www.ScottRiver.org

A Year in Review 2023

Scott River Watershed Council's Programs & Partnerships

Beaver, Community, Education, Fisheries, Forests, Fire, Meadows, Monitoring, Outreach, Restoration Designs & Implementation, Soil, Water, Weeds & Wildlife

SCOTT RIVER WATERSHED COUNCIL

A Message from Our Board Chair

The Scott River Watershed Council (SRWC) has been committed to Scott Valley's natural resource issues for 31 years. Our grassroots founders recognized the need to be proactive in supporting growth and maintaining our resources for the future. The SRWC continues to meet those challenges through education and science-based collaborations with our multiple partners such as The Nature Conservancy, the California Department of Fish and Wildlife, the US Forest Service, the Coastal Conservancy and so many more. Our team is rich in education, commitment, passion for and loyalty to our valley, all life, resources, and each other. Our programs and projects support the Council's mission which is to promote and support education, restoration, and scientific planning and monitoring to ensure the sustainability of the natural and human communities of the watershed, now and for future generations.

On behalf of the Board of Directors, I want to thank everyone on the SRWC staff and our partners for their efforts in making the Scott River watershed a better place for us all. We hope you enjoy our *A Year in Review 2023* newsletter!

With appreciation,
Shirley Johnson, Board Chair

You can contact Shirley at Shirley@scottriver.org

"Working for the Watershed Council gives me joy and a sense of purpose. It provides me with a community of people, of all ages, who are willing to roll up their sleeves to put their values into action. I can't think of anything I'd rather do than be in a creek with other Watershed Council employees helping to restore and monitor the natural world."
Betsy Stapleton, Project Development & Permitting Specialist

Scott River Watershed Council's Program Objectives

Community Connectivity	Fostering sustainable community bonds, while supporting local businesses and workforce in natural resources and environmental stewardship. Support for private and public lands while finding opportunities to reconnect Tribes with lands to support traditional practices.	**Land & Water Use Support**	Providing strategic planning and support to balance environmental conservation, ecosystem resilience, economic development, and social well-being while addressing the complexity of climate change. Finding resources to help support difficult yet needed changes that help move towards sustainability.
Education & Research	Creating a culture of learning, knowledge exploration, and academic inquiry. Promote opportunities for various levels of education and research activities and offer field experiences that promote giving thought and consideration to the complex issues facing our community. Supporting our local youth through the YESS program.	**Mountain Meadows**	Restoring mountain meadows to be ecologically rich areas to maintain and improve biodiversity, support wildlife habitats, regulate water flow, and contribute to overall ecosystem health. Working with federal/state agencies and landowners to minimize use impacts to these critical areas from over grazing, fire suppression and other land use management activities.
Fire & Forest Health	Promoting a comprehensive approach to managing and maintaining the health of forest ecosystems while addressing the risks and impacts of wildfires. Combining prevention, mitigation, and restoration strategies with an emphasis of getting good fire back on the land to reduce catastrophic wildfire risk to our community.	**Planning & Design**	Advancing ideas to address issues created by legacy impacts such as mining, logging and grazing while supporting landowners with ways to meet land and water use management objectives with the goal of improving ecosystem services, support natural processes and increase resilience for future generations.
Fisheries & Water Monitoring	Supporting our understanding about the effectiveness of restoration actions, how water management impacts water quality and quantity, and how water and fish are being influenced by our actions in the face of climate change. Committed to establishing monitoring activities to help answer the questions of the future.	**Pubic Engagement**	Building relationships, address community needs, and fostering a sense of collaboration and mutual support. This includes forums, workshops, field tours, newsletters, and one-on-one communications. Support for community projects and promoting environmental responsibility, awareness and sustainability.
Instream Implementation	Improving ecological conditions, restoring habitat, and encouraging processes such as groundwater recharge. This work generally is instream or adjacent to stream systems such as riparian areas and floodplains and focuses on creating processes that support beaver and fish.	**Regional & Statewide Initiatives Leader**	Collaborating with Tribes, government entities, NGOs, and community members to develop and implement strategies that can have a meaningful impact at a larger scale. Providing leadership and participation in regional or statewide initiatives that transcend local boundaries to address broader challenges and opportunities.

