



Looking back: achievements on the Shasta

The Shasta Valley Resource Conservation District (SVRCD), formed in July 1953, is proud of its long history of working with landowners on voluntary measures. Since 1988 SVRCD has utilized over \$20 million in grant funds, with \$15 million of that for projects from 2006 to 2011. These projects improve fisheries and water quality in the Shasta River and its tributaries. Sensitive to the strong agricultural presence in the Shasta Valley, SVRCD has worked with agricultural landowners and irrigation districts to implement voluntary restoration projects ranging from riparian fencing to upgrading diversions to provide fish passage and water delivery system upgrades that benefit the rancher, the water and the aquatic life.

Looking back, some of those projects have changed the landscape of the Shasta River, for instance by replacing or removing small irrigation dams, while others are ongoing projects which seek to continue to improve water quality and bring benefits to landowners. The Araujo and Shasta River Water Association (SRWA) dam removal projects (2007-2009) improved the ecological health of the Shasta River, while enhancing irrigators' ability to manage their ranchlands. The

Araujo dam removal made that area of river more easily accessible to fish. The SRWA project improved irrigation systems through the installation of variable speed pumps and the installation of several miles of piping to replace leaky irrigation ditches.

In 2006, SVRCD began its Shasta River Tailwater Reduction Program, which continues today in Phase 3 to reduce tailwater return to the Shasta River. This planning and implementation effort now provides ongoing guidance for current and future tailwater reduction projects. Earlier phases included developing a watershed-wide tailwater reduction plan, irrigation efficiency projects and riparian buffer projects.

Despite its name, the Shasta Valley RCD boundary extends beyond the Shasta Valley. As we look to the future, SVRCD recognizes the need to engage communities outside of the Shasta Valley. Acting on this, projects and partnerships are currently being developed in the Sacramento and McCloud watersheds and work is or has been done in the Klamath and lower Scott River watersheds.

A sampling of SVRCD projects and funding over recent years

Watershed Coordination 2011-2014 (Dept. of Conservation) - \$308,821

Shasta River Riparian Protection/Enhancement 2012-2015 (North Coast Water Board) - \$321,545

Salmonid Monitoring 2012-2016 (CA Dept. Fish and Wildlife) - \$589,475

Tailwater Reduction and Management – Phase 2 2010-2014 (Water Board) - \$751,442

Irrigation Water Management/Watershed Stewardship began in 2014 (Water Board) - \$610,000

Fish Passage Designs began in 2015 (National Fish & Wildlife Foundation) - \$125,194

Fine Sediment Reduction Project began in 2015 (CA Dept Fish and Wildlife) - \$99,194

Bogus Watershed Riparian Protection Project began in 2016 (Water Board) - \$421,659

Shasta Drought Response/Irrigation Efficiency to begin in 2016 (DWR) - \$347,092

Shasta Stewardship Implementation Project to begin in 2017 (Water Board) - \$341,204

Riparian fencing launched on Bogus Creek

This summer the Shasta Valley RCD launched the Bogus Watershed Riparian Protection Project, with funding by North Coast Water Quality Control Board, to install 6 stream-bank miles of livestock management fencing along priority riparian areas in the Bogus Creek watershed. Bogus Creek is an important spawning tributary to the Klamath River, and this grant will provide fencing to stabilize and enhance the riparian forest adjacent to the creek. A healthy riparian forest provides shading for the creek, stabilization to the stream-banks, and habitat for birds, amphibians, and other wildlife.

Site visits are currently being conducted with the goal of prioritizing and selecting projects later this year. The project grew out of interest and work being done in the area by landowners, both on their own and with support from agencies. Landowners who participate in this project will also allow access for pre and post project monitoring, development of a private riparian grazing management plan and commit to maintain any structures paid for by this grant.

The landowners in the project area are proactive – they created a Bogus Watershed Plan, formed the Upper Mid-Klamath Watershed Council, wrote draft watershed assessment with the help of the Klamath Watershed Team and NRCS, and planned or implemented TMDL improvement work. Landowners have

expressed interest in fencing, water access lanes and other livestock management strategies to improve water quality in this important tributary to the Klamath River.

