaluma River and Sonoma Creek watersheds. Specific achievements attributed to the watershed coordinators during this time include: increased summer survival of steelhead as a result of habitat enhancement, increased spawning habitat for migrating salmonids, reduced sediment inputs due to changes in land use practice and restored stream channels, improved water usage around Sonoma Creek and Petaluma River, updated watershed enhancement plans for both watersheds, and improved coordination and sharing of watershed resources among stakeholders.

Sonoma Creek Watershed

A critical component of restoration and habitat enhancement work involved developing relations with landowners in the watershed because a majority of the region is privately owned and highly parceled. The previous watershed coordinators (2004-2007 and 2008-2011) were housed in the Sonoma Ecology Center and focused their work in the Sonoma Creek watershed. The watershed coordinator linked landowners with technical assistance and resources to encourage landowner participation in watershed improvement projects on their property. The Southern Sonoma RCD also focused some of their 2011 to 2014 watershed coordination efforts in the Sonoma Creek watershed. At minimum, a part-time watershed coordinator was present throughout the three watershed coordinator grant periods, as well as the extension (2004-2007; 2008-2011; 2011-2014 and the 2014 extension). Community outreach efforts continued through this grant, including audio clips on a local radio show once or twice monthly, newspaper announcements, Facebook posts, SEC website advertisements, and community engagement during clean-up workday activities.

The history of watershed coordination in the Sonoma Creek watershed contributed to the development and maintenance of relationships between the watershed coordinators, as representatives from the Sonoma Ecology Center and Sonoma County RCD, and the landowners. Owing to these relationships, one of the major successes of the 2011-2014 watershed coordinator grant was the assessment and enhancement work for salmonid habitat on 40 privately owned streamside parcels involving over 300,000 plants planted. Highly parcelized and privately-owned lands necessitated that effective restoration in the watershed had to involve coordinated efforts among private landowners. This was accomplished through the leadership of the watershed coordinator.

The watershed coordinator worked with the Sonoma Ecology Center and the Sonoma County RCD to achieve many of their organizational objectives, installing a rain harvesting catchment for the Mayacamas Fire Department, participating as a member of the Technical Advisory Committee of Sonoma Valley Groundwater Management Program, assisting with a Sonoma Valley water workshop for the public, and aiding in climate adaptation presentations.

Finally, the watershed coordinator led outreach efforts to local, state, and federal agency partners to seek technical updates for the 1999 version of the Sonoma Creek Watershed Enhancement Plan. Community input was sought to understand current watershed conditions and meet current

watershed needs, and a Total Maximum Daily Load (TMDL) steering committee was formed to share knowledge on water quality regulations and associated issues. As a result of the collaborative process, the plan now complies with the *EPA's 9 Elements of a Watershed Plan*, which recommends nine critical elements to incorporate in a watershed management plan for achieving watershed improvements⁴ (e.g., identify source pollution, determine loads reductions needs, establish management measures, create an implementation schedule, develop criteria to measure progress, design an educational and informational component, and identify technical and financial assistance or an implementation plan).

Petaluma River Watershed

In the Petaluma River watershed, many landowners were skeptical of the intentions of regulatory agencies working in the watershed owing to an undeveloped relationship between landowners and agencies. The watershed coordinator dedicated time to cultivating these relationships and dispelling the sense of mistrust in agency involvement. Similar to Sonoma Creek watershed, a large portion of the watershed is privately owned, which prioritized that the watershed coordinator works closely with private landowners. The watershed coordinator acted as a visible and vocal presence in the watershed advancing the community toward a best management practices for watershed health.

To connect with the community, the watershed coordinator assisted the RCD in developing and updating a landowner outreach database, coordinating planting days with a local high school and elementary school, coordinating trash clean up days at local parks, and assisting with a water forum that involved both agency and landowners from the watershed. While much work focused on public land, the watershed coordinator helped to develop bank stabilization, fencing, fish barrier removal, riparian enhancement and rainwater catchment projects on 11 private properties.

A major objective of the grant was to update the Petaluma River Watershed Enhancement Plan (1998). Through extensive outreach to federal, state, and local agencies and organizations, the coordinator received input that informed the revised watershed goals and objectives. Feedback was provided by the City of Petaluma, San Francisco Estuary Institute, CalTrans, the Department of Fish and Wildlife, Friends of Petaluma River, Casa Grande High School, Environmental Protection Agency, National Marine Fisheries Service, Sonoma Land Trust, Bay Area Regional Water Quality Control Board, and the State Water Resources Control Board. With assistance from this assortment of agencies and organizations, the updated plan was finalized in 2015 and designed to meet *EPA 9 Elements*.

