

Case Study: San Joaquin County Resource Conservation District

Watershed: Lower Mokelumne River watershed

Authors: Kaily Bourg and Jonathan Kusel

Year	Grant Program	Project Title	Watershed	Award Amount
1998-2002	CalFed Ecosystem Restoration Coordination Program	Lower Mokelumne River Watershed Stewardship Program	Lower Mokelumne	\$159,000
2000-2002	Department of Conservation-Resource Conservation District Watershed Coordinator Grant Program - Pilot	Mokelumne River Watershed Coordinator	Lower Mokelumne	\$37,500
2000-2003	CalFed Watershed Program	Murphy Creek Restoration Project	Murphy Creek	\$282,500
2002-2004	Department of Conservation-Resource Conservation District Watershed Coordinator Grant Program – Pilot Extension	Mokelumne River Watershed Coordinator	Lower Mokelumne	\$47,668
2003-2007	CalFed Watershed Program	Lower Mokelumne River Stewardship Plan Implementation	Lower Mokelumne	\$1,377,884
2004-2007	Department of Conservation-Watershed Coordinator Grant Program	Mokelumne River Watershed Coordinator	Lower Mokelumne	\$182,505
2007-2010	CalFed Watershed Program	Continuing Education, Outreach, Restoration, and Monitoring in the Lower Mokelumne River	Lower Mokelumne	\$890,655
2008-2012	Department of Conservation-Watershed Coordinator Grant Program	Mokelumne River Watershed Coordinator	Lower Mokelumne	\$131,965

Note: Bolded grants are included in the scope of this study. Un-bolded grants are not included in the study due to differences in programmatic and administrative objectives but are discussed here because they are fundamental in understanding the subsequent grants.

Overview

Watershed improvement efforts in the Lower Mokelumne River Watershed stem from a central community-driven *Lower Mokelumne River Watershed Stewardship Plan* (Plan), a plan developed and implemented through a steering committee of diverse entities and stakeholder interests across the watershed. The development and implementation of the plan was largely funded through CalFed Watershed grants starting in 1998. Collaborative efforts throughout the development process were driven by the coordination and facilitation of a watershed coordinator, whose position was funded by grants awarded to San Joaquin County Resource Conservation

District (SJCRCD) through the Department of Conservation (DOC) Watershed Coordination Program.

Of the grants awarded to SJCRCD, five are included in the scope of this assessment, and three are included in a background review because it was determined that their inclusion is fundamental in understanding the subsequent grants. Major entities and stakeholders involved in collaborative efforts include: SJCRCD, the City of Lodi, East Bay Municipal Utility District (EBMUD), Lower Mokelumne River Partnership (a Joint Settlement Agreement of EBMUD, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife), San Joaquin County Council of Governments (COG), Lodi Winegrape Commission, and numerous private land owners throughout the watershed.

Lower Mokelumne River Watershed

Situated along the northern border of San Joaquin County, the Lower Mokelumne River Watershed begins at the base of the Camanche Dam and extends to the confluence of the Cosumnes and Mokelumne Rivers. This 52,688-acre watershed lies largely within the bounds of San Joaquin County with almost 2,000 acres stretching into Sacramento County and Amador County. With only one incorporated city, the City of Lodi, the Lower Mokelumne River Watershed is more than 95% privately owned and widely used for agriculture.

The Mokelumne River drains nearly 661 square miles, making it the largest eastside tributary to the Bay-Delta. Major tributaries to the Lower Mokelumne River include Murphy Creek and Jahant Slough. A history of mining, agriculture, water diversions, levees, and other human activity has led to a decline in natural riparian and aquatic habitat conditions in the watershed, underscoring the need for watershed restoration work and adoption of sustainable practices. The river has been on the Environmental Protection Agency's 303(d) list for impaired waterways since 1992 for copper and zinc pollutants and, more recently, on the 2010 list for chlorpyrifos, mercury, and dissolved oxygen.

Background

1998 CalFed Ecosystem Restoration Coordination Program - Lower Mokelumne River Watershed Stewardship Program

In 1998, representatives from EBMUD, along with technical support from California State University, Sacramento, and the Lodi Winegrape Commission worked with SJCRCD to prepare a grant proposal for a Lower Mokelumne River Watershed Stewardship Program with three principal goals in mind: (1) to develop and implement a community-based stewardship program, (2) to continue and expand environmental farm plans, and (3) to expand biological monitoring

programs to include neotropical landbirds (proposal submitted to CalFed, 1998). The efforts accomplished through this grant are considered the catalyst for the long-term collaboration in the Lower Mokelumne River Watershed and the origin of the Lower Mokelumne River Watershed Stewardship Planning Committee (Committee) that continues to meet today.