There has been occasional attention to the Bogus Creek area over the years by various agencies and



Looking down on the Bogus Creek Watershed

groups. However, because other streams have needed more immediate attention, and Bogus Creek system has been seen as well-functioning, there has not been any long-term focus on this area. These project activities will implement on-the-ground projects and lead to a better understanding of any data gaps, what type of project work is needed, and other resource needs for the Bogus Watershed.

The Bogus Creek Watershed Plan, a collaborative effort between stakeholders, will be used as a starting point to help with the outreach and prioritization.

Working cooperatively with the Upper Mid-Klamath Watershed Council, the SVRCD will contact landowners, evaluate fencing projects and determine which reaches will be the most critical for these projects.

Riparian areas are ecosystems located along the banks of rivers, streams, creeks, or any other body of water. Riparian habitats are ecologically diverse and may be home to a wide range of plants, insects and amphibians that make them ideal for different species of birds and wildlife. Riparian areas can be found in many types of habitats, including grassland, wetland and forest environments.



Bogus Creek

Project enhances over 3 miles on Shasta River

The Shasta River Riparian Protection and Enhancement Project of 2012-2014 involved the construction of riparian fencing, planting, and stockwatering systems in high priority reaches of the Shasta River and its tributaries. This project, funded by a State Water Board Clean Water Act 319(h) grant, is part of a multi-year effort to continue to provide riparian protection and enhancement to the Shasta River Watershed.

The Shasta Valley RCD, its partners and dozens of willing landowners have been steadily installing riparian livestock management fencing along the Shasta River and its tributaries since 1991. To date, an estimated 91% of the mainstem Shasta River, where livestock is present, has livestock management fencing in place. These accomplishments were made on the strength of partnerships and relationships between all those involved.

During this project alone, 3.8 miles of riparian fencing, 1650 linear feet of riparian planting, 11 off-stream stockwater systems, two water access lanes, and a stream crossing were installed on eight ranches in important reaches of the river. This project received \$321,545 of State Water Board funding and benefited from funds leveraged by USDA Natural Resources Conservation Service and US Fish and Wildlife Service. Landowners contributed in-kind donations in the form of labor and materials in the amount of \$32,325.

This project focused on fencing some of the key remaining unprotected riparian portions of the Shasta River, with concurrent riparian tree planting to accelerate the recovery of stream shade and enhance riparian vegetation. Projects were implemented in the highest priority area, the mainstem Shasta between river miles 24 and 40.5, and in a second priority area located between river miles 12 and 24. Providing livestock management fencing along the riparian zone and planting riparian



Riparian planting along the Shasta River

vegetation is a priority conservation focus for the Shasta Valley RCD and its partners.

Allowing desired riparian vegetation to grow where it was subject to heavy grazing and trampling results in increased shade, leading to cooler river temperature over time. Riparian fencing also protects the stream-bank from hoof impact, which reduces erosion and

sedimentation. A healthy riparian zone also improves the filtration of runoff heading back into the river. These actions all address the Shasta TMDL by providing steps toward a reduction in temperature and an increase in dissolved oxygen.

The construction of riparian fencing is an ongoing effort as ownerships and land management change, fences wash out or fall into disrepair, and landowners become interested in participating in funding programs. SVRCD has recently obtained a new State Water Board CWA 319(h) grant to continue to install riparian fencing, planting, and stockwater

systems along the Shasta River starting in 2017. While the wheels turn slowly for SVRCD to plan projects, write grants, and prepare projects for implementation, we encourage any interested landowners to contact SVRCD with your project needs as a first step to participation in our programs.

Shasta River Watershed Stewardship – 2017

Are you struggling with invasive plants behind your riparian fencing and are interested in planting native plants and trees? Are you interested in installing riparian fencing or native riparian habitat improvement projects? Contact the SVRCD.

Fish Passage Project to open up 6 miles of Parks Creek

In summer 2017 Shasta Valley RCD will implement project construction to re-establish fish passage in Parks Creek under the Interstate 5 overpass bridge, opening up 6 additional miles of good habitat for coho salmon. Currently in the design and permitting phases, the on-the-ground work will consist of engineering a roughened channel creek bottom using an engineering approach developed by Cascade Stream Solutions.