Challenges

One of the interview participants working under the 2011-2014 Southern Sonoma RCD coordinator grant felt that the grant required metrics that were “inconsistent with the nature of the program.” Essentially, the grant recipient was responsible for outlining a detailed list of on-the-ground outcomes for the scope of work, yet the grant was not for implementation funding. Therefore, listing outcomes each year, prior to knowledge of which projects would receive grant

⁴ <https://www3.epa.gov/region9/water/nonpoint/9elements-WtrshdPlan-EpaHndbk.pdf>

funding for implementation, was seen as arduous and inexact. As a result, the scope of work presented in the proposal was more closely linked to on-going endeavors of the organization.

Turnover with watershed coordinators occurred resulting in two separate coordinators participating in the Southern Sonoma County RCD watershed coordinator grant. A primary role of the watershed coordinator in this area was to develop relations with local landowners, which takes time and consistent contact. Multiple informants underscored the importance of consistent contact with a watershed coordinator and the watershed coordinator's role in developing and mediating a relationship between the RCDs and the landowners, as well as other agencies and landowners. Turnover interrupted the processes as the subsequent watershed coordinator was brought on near the end of the grant with less time to cultivate trust with landowners, a necessary step in order to accomplish watershed projects (e.g., fish restoration, riparian enhancement, sediment reduction) in the mostly privately-owned watershed.

While consistent contact between the watershed coordinator and stakeholders was cited as valuable, the Friends of Mark West did not have a consistent watershed coordinator. A number of factors, including the part-time role dedicated to watershed coordination in the Russian River, as opposed to full-time; the dissolution of the partnership between Sotoyome RCD and Gualala River Watershed Council on their watershed coordinator grant; and the consolidation of Sotoyome RCD and Southern Sonoma RCD during the grant period, left the stakeholders in Mark West Creek somewhat disconcerted as to the extent of watershed coordination dedicated to their watershed. This underscores the lack of communication and attention given to the watershed. Organizational dynamics and shifting partnerships played a role, and so too did over-promising outcomes, which raised expectations.

Nonetheless, Friends of Mark West have thrived in their watershed by taking on roles that are typical of a watershed coordinator as set forth in the request for proposal (RFP) for the 2011 to 2014 watershed coordinator grant.⁵ As a volunteer organization with all members living in the watershed, Friends of Mark West conducted outreach to their neighbors, shared information and provided a forum for discussion, coordinated meetings bringing stakeholders together with technical experts to share information and provide assistance to those landowners for watershed restoration project, and acted as a vehicle for the RCD to connect to landowners.

Key Findings

Building Relationships and Trust

Developing relationships with landowners throughout the watershed was a necessary process for on-the-ground watershed restoration efforts. A component of relationship development is

⁵ According to the 2010 Watershed Coordinator Grant RFP, "The primary duties of a watershed coordinator supported by this grant solicitation include, but are not limited to: (1) ensuring open and accurate sharing of information; (2) convening and advancing collaboration among and between various agencies, entities, groups, and individuals with interests in management of natural resources within the watershed, including environmental justice communities and Tribes located within the watersheds; (3) providing or assisting with the acquisition of necessary technical expertise; (4) reporting and measuring performance milestones; and (5) acting as a liaison between local communities and regional or statewide activities and programs."

building social capital between community stakeholders and agency stakeholders. The watershed coordinator, RCD, and/or local watershed groups have contributed to creating trusting relationships, which has laid a foundation to engage landowners in watershed restoration work. In the Sonoma Creek watershed, once a watershed coordinator was able to successfully partner with a landowner, word spread throughout the community and the number of landowners willing to participate expanded, increasing the number of projects and the geographic scope of the restoration work in the watershed. In the Mark West watershed, the Friends of Mark West watershed group consisted of local landowners predisposed to improving the health of their watershed. With some level of community buy-in, which essentially launched the watershed group, the organization effectively filled the typical role of a watershed coordination.