Preceding the development of the proposal, biologists from EBMUD's Lodi office were working to restore and monitor anadromous fish habitat in the Lower Mokelumne in response to a protest as part of a Federal Energy Regulatory Commission (FERC) re-licensing process. This effort led EBMUD biologists to initiate relationships with landowners along the Mokelumne River to increase river access, leading to active participation with the Lodi Winegrape Commission. At the same time, members of the Lodi Winegrape Commission were crafting a *Lodi Winegrower's Workbook* to serve as a self-assessment of integrated and sustainable farming practices—a workbook that would later serve as a model for the *Mokelumne River Watershed Owner's Manual*, a project spearheaded by the watershed coordinator and members of the Committee. The first version of the *Lodi Winegrower's Workbook* was published in 2000.

During this time, the City of Lodi's wastewater facility was fined \$20,000 by the State Water Resource Control Board (SWRCB) concerning high chlorine discharge. The Public Works Director at the time successfully negotiated with SWRCB to allocate \$10,000 of the fine toward a water quality education program in Lodi. Furthermore, the Public Works Director secured an additional \$16,000 from the City of Lodi City Council, enabling the development of a citizen-monitoring program, known as Storm Drain Detectives.

With a tangible goal and funding in place from the 1998 grant award for the development of a community-based stewardship program and the invested interest of local landowners, the Special Projects Coordinator at SJCRCD identified and convened diverse interests, forming the Lower Mokelumne River Watershed Stewardship Planning Committee. In its early years, stakeholder representation in the committee included staff from SJCRCD, biologists from EBMUD, California Department of Fish and Wildlife, San Joaquin County Department of Public Works, San Joaquin County Department of Education, City of Lodi Parks and Recreation, City of Lodi Municipal Service Center, City of Lodi Department of Public Works, City of Lodi-Lodi Lake Docents Program, Friends of Lodi Lake, Woodbridge Irrigation District, Sierra Club Conservation Committee, University of California Cooperative Extension, Western Agricultural Appraisals, San Joaquin County Agricultural Commissioner, San Joaquin Farm Bureau Federation, California Farm Bureau Federation, Lodi Winegrape Commission, Lange Twins Family Winery and Vineyard, Rossini Farms, Mohr-Fry Ranches, and Vino Farms (*The Lower Mokelumne River Watershed Stewardship Plan*, 2002). Together, they mobilized and crafted *The Lower Mokelumne River Watershed Stewardship Plan* (Plan). The Plan originally addressed nine elements of watershed management including: education, recreation, agriculture, biological resources, water quality, flood management, cultural resources, economic development, and

emergency services and fire prevention. Humboldt State University provided additional support in developing the Plan regarding the restoration of riparian habitat and contributed Geographic Information Systems (GIS) support. This original grant led to a Plan that catalyzed and laid the critical groundwork for the future of watershed management in the Lower Mokelumne.

2000 pilot Watershed Coordinator Grant Program

In 2000, the SJCRCD successfully submitted a proposal to the DOC's pilot Watershed Coordinator Grant Program for Resource Conservation Districts. The Plan was critical in the development of the proposal. The DOC and SJCRCD signed a grant agreement in spring of 2001, and soon after the SJCRCD hired a full-time watershed coordinator, who remained with the group through 2014 with recurrent funding through the DOC Watershed Coordinator Program.

The watershed coordinator's primary objectives during the grant period were to reduce non-point source pollution resulting from urban/residential land uses and address the disconnect between the agricultural and urban communities regarding watershed management (report submitted to DOC, 2002). This entailed a large educational and outreach initiative and led to the development of a *Reflections in the River* video—scripted and narrated by the watershed coordinator, and the *Mokelumne River Watershed Owner's Manual* (2002). The Manual serves as a self-assessment tool for residents in the watershed to reduce the amount of run-off and contaminants generated on home properties. The watershed coordinator also organized and executed outreach events and educational workshops in the community and in the classroom, and worked with landowners along the Mokelumne River on projects geared toward restoring riparian habitat (report submitted to DOC, 2002).