After high flows in 2012 undermined the slope and removed some of the boulders from the original roughened channel project, this stretch deteriorated into a 4-foot drop with a steep approach and inadequate pool jump for juvenile salmonids. In this area of Parks Creek, the floodplain narrows from 350 feet to 70 feet as it passes under the freeway, leading to fast water during high flow events.

Significant efforts in the Shasta Watershed have improved conditions for salmonids; however, high water temperatures persist in the lower reaches and juvenile fish blocked from access to colder water as summer approaches will not survive. Many coho salmon tracked in the upper Shasta River ultimately spawned in lower Parks Creek where water temperatures are cooler.

The resulting cohort that emerges from lower Parks Creek and other areas in the Upper Shasta that are seeking juvenile rearing refugia are prevented from moving further upstream into Parks Creek by this fish passage barrier. That upstream area has been identified as a thermal refuge area that is currently inaccessible.

Construction of the project will place an extended roughened channel with concrete bed retention sills



Site visit with agencies to review plans for Parks Creek fish passage project.



that will use engineered stream-bed material and existing bed with native streambed material and boulder buttresses to ensure stability against high flow events. The result of the roughened channel is to re-slope the channel and provide resting pools to allow for passage of salmonids of all life stages.

The project began in 2014 with engineering proposals, hydraulic analysis and field studies, and

project design review by CalTrans Hydraulic Engineers and US Fish and Wildlife Service Fisheries Biologists. CalTrans and US FWS visited the site in early January 2016 to review the designs, which were prepared in accordance with the CDFW and NOAA fish passage design guidelines and standards and will meet the criteria for fish passage for all life stages.

Currently the project is in process of applying for necessary permits. In fall 2016, bidding will open for prospective engineers for the project buildout. Following pre-project monitoring, instream construction will happen during a six-week window next summer.

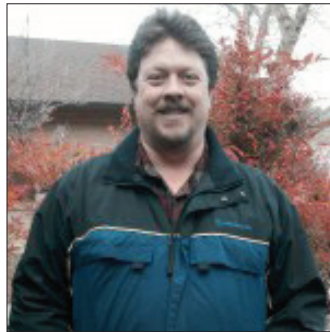
Shasta Valley RCD Board Members



Chairman, William H. Hirt joined the board in March 2005 and was re-elected Chairman of the Board in January 2015. Bill moved to Siskiyou County since August 1991, when he joined the faculty at College of the Siskiyous as the geology instructor. He uses his professional background to assist the

district in addressing geological and hydrological issues.

Chris Robertson became a board member in December 2011. He owns a farm in the Montague area and brings a history of working on his grandfather's farm in Modoc County, where he learned the family conservation ethic. Presently he supervises information technology for the County of Siskiyou. He served as the president of the Soil Conservation District for decades and worked in information technology in the San Francisco Bay Area.



Beth Sandahl came to the board in January 2015. In addition to teaching first grade, she and her husband also own and operate one of the few remaining dairies in Siskiyou County. She is a fifth generation resident of Siskiyou County.

Since 1864, Beth's family has been passionate about education, agriculture and conservation in our community. She holds a Masters of Science in Literacy and Reading.

Rich Klug was appointed in January 2013. Rich works for Roseburg Forest Products as a wildlife biologist. His work focuses mainly on rare and endangered species such as the Northern Spotted Owl and Pacific fisher. Rich has a BS in Wildlife Management from Frostburg State University and a MS in Wildlife Management from Humboldt State.



Ryan Walker has been a board member since 2011. Ryan grew up on the JJJ Ranch along Bogus Creek where he assisted his parents in running a large sheep ranch. He earned a law degree from Yale Law School and practiced law in Los Angeles for 10 years before moving home in 2005 with his family. Ryan returned to the family ranch, which he and his father have expanded and transitioned from sheep to beef cattle.



Shasta Valley RCD staff

Executive Director: Adriane Garayalde
(on leave of absence)

Interim District Manager: Karen Mallory

Project Specialist: Ally Lutes

Project Staff: Ayn Perry

Monitoring Specialist: Brook Mejica

Project/Monitoring Staff: Renee Casterline

Senior Project Coordinator: Dave Webb
(semi-retired)



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RCD online at our website:**

<http://svrccd.org/wordpress/>

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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.



Monitoring staff on the Shasta River.