Our Commitment to Finding Sustainable Solutions

Throughout the year, the Council's collective efforts have translated into tangible achievements and positive outcomes for our community. Whether it was implementing innovative programs, spearheading impactful initiatives, or addressing pressing issues, the Council's work has been guided by a genuine commitment to making a difference. Daily I am gifted inspiration, humor, insight, and wonder about our watershed and our world by the Board and staff. This not only contributes to the overall well-being of our team but also fueled the creativity and innovation necessary for addressing complex challenges. The positive impact made in 2023 is a testament to what can be achieved when a group of dedicated and passionate individuals comes together for a common purpose.

It can't be understated the immense challenges posed by water scarcity, drought, and the broader impacts of climate change that extend beyond our watershed, affecting communities and countries worldwide. This is a transformative period in the Klamath Basin. As people are trying to navigate changes in water availability, ecosystem dynamics, and community resiliency, the Council fully recognizes the seriousness of these issues. We believe the crucial first step to navigate our future is to foster meaningful dialogue and raise awareness based on facts and empirical data. Our future is full of complex and interconnected challenges, but we must focus equal attention to the tremendous opportunities that lie before us. This is best said by Roman poet Horace "*Adversity has the effect of eliciting talents which in prosperous circumstances would have lain dormant*." I believe in these words as I have seen them play out numerous times throughout my life.

I am proud to say that our team is ready to take on the new year with empathy, dedication and understanding about the significance of what lies ahead. The Council remains steadfast in our commitment to continuing our crucial role in bringing together diverse perspectives to foster meaningful collaboration and to develop solutions that consider the well-being of both people and the environment.

Charnna

Charnna can be reached at:
530-598-2733
charnna@scottriver.org




The Scott River Watershed Council (SRWC) is a place-based, non-profit whose local Board of Directors and committed staff is taking a holistic and comprehensive approach to many of the challenges facing while trying enhance the opportunities of the Scott River watershed.

Scott River Watershed Council Team

Board Members

Shirley Johnson, President
Matt Thomas, Treasurer
Craig Thompson
Jenn Bray
Judd Hanna
Larry Alexander
Kory Hayden
Michael Stapleton
Tamila Medinnus
Vinnie McNeil

Staff Members

Charnna Gilmore, Executive Director
Betsy Stapleton, Project Development/Permit Specialist
Erich Yokel, Monitoring Supervisor
Amanda Schmalenberger, Office Manager/Bookkeeper
Sally Ayres, Administrative Assistant
Susan Rickey, Administrative Assistant
Sheryl Wilkins, Community Outreach Coordinator
Jenn Rogge, Composting Coordinator
Megan Ireson, Mtn. Meadow Coordinator/Data Mgr.
Peter Thamer, Project Manager
Harrison Morrow, Fish Biologist & Field Technician
Joe Croteau, Cal Fire Grant Project Manager
Darrell Mitchell, Technology Coordinator
Linda Bailey, Field Technician
Shannon Wedgley, YESS Crewleader & Field Technician
Aaron Elliott, Field Technician
Olivia Smith, Field Technician
Summer Interns: Frank, Kennedy Kyle, Leena & Nick
YESS Crews (7th Cohort)

"Working at the Scott River Watershed Council has been such a pleasure. It's wonderful to be surrounded by individuals with a common goal of maintaining the health and longevity of our community."
Sally Ayers-Smith & Rosie, Contract Managers

"The combination of a close-knit community and meaningful work makes my experience at the Scott River Watershed Council truly enjoyable."
Susan Rickey, Administrative Assistant