2002 extension to pilot Watershed Coordinator Grant Program

The DOC extended the original grant for watershed coordination by 18 months between the years 2002 and 2004. The extension of the grant was a continuation of the original, though the coordinator's role shifted in the transition. In the earlier grant, the coordinator focused on developing specific projects and products (i.e., *Lower Mokelumne Watershed Owner's Manual* and *Reflections in the River*), while also getting to know the people in the watershed and forming necessary relationships. Time spent forming relationships was critical in strengthening the role of coordination in the watershed and enabled transition into more project implementation and capacity building with the Committee.

With facilitation from the watershed coordinator and stimulus from within the Committee, the Plan was amended to include a restoration element, which enabled restoration in the watershed to be executed under guidance of formally identified, agreed-upon goals. Discussions around the amendment nearly derailed the restoration element with concern from the biologists that

restoration activities were being pursued without proper guidance, and landowners were concerned about establishing standards that might later become regulatory.

From an idea propelled by agricultural interests, the coordinator collaborated with representatives from the City of Lodi to develop a voluntary citizen-monitoring program that would effectively co-exist with the City of Lodi's Storm Drain Detectives program. This new program would encourage agricultural monitoring upstream and downstream from the Lodi city limits. The voluntary citizen-monitoring efforts shifted when a new regulation came into effect that required farmer participation. This led to the formation of a locally based watershed coalition that complied with the new regulation requirements, and the SJCRCD allocated general funds to support the watershed coordinator to assist with facilitation activities in the coalition. In addition, the coordinator continued to advance outreach efforts and maintain relationships with EBMUD and the Lodi Winegrape Commission to advance and submit grant proposals for more restoration work throughout the watershed (report submitted to DOC, 2004).

Watershed Coordination Grants

2004-2007 Watershed coordinator grant

As described in the final report, the purpose of this grant was to increase water quality; improve coordination and collaboration among government agencies, other organizations, and the Committee; and implement a strategy that would ensure continued support for local watershed activities. During the three-year grant period, the watershed coordinator focused on three objectives: (1) to promote and increase diverse stakeholder participation in the Committee, (2) to increase involvement of school systems and educational institutions in watershed improvement efforts, and (3) to work across agricultural and urban-suburban areas to improve education about runoff control and non-point source pollution (final report submitted to DOC, 2007).

With facilitation and coordination from the watershed coordinator, the number and diversity of active participants in the Committee increased by 20%; this increase included a flux of new landowner participation. The Committee adopted an annual watershed stewardship award, funded through the Lower Mokelumne Partnership (Joint Settlement Agreement of EBMUD, California Department of Fish and Game, and U.S. Fish and Wildlife Service). The award was effective in increasing attention and awareness of the goals of the Plan and highlighted principle players in the watershed, which allowed the Committee and the public to recognize the successes that were occurring. The coordinator facilitated the award process and worked with sponsors on award criteria, disseminating nomination packets, and organizing the award ceremony and publicity. The coordinator expanded educational opportunities by working closely with landowners and the Center for Land-Based Learning's Student and Landowner Education and Watershed Stewardship program (SLEWS) to identify sites on landowner property where

students could participate in restoration projects like planting, monitoring, and removing non-native invasive species. Working with the Lodi Winegrape Commission, the watershed coordinator organized multiple workshops for urban-suburban homeowners to learn about reducing runoff and non-point source pollution (Final report submitted to DOC, 2007). The workshops were modeled after the Winegrape Commission's workshops for winegrape growers that encouraged the adoption of sustainable farming practices. Unlike the growers' workshops, the homeowner self-assessment workshops presented a challenge in recruiting volunteers to join in the effort. As a result, the initiative did not generate much support.

Through collaboration with multiple stakeholders, the watershed coordinator and the Committee secured over \$2,000,000 in additional grants for watershed improvement and advancing the goals of the Plan in the Lower Mokelumne. Included in these grants was the 2007 CalFed grant for Continuing Education, Outreach, and Restoration in the Lower Mokelumne River Watershed (final report submitted to DOC, 2007).

