

Case Study: Shasta Valley Resource Conservation District

Watershed: Shasta River, Sacramento River Headwaters, and McCloud River Watersheds

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Year	Grant Program	Project Title	Watershed	Award Amount
2011-2014	DOC Watershed Program	Watershed Coordination for the Shasta River, Sacramento River Headwaters, and McCloud Watersheds	Shasta River, Sacramento River Headwaters, and McCloud River	\$178,135

Overview

The Shasta Valley Resource Conservation District (SVRCD) received a watershed coordinator grant in 2011 to help increase SVRCD’s capacity to coordinate entities and individuals across the southern region of the district’s jurisdiction. SVRCD also received a six-month extension to the watershed grant as part of the watershed program’s Drought Emergency Response Extension for the 2011-2014 grant recipients. Watershed coordination efforts took place in both the Shasta River watershed and the portion of the Upper Sacramento watershed that falls within Siskiyou County.

Organization

SVRCD is a California authorized special district that was founded in 1953 with a mission to “work with interested landowners on a voluntary basis to enhance the management and sustainable use of natural resources in order to ensure the long-term economic viability of the community.” SVRCD focuses on projects concerning the improvement of fisheries and water quality primarily in the Shasta Valley. The SVRCD service area encompasses the central part of Siskiyou County, including the entire Shasta River watershed and portions of the Klamath River, Applegate River, Scott River, McCloud River, Fall River, and Sacramento River watersheds. Unlike some RCDs throughout the state that receive limited funds through county property tax, SVRCD relies solely on a combination of grant funds, fundraising, and fee-for-service projects. SVRCD’s Board of Directors is volunteer-based, and includes members with backgrounds in agriculture, geology, and environmental sciences.

Shasta River and Upper Sacramento Watersheds

Originating southwest of the town of Weed in the Eddy Mountains, the Shasta River flows northward for over 50 miles through the Shasta Valley to its confluence with the Klamath River. The river is primarily recharged by springs, fed by precipitation and snow and glacial melt from Mount Shasta with four major tributaries, including Parks Creek, Big Springs Creek, Little Shasta River, and Yreka Creek. The Shasta River watershed drains an approximate 507,500-acre area located entirely within Siskiyou County. Human activities such as gold mining, gravel extraction, agriculture, and water diversion systems have affected the ecological health of the watershed and impacted fishery conditions. The watershed supports populations of Coho,

steelhead, and Chinook salmon. Coho salmon in the Shasta River watershed are included on state and federal lists of threatened species.

With headwaters in the Klamath Mountains, including Mount Shasta, the Upper Sacramento River flows 40 miles south where it empties into Lake Shasta. With an area of approximately 383,000 acres, the watershed encompasses both private and public lands containing high elevation mountains and numerous lakes and streams. While timber production remains critical to the local economy, recreation and tourism have become the primary economic activity in the watershed. Population in the watershed is concentrated in the towns of Mount Shasta and Dunsmuir, and the small-unincorporated towns of McCloud and Lakehead. Management issues within the watershed are focused on wild trout, forest health, wildfire and fuels management, aquatic and riparian habitat, and water quality (Upper Sacramento River IRWM).

2011-2014 Watershed Coordination Grant

The watershed coordinator grant provided an opportunity for SVRCD to strengthen capacity, enhance ongoing projects, and expand its reach and presence across the watershed. Twelve objectives were identified at the onset of the grant, including: 1) update and expand the SVRCD's "Long Range Plan" goals for 2011 to 2016; 2) establish awareness of SVRCD activities in underserved portions of the district; 3) diversify SVRCD's funding base; 4) work toward forming a community forest/joint management area on Rainbow Ridge; 5) conduct preliminary survey of watershed status; 6) improve landowners' understandings of the Shasta River Total Maximum Daily Load (TMDL) waiver requirements; 7) attend meetings and contribute to processes related to the Klamath Dam removal and TMDL implementation; 8) help advance creation of a watershed plan; 9) support SVRCD's involvement in watershed activities; 10) utilize the RCD exchange network to coordinate watershed resources on a statewide level; 11) complete all required management and reporting tasks; and 12) contribute to the State's drought relief plan by working locally and increasing public awareness.