Sonoma Creek had a history of watershed coordination owing to the two preceding grants received by the Sonoma Ecology Center. While much of the work reported in the final report for the Petaluma River demonstrated watershed improvement work on public areas (e.g., public parks), work was implemented on 11 privately owned parcel projects. In Sonoma Creek watershed, assessment and/or enhancement work on an estimated 40 privately-owned streamside parcels. Motivating landowners to participate in watershed restoration is one of the more difficult aspects of the work, but through years of relationship development, watershed coordination has proven at least somewhat successful in engaging with landowners and encouraging watershed restoration on private land in Sonoma Creek and to a lesser extent in Petaluma Creek. Relationships were reportedly “starting to warm up” in Petaluma Creek, and partnerships were starting to solidify when funding was lost. The administrative time to maintain a collaborative forum became burdensome for the RCD once watershed coordination funding ended.

Duration of Funding

Interview participants noted challenges with accomplishing restoration work in a watershed that is mostly privately owned and skeptical of agency involvement. To meet the challenge of working with skeptical landowners, watershed coordinators focused on outreach, engagement, and developing a relationship with the communities in the watersheds. Comparatively, the RCD and watershed coordinator had a longer history of community engagement with Sonoma Creek and this has enabled the RCD to work with agencies and landowners to accomplish a large number of on-the-ground watershed projects.

Parallel to community outreach efforts, the RCD was beginning to bring Petaluma Creek watershed stakeholders together, including community representatives, agencies, non-profits, and the City of Petaluma, to try to leverage resources and pursue funding opportunities. While good relationships were starting to develop, the RCD discontinued the meetings when funding ended. The RCD is increasingly challenged to work with landowners on restoration without implementation funding.

Defining a Manageable Scope and Scale for Consistent Watershed Coordination

One of the uncertainties for stakeholders in the Mark West watershed was the scope of the watershed coordinator. Part of this confusion was due to the cessation of one partnership, the merging of another, and the turn-over of watershed coordinators. No more than one part-time

coordinator was ever dedicated to the Mark West watershed. The position was split between watersheds. At times, a watershed coordinator would be in contact with the Friends of Mark West, however, this was inconsistent and the stakeholders remained unsure of the primary contact for watershed coordination efforts. Accomplishments in the Mark West watershed are attributed directly to the local watershed group, without the help of a watershed coordinator. The Friends of Mark West group essentially engages in watershed coordination as demonstrated in the final watershed coordination RFP. If a watershed coordinator is assigned to a single watershed of a manageable scale or a sub-watershed at a more socially relevant scale for the particular context, perhaps more consistent contact can be provided by the watershed coordinator.

Additionally, defining a manageable scope for the initial objectives for the watershed coordinator are an important, but an often-neglected component. The idea is that the more extensive the list, the more likely the proposal will be funded. As seen in Southern Sonoma's 2011 to 2014 watershed coordinator grant, the organization's widespread objectives are listed, which are beyond a manageable scope of an individual watershed coordinator. Many of the projects may or may not involve the watershed coordinator, but are a list of current projects that the organization is pursuing. Working from an extensive list of different projects presented challenges in meeting initial objectives and expected outcomes.

Lastly, a watershed coordinator may have their hands in many endeavors, hence the extensive list of objectives, but they may not be able to pursue the entire list. The watershed coordinator may find funding to pursue only a handful of the objectives listed, as the grant typically funded the position, but not projects. This does not necessarily denote a failure. Lessons can be gained from these efforts. Though some efforts may lead to dead ends, they may also result in positive outcomes in the watershed. An experienced, resourceful watershed coordinator with foresight and a strong network may augment the positive outcomes.

Case Challenges

A week after our site visit for this case, numerous fires devastated the area. Out of respect for those affected, there is a level of incompleteness to this report, as we felt it better to not overwhelm informants with follow-up questions related to this grant during a time of community re-building.

Appendix A. Methods

Two researchers spent two days visiting stakeholders and touring watershed project sites in and around Sonoma County. Two in-person interviews and three over the phone and email interviews were conducted with a diverse group of stakeholders, including representatives from Sonoma RCD, Sonoma Ecology Center, and Friends of Mark West Watershed. A fellow researcher conducted interviews for the Gualala Watershed Council watershed coordinator grant. All available documents were reviewed.

Appendix B. Participants

Representatives from:
Sonoma Ecology Center
Sonoma County RCD
Friends of Mark West Watershed

Appendix C. Available Grant Documents

Sonoma County Resource Conservation District	Individual Grant Proposal	Catalogued Description	Annual Update(s)	Individual Final Report	Catalogued Final Reports	Other	
Coordinator (2011-2014)					X		

Appendix D. Grant Recipient Chart