2008-2012 Watershed coordinator grant

This grant was a continuation of the preceding grant; purpose and objectives were the same. Key outcomes include organizing watershed tours, expanding SLEWS work in the watershed, expanding the Lodi Storm Drain Detectives Program, updating the *Lower Mokelumne River Owner's Manual*, and refining the Plan (annual report submitted to DOC, 2011). During this grant period, the watershed coordinator and Committee were able to secure an additional \$1,009,000 for restoration projects (final report summary published by DOC, 2012).

Watershed Project Grants

2000-2003 Project grant – Murphy Creek Restoration Project

Though the Murphy Creek Restoration Project occurred concurrent to a watershed coordinator grant, the efforts were separate. Planning and implementation of the project was already underway at the time the watershed coordinator was hired by the SJCRCD. Once hired, the watershed coordinator offered assistance to the project, eventually becoming the lead project manager, and helped compile the final report. The Murphy Creek Restoration Project was an initiative catalyzed by landowners along Murphy Creek with hope of restoring riparian zones that were damaged by livestock use. As active participants of the Committee and with guidance and consultation from EBMUD, a coalition of seven landowners worked with the SJCRCD to help secure funds for restoration. EBMUD became the lead agency in the CEQA and NEPA process and was the permit holder, and SJCRCD was the grant recipient and project manager. The landowners outlined four goals for the project: (1) restore rearing and spawning habitat for Chinook salmon and steelhead, (2) to restore native riparian vegetation to encourage

reestablishment of neotropical migratory birds and other wildlife species, (3) improve water quality and water flows with Murphy Creek, and (4) promote sustainable agricultural practices that continue to support livestock and vineyard production within the watershed (final report submitted to CalFed, 2003). These goals addressed and enabled the execution of multiple elements identified in the Plan.

The major accomplishment was the removal of an earthen livestock dam on the Sparrowk Property. Removal of the dam opened a 0.8-mile stretch of spawning and rearing habitat to anadromous salmonids. Additionally, fencing was installed to prevent livestock from entering the creek, and three landowners installed off-watering systems on their properties. Native grasses were planted at the dam removal site to reduce sedimentation from entering the stream. Further downstream on two private properties, stream banks were re-sloped and stabilized and large gravel were added to streambeds to enhance stream function. Crews from California Conservation Corps (CCC) removed 100 yards of non-native invasive species (NIS) Himalayan blackberry vines near the dam removal site. However, it was determined that herbicide application was necessary, and the task was subcontracted to a restoration company. SLEWS, over the course of five field trips, and students from Lodi High School's Sun Academy participated in site mapping, plant identification, bird watching, planting and monitoring. The planning and execution of the project helped to build trust among diverse stakeholders and dispelled exaggerated stereotypes of landowners and agencies. Such trust enabled willingness from landowners to open their properties and project sites to various tours.

2003-2007 Project grant – Lower Mokelumne River Watershed Stewardship Plan Implementation

This grant sought to implement elements of the Plan through an identified set of goals and associated tasks. Tasks included: (1) implement the Lodi Winegrape Commission's winegrape grower's self-assessment plan, (2) develop a walnut grower's self-assessment plan, (3) develop a conceptual strategic framework to prioritize riparian habitat protection, enhancement, and restoration projects, (4) develop a pesticide environmental risk indicator model, (5) monitor downstream water quality in the Lower Mokelumne near vineyards, (6) monitor pest and pesticide use in vineyards near the river, (7) continue implementation of the Lodi Storm Drain Detectives Program, and (8) continue to conduct education and outreach (final report submitted to CalFed, 2007).

Implementing the winegrape grower's self-assessment plan has led to more than 1,500 acres of certified sustainable winegrapes in the Lodi region. The walnut grower's self-assessment program was unable to advance due to difficulties in securing a subcontract agreement with the University of California. The Committee developed ranking criteria for restoration projects that were broadly accepted by both landowners and a peer review, and it developed a conservation

handbook, which was made available to landowners who expressed an interest in conducting habitat restoration on their properties. As part of a confidential and voluntary self-testing effort to address discharge from their properties, farmers were unable to secure a lab to test for sulfur, one of the proposed baseline measurements for water quality testing near the vineyards (final report submitted to CalFed, 2007). The voluntary self-testing program dissipated instantly when the regional water board mandated the Irrigated Lands Regulatory program. Additionally, as a result of this grant, participation in the Storm Drains Detective and the Lodi Lake Docents programs increased and gained more public attention.