Outcomes and Process

SVRCD geographically split watershed coordination tasks between two watersheds, the Shasta River and Upper Sacramento River, and between two watershed coordinators. The split efforts enabled SVRCD to expand its reach by continuing existing water quality projects in the Shasta River watershed and by initiating new projects in the southern part of Siskiyou County. In the Siskiyou County portion of the Upper Sacramento River watershed, the watershed coordinator (hereafter, watershed coordinator 1) aimed to educate the public and landowners on forestry issues and timberland management through a series of workshops and fuels reduction demonstration projects. The watershed coordinator working in the Shasta River watershed (hereafter, watershed coordinator 2) focused on building relationships with the ranching community and provided technical and informational support regarding water quality issues and fishery conditions. Among the range of outcomes accomplished with the watershed coordination grant, interviewees highlighted: 1) updating SVRCD's Long Range Plan, 2) working with the Siskiyou Land Trust on the Rainbow Ridge Community Forestry Project, 3) organizing numerous educational workshops focused on topics such as fire safety, forest stewardship, and watershed health, 4) contributing to the Upper Sacramento Integrated Regional Watershed

Management Plan, 5) supporting private landowners in developing ranch plans for the Total Maximum Daily Load (TMDL) waiver program, 6) coordinating a salmon festival in 2012, and 7) participating in organizing the Nature Conservancy's Shasta Water Transaction Program.

Organizational Capacity Building

The DOC grant enabled SVRCD to hire a part-time watershed coordinator (watershed coordinator 1) to augment the district's preexisting staff. Watershed coordinator 1 accomplished several outcomes during the grant term; however, stakeholders noted that SVRCD lacked resources to fund the position once the grant ended. The grant also provided funds for SVRCD to purchase two new computers, which stakeholders remarked greatly increased the technical capacities of the organization.

In discussing increased internal capacity of the RCD, watershed coordinator 1 facilitated the development of an updated long-range plan, which was the first step to addressing SVRCD's goal to improve its organizational structure (Shasta Valley RCD Long Range Plan, 2016). Informants commended watershed coordinator 1 for engaging and consulting the RCD board to accomplish the update, noting that it is often difficult for board members to dedicate time to complete involved tasks. The active presence of a watershed coordinator was critical in gathering input from diverse board members to expand and solidify long-term goals and objectives outlined in the long-range plan. Revised and expanded goals include: 1) maintain a sustainable organization; 2) implement effective projects that meet the needs of our district; and 3) provide guidance and direction to the Natural Resource Conservation Service (NRCS). Interviewees acknowledged the value of revisiting goals in the long-range plan to advance projects and continuing engagement of RCD board, staff, and partners.

The additional capacity afforded by the DOC grant also enabled SVRCD to participate in statewide issues and discussions surrounding state legislation and policy. Flexible funding from the grant supported watershed coordinator 2 to attend and participate in four annual California Association of Resource Conservation Districts (CARCD) meetings. Interviewees emphasized the importance of rural presence at statewide meetings, where common challenges, such as funding can be discussed with similar groups, and a collective voice can be developed. In the thread of expanding SVRCD's reach, stakeholders reemphasized the importance of the DOC grant in enhancing their capacity to increase outreach to the "hinterlands," particularly the south end of Siskiyou County, where issues concerning forests and fires encumbered several disadvantaged communities. In this economically challenged region, watershed coordinator 1 worked closely with Siskiyou Land Trust (SLT)—which provided office space and other resources—to advance numerous forest-related projects across the landscape.

Upper Sacramento River Watershed

In the Upper Sacramento River watershed, the Rainbow Ridge Community Forestry Project (RRCFP) was implemented through a partnership between SVRCD, SLT and NRCS. The goal was to facilitate fire safety and forest stewardship activities with landowners on Rainbow Ridge, a 5,000-acre forested hillside area adjacent to Mt. Shasta. With support from project partners and watershed coordinator 1, SLT worked with landowner and conservation advocate, Thamar

Wherrit, to place a conservation easement on her 600-acre forested property on Rainbow Ridge. The landowner's dedication to conservation made it possible for watershed coordinator 1 and other project partners to organize volunteer workdays and fuels reduction demonstration projects on the property. Project activities on Wherrit's property served as an example and model for private landowners to better manage and implement forest stewardship practices. As a component of RRCFP, the watershed coordinator and project partners worked with Rainbow Ridge landowners to collect data on forest conditions, assisted with developing collaborative management strategies and plans among landowner working groups, and informed interested landowners about the conservation easement process.

In addition to organizing volunteer workdays and demonstration projects on Rainbow Ridge, watershed coordinator 1 expanded outreach efforts to develop a series of 22 educational forest stewardship workshops over the course of three years. Informants agreed that workshops were one of the most significant outcomes of watershed coordination in the Upper Sacramento River watershed, garnering participation from the public, landowners, and others. Workshop attendance ranged from three to 70 participants, and experts presented on a variety of topics including the ecological and land use history of the watershed, sustainable forestry, restoration, climate change, drought, and fire. Informants reflected that the most well-attended topics included those discussing general ecosystem knowledge, restoration projects, and threatened species, such as the northern spotted owl. Topics that were not as well attended or most controversial included those discussing fire and climate change. See Appendix ___ for full list of workshops.

Watershed coordinator 1 also supported the development of the Upper Sacramento IRWMP by participating in meetings and contributing 50 hours to writing the forestry section, presented updates to the RCD's board of directors, and held public meetings to inform interested stakeholders about the IRWM process. Informants recognized the watershed coordinator's essential role in connecting the interests of landowners to—as some stakeholders describe it—an “overwhelming” IRWM process by making information digestible and gathering essential input from landowners in a region that is mostly privately owned.

Shasta River Watershed

In the Shasta River watershed, the DOC grant allowed increased the flexibility of an RCD staff person to take on the watershed coordination role, continuing to advance ongoing monitoring projects and initiating new projects with the Shasta Valley ranching community. Many projects focused on water quality, including riparian habitat restoration and fish passage improvements. Throughout the grant term, watershed coordinator 2 provided technical assistance to landowners to complete requirements of the Shasta River TMDL Conditional Waiver Program, managed by the North Coast Regional Water Quality Control Board. The conditional waiver program offers an alternative for landowners to meet Shasta River TMDL requirements through a collaborative stewardship approach. As a liaison between landowners and the water board, the watershed coordinator supported landowners in developing ranch plans, maintaining property goals, and fulfilling annual reporting requirements. According to the final grant report, efforts resulted in the development of over 20 ranch plans that identified projects to meet TMDL requirements,

increased monitoring within the ranching community, and an increased awareness of water quality concerns throughout the Shasta Valley.

Led by the Nature Conservancy and in partnership with agricultural landowners, resource agencies, and the local water district, watershed coordinator 2 helped implement the Shasta Water Transaction Program (SWTP). SWTP is a collaborative market-based program that encourages water users to leave water in-stream for fish. Water users participate in two ways: 1) decrease water use voluntarily or through voluntary short-term agreements, and 2) receive compensation for water left in-stream. According to the Nature Conservancy's website, efforts from the SWTP yielded over 6,800 acre-feet of water in-stream between 2012 and 2016, which supported about 40% of the incoming adult fall Chinook population during severe drought conditions.¹

The DOC grant supported watershed coordinator 2 to become a member or maintain membership with several local and statewide groups, including the California State Coho Recovery Team, the Klamath Fish Health Assessment Team, North Coast Region of RCDs, and the Nature Conservancy's committee for planning open houses at the Shasta Big Springs Ranch. As part of the Nature Conservancy's open house at the Shasta Big Spring Ranch, the watershed coordinator helped lead tours with the public to observe spawning Chinook salmon. During the big Chinook run in 2012, the watershed coordinator worked closely with the Nature Conservancy to coordinate the annual Salmon Festival. Distinct from other years with its emphasis on celebrating both salmon and beef, the festival brought together for the first time two major economic enterprises heavily dependent on the watershed's resources. One interview participant remarked that the festival was an "enlightened moment," capitalizing on common interests to improve water quality, and having encouraged relationships between ranchers who own the water rights and ocean fishermen who harvest fish that depend on inland stream habitat for spawning.

Key Findings

SVRCD accomplished a range of objectives between 2011 and 2014, uniquely enabled by DOC watershed coordination funding. Considering the diverse landscape of the region and the vast scope of coordination needs, some stakeholders believe that the length of time in which watershed coordination was funded fell short of strengthening the RCD's long-term needs for building capacity. Despite the RCD's ongoing challenge to maintain watershed coordination efforts after the grant, several significant findings are evident in the great amount of work that was accomplished, from developing relationships with landowners to presenting at statewide conferences.