2007-2010 Project grant – Continuing Education, Outreach, Restoration, and Monitoring in the Lower Mokelumne River

This project was designed to continue implementation of goals and activities outlined in the Plan. Completion of tasks was made possible by subcontracting the Center for Land-Based Learning, the City of Lodi, Point Reyes Bird Observatory (Point Blue), and the Lower Mokelumne River Partnership. The goals of the project were: (1) implement programs identified in the Plan, (2) work with the City of Lodi to expand water quality and conservation education programs in cooperation with Lodi Public Schools and city property, (3) gauge the effectiveness of previous education and outreach efforts, (4) restore 20 acres of Valley Foothill Riparian Habitat, and (5) conduct monitoring to implement adaptive management and evaluate the effectiveness of habitat restoration activities (Final report submitted to CalFed, 2010). Progress was made with each of the goals throughout the course of the grant period with only one major holdback—the state bonds freeze in 2008-2009, which halted all projects and activities being implemented by the grant funds. Two projects that were in part locally funded, the Lodi Storm Drain Detective Program and the Center for Land-Based Learning’s SLEWS program, were able to continue activity during the freeze. The remaining projects were offered an extension to the grant agreement between 2009-2010 (final report submitted to CalFed, 2010).

Addressing the goals of the grant, SJCRCD in partnership with the Lower Mokelumne Partnership, the San Joaquin Council of Governments, and the Natural Resources Conservation Service performed riparian restoration work on more than 80 acres in the watershed, all of which were completed using only matching funds. Monitoring efforts generally revealed that restoration activities had a positive effect number of bird species present in the watershed. In partnership with the Center for Land-Based Learning, 225 students were recruited and completed the SLEWS program in San Joaquin County. Students in the SLEWS program participated in habitat restoration activities on roughly 100 acres of land. This grant also advanced the City of Lodi’s watershed education and outreach programs including the Lodi Lake Docents program, the Lodi Storm Drain Detective Program, and an after school program. It also supported the installment of Lodi Lake interpretive panels, an issue of watershed brochures, the development of a Mokelumne River Watershed Curriculum for Lodi Public Schools, and a survey of

residents' knowledge and attitudes about the Lower Mokelumne River. Additionally, the SJCRCD helped to enroll three additional landowners enrolled in a Safe Harbor Agreement for the valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (final report submitted to CalFed, 2010).

Unique Outcomes

This section highlights most significant outcomes that a number of stakeholder participants shared and this analysis revealed as important components in discussing the sweeping impact of Lower Mokelumne River Watershed Stewardship Committee and Plan. These outcomes are the result of the overall Lower Mokelumne Watershed Stewardship initiative and would more than likely not been achieved with a single grant. These consistent and long-term efforts driven by stakeholders and the watershed coordinator allowed for deeper outcomes to occur that have not only local, but statewide, national, and even international implications.

Safe Harbor Agreement

In partnership with SJCRCD, EBMUD, Lodi Winegrape Commission, Environmental Defense, and U.S. Fish and Wildlife Service, landowners in the Lower Mokelumne River Watershed signed the first non-mitigation programmatic safe harbor agreement in the State of California. It was developed in light of a habitat restoration project involving the planting of elderberry bushes. Elderberry bushes are key habitat for valley elderberry longhorn beetles, which are protected under the Endangered Species Act. Valley elderberry longhorn beetles can be killed in the course of ordinary farming operations. As a result of this, landowners negotiated an agreement that would provide legal protection if they harm the beetle, as long as measures were put in place to provide protective habitat for the beetles. This involved a three-year voluntary effort. While some landowners were skeptical of the effort, one landowner noted, the greater outcome is the evolution of viewpoints of the diverse people that came together to make this happen. Many involved in the Lower Mokelumne River Watershed stewardship initiative agree the development of the Safe Harbor Agreement and trust fostered between stakeholders involved is the most significant outcome of all. Additionally, in 2013, the restoration work in the Lower Mokelumne River Watershed was recognized and cited in the congressional record for contributing to the proposed delisting of the beetle from the threatened species list.

The Lodi Rules for Sustainable Winegrowing

The Lodi Rules for Sustainable Winegrowing, established in 2005, promotes the adoption of sustainable viticulture practice among winegrape growers throughout the Lodi region. Lodi Rules was the first third party sustainable winegrowing certification program in the state.