In discussing the outcomes of the grant, stakeholders emphasized that characteristics like "interactive" and "resourceful" are important attributes of watershed coordination, particularly in tasks like building trust, nurturing partnerships, and providing a clearinghouse for information-sharing. Stakeholders agree that these aspects of watershed coordination combined with flexible

¹ SWTP efforts also resulted in a peer-reviewed article published in *Journal of Water Resources Planning and Management* titled, "Instream Flows: New Tools to Quantify Water Quality Conditions for Returning Adult Chinook Salmon."

grant funding make up an effective recipe for advancing projects in a dynamic and rural-oriented landscape.

In discussing concerns of SVRCD's capacity and reach, stakeholder sentiments reflected a need to most effectively align the scope of coordination efforts with the length of time that a watershed coordinator is funded. In the Shasta Valley, developing trust across a broad rural landscape where previously there had been little to no SVRCD presence is a time-consuming process. One stakeholder suggested that grant funding stretched over a longer term would yield more effective and durable results, especially in light of the learning curve a new watershed coordinator is likely to face. This may be less relevant if a watershed coordinator has previous experience working or living in the region. From a different perspective, having someone new to the area introduced new ideas about the watershed, with fewer preconceptions about the region and the people in it. In this case, watershed coordinator 1 was new to the area, but prior to starting the watershed coordinator position the individual volunteered with SLT to gain familiarity with issues present in the region and begin developing trust with entities and individuals. Having some familiarity and rapport with stakeholders in the watershed contributed to SVRCD's ability to effectively share resources with partners and established a platform for introducing new project ideas (e.g., forestry workshops) to the region.

A commonly cited challenge among interview participants was the perceived position of the RCD on a range of issues from, as interview participants describe, "both sides" of the political spectrum. Given the diversity of the district's biophysical and socio-political landscapes and, what interviewees describe as, ongoing political animosity between the north and south counties, the RCD is sometimes perceived as "too much of an environmental advocate" by some and "too much of a government agency" by others. Despite the RCD's increased challenge in building trust in the diverse landscape, multiple stakeholders suggested that the RCD is still a "perfect venue" for hosting a watershed coordinator because of the large network of existing contacts it maintains, further necessitating the watershed coordinator's role in fostering trust and building relationships across the landscape.

Stakeholders also reported strengths and weaknesses of the RCD's position in the watershed by looking at the internal structure of the RCD. In this context, internal structure refers to mentorship between RCD staff, connectivity among the RCD's projects, and funding stability. Because watershed coordinator 1 worked outside of the RCD office at an office space provided by SLT, stakeholders noted there was maybe too little overlap and connectivity among watershed coordinator 1's work in the southern part of the district, watershed coordinator 2's work in the northern region, and project supervisors at the RCD's main office. Interview participants suggested that more overlap and mentorship between staff and watershed coordinators might have contributed to a shorter learning curve with new projects in the southern part of the district. Additionally, funding stability has previously been and remains a challenge for SVRCD, with added concern from some stakeholders that low-capacity organizations in general might lack the ability to spend grant funds "properly," or most effectively. Stakeholders recognized the limitations SVRCD had given their limited organizational capacity.

Unstable funding is related to SVRCD's biggest challenge today, that is, keeping the RCD's doors open. Since the end of the DOC grant, many of the efforts that both of the watershed

coordinators implemented are no longer active. Additionally, stakeholders mentioned some of the larger projects funded by Fish and Wildlife Service are coming to an end, which invokes a sense of uncertainty among stakeholders in discussing the future of SVRCD.

Appendix A

Methods

This case study is based on four stakeholder interviews and program-related documents. Interviews were conducted both over the phone and in-person by two researchers, recorded by handwritten notes, and synthesized into this case study report. See Appendix C for a list of interview participant affiliations.

Appendix B

Interview Participants include one or multiple representatives affiliated with the following:

Shasta Valley RCD
Forsgren Associates, Inc.

Appendix C

Available Grant Documents and References

	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
Shasta Valley RCD Watershed Coordination			X			X