“Sustainable viticulture” is a term used when principles of sustainable agriculture are practiced in the vineyard (Lodi Rules, 2013). The Lodi Rules program grew out of the *Lodi Winegrower’s Workbook* and was developed through a partnership between the Lodi Winegrape Commission and Protected Harvest. The Lodi Rules program addresses consumer perception of Lodi winegrapes, winegrape marketability and quality, agricultural impact on the environment and human health, and wildlife habitat and biodiversity throughout the region (Lodi Rules, 2013).

Growers who achieve the Lodi Rules certification standards display a Certified Green seal on wine bottle labels. One component of certification requires growers to attend meetings with a local watershed stewardship group. For growers in the Lodi region, this means attending the Lower Mokelumne River Watershed Stewardship Committee meetings. This requirement in the Lodi Rules increases landowner participation in the Committee meetings. The *Lodi Winegrower’s Workbook* and the Lodi Rules program have served as models for California’s statewide sustainable winegrowing program, and have sparked interest in Oregon and Washington. The program has recently gained international attention with the prospect of being adopted in Israel and other winegrowing regions around the world.

Key Findings

Watershed improvement activities in the Lower Mokelumne River Watershed have led to an array of environmental, economic, and social outcomes that not only display, but also contribute to high levels of organizational, technical, and grant-acquiring capacity within the Lower Mokelumne River Watershed Stewardship Committee. Products that came out of the supported grants and continue to influence the implementation of projects include the *Lower Mokelumne River Watershed Stewardship Plan*, the *Mokelumne River Watershed Owner’s Manual*, the *Lodi Winegrower’s Workbook*, and the Lodi Rules Certification Program.

Significant environmental outcomes include the development of California’s first programmatic Safe Harbor Agreement, the removal of the Murphy Creek dam, wildlife habitat restored across property boundaries, and more broadly, widespread adoption of sustainable best practices in both agricultural and urban communities. From an economic standpoint, the adoption of sustainable best practices in the field has shown to be a valuable marketing mechanism for Lodi winegrape growers, resulting in a boost in the marketability and reputation of Lodi winegrapes. Another major economic outcome has been the stewardship group’s ability to secure additional project funding through additional grant awards and support from EBMUD and the Lower Mokelumne Partnership. In realizing the benefit of multi-stakeholder collaboration and watershed coordination, EBMUD and the Lower Mokelumne Partnership shifted from only funding on-the-ground projects to also funding initiatives that would contribute to expanding watershed education to benefit watershed-based social outcomes. Such activities changed the way agencies and organizations viewed the importance of watershed management. Beyond agencies and

organizations, shifts in perspectives spread throughout the stakeholder group, leading to one of the most significant social outcomes of the watershed activities—trust and relationships built among diverse interests, false stereotypes dispelled, and standing viewpoints evolved. Additionally, coordination became more effective throughout the course of practicing collaborative processes while stakeholders with different needs were encouraged to connect and set common goals. Outside of the stakeholder group, rural and urban community members gained awareness of their own and the other’s impacts on watershed health, and numerous youth learned about and participated in watershed restoration efforts.

These outcomes were achieved and contributed to by an aggregate of key elements as identified through stakeholder interviews and information conveyed in the final report. Overlapping key elements include sufficient grant funding, clear programmatic goals outlined in a watershed management plan, inclusive and diverse stakeholder participation in the development and implementation of the management plan, effective and consistent coordination, and an adaptive process. Driving these elements forward was a watershed coordinator, whose position was predominantly funded by DOC Watershed Coordination Grant Program with additional support from the Lower Mokelumne River Partnership. The watershed coordinator fulfilled many essential roles that contributed to the positive outcomes seen throughout the watershed. The coordinator increased stakeholder participation, promoted collaboration, and facilitated trust building in both interpersonal relationships and formal partnerships. The coordinator helped to increase organizational and technical capacity in the group by gathering and distributing information to the stakeholder participants, finding the resources needed to plan and implement projects, enlisting the expertise of state and federal agency personnel and partners, and contributing an overarching narrative for grant proposals. The coordinator kept the group and the partnerships alive by fulfilling the logistical role of writing and consolidating agendas and minutes, maintaining an open space for diverse ideas and communication, advancing the overarching goals outlined in the management plan, and engaging an adaptive management process. The watershed coordinator displayed an assortment of characteristics that contributed to effective coordination—likeable, kind, confident, an effective communicator, an attentive listener, a nurturer, a catalyzer, and the glue that connects visions and maintains stakeholder engagement.

The process in which key elements were exercised and outcomes were achieved in the Lower Mokelumne is characterized as voluntary, community-driven, and adaptive. Several interview participants noted that stakeholders, landowners especially, are “more willing” and “more empowered” to participate under voluntary circumstances. It was the looming “threat” of regulation that originally mobilized landowners and other stakeholders, who had the mindset of, “We’re going to get in front of this and regulate ourselves.” The stewardship group that formed out of this has maintained a non-confrontational, community-led approach to watershed activities where self-interests are addressed through collective action. The watershed coordinator

reinforced this approach by “keeping the community in the lead” and “keeping the management plan as the answer.” Through an adaptive process and goals identified in the existing management plan, the watershed coordinator guided the group through visioning exercises, identified joint goals, explored roads that lead to outcomes, and forged the partnerships and compromise needed to get there. The coordinator regularly charted successes, outcomes, and challenges, and then worked with the group to identify next steps. Stakeholders, through this process, believed in their work, gained trust amongst each other, increased levels of participation, and further supported the overall efforts.

In recent years, there has not been full funding for a watershed coordinator in the Lower Mokelumne River Watershed. Following the departure of the watershed coordinator, the group shared some of the coordination tasks that had been provided for over a decade, and recently EBMUD has extended funding for a part-time position, though many noted that part-time is inadequate to maintain the momentum and provide the needed attention to the myriad of issues of the watershed group. The group now grapples with whether one entity or a shared effort should financially support coordination. Many in the Committee have recognized a decline in motivation and stakeholder participation, a slow-down of projects, and a decrease in grant-writing capacity from the SJCRCD. One informant expressed the fear that without the presence of a watershed coordinator, everyone may retreat to working in individual bubbles. Without the enterprise of a central watershed coordinator, it is a challenge for individuals to harness energy and collectively move forward.

Appendix A: Methods

This case study is based on nine stakeholder interviews and a review of grant documents provided by the Department of Conservation, the SJCRCD website, and multiple stakeholders (See *Appendix A* for Available Documents). Seven out of nine interviews were made possible with a two-day visit to the City of Lodi by two Sierra Institute researchers; two interviews occurred over the phone. Stakeholders interviewed include former staff of the SJCRCD, including Special Projects Manager and Watershed Coordinator, the Watershed Program Coordinator with the City of Lodi, the Project Manager with the San Joaquin Council of Governments, a former biologist and a Watershed Planning Analyst with East Bay Municipal Utility District, former Sustainable Winegrowing Director of the Lodi Winegrape Commission, and two local stewards and landowners associated with Lange Twins Family Winery and Vineyard and Vino Farms (See *Appendix B* for List of Interview Participants).

Appendix B: Interview Participants

Representatives from one or more of the following:

San Joaquin County Resource Conservation District

City of Lodi

Vino Farms

East Bay Municipal Utility District

Lange Twins Family Vineyard and Winery

San Joaquin Council of Governments

Lodi Winegrape Commission

East Bay Municipal Utility District

Appendix C: Available Grant Documents and References

San Joaquin County Resource Conservation District	Grant Proposal (Submitted to granting agency)	Quarterly or Annual Update(s)	Final Report (Submitted to granting agency)	Catalogued Description (Published by granting agency)	Catalogued Final Report (Published by granting agency)	Other
Murphy Creek Restoration Project (2000-2003)			X	X		
Lower Mokelumne River Stewardship Plan Implementation (2003-2007)			X	X		
Mokelumne River Watershed Coordinator (2007-2007)			X		X	
Continuing Education, Outreach, Restoration, and Monitoring in the Lower Mokelumne River (2007-2010)			X			
Mokelumne River Watershed Coordinator (2008-2012)	X	X			X	

References

Lodi Winegrape Commission. (2013). *The Lodi Rules for Sustainable Winegrowing Certification Standards, Second Edition*. Lodi Winegrape Commission, Lodi, CA.

San Joaquin County Resource Conservation District. (2002). *Lower Mokelumne River Watershed Stewardship Plan*. Lodi, CA.

San Joaquin County Resource Conservation District. (2002). *Mokelumne River Watershed Owner's Manual*. Lodi, CA.