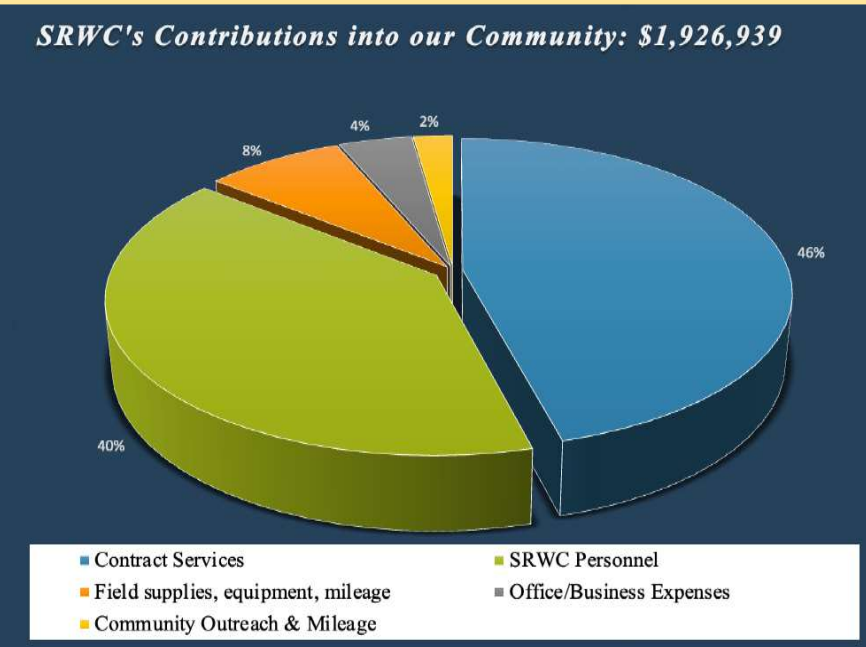
Exploring Progress: SRWC staff touring diverse projects in Scott Valley

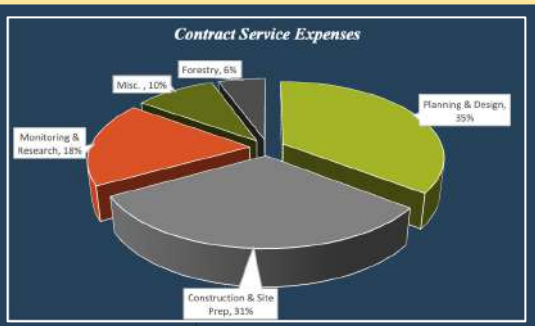
Growing Together: SRWC's Impactful Contributions to our Community

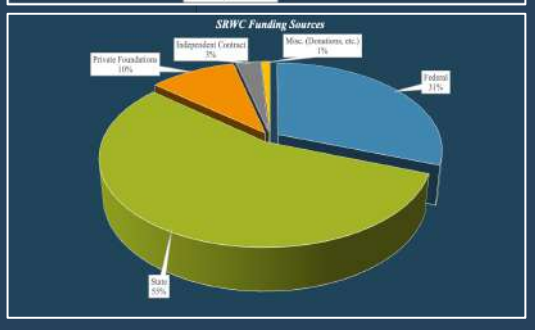
Scott River Watershed Council's office on February 17, 2023.

The Scott River Watershed Council (SRWC) is deeply rooted in its commitment to the well-being of our community, emphasizing a place-based approach. Throughout 2023, our unwavering focus on diverse aspects aimed at the overall growth and prosperity of our community remained steadfast. SRWC serves as a crucial advocate on complex issues affecting both our natural environment and human communities. We firmly believe that effective solutions can be achieved through collaborative efforts, partnerships, and engagement with a diverse range of individuals.

SRWC's mission extends across multiple domains, including education, environmental sustainability, social well-being, workforce development, and local economic viability. Through collaborative projects, volunteer initiatives, and strategic partnerships, we strive to bring about a lasting positive impact in the lives of those in our community. We are proud for the economic contributions we made to the Scott Valley community in 2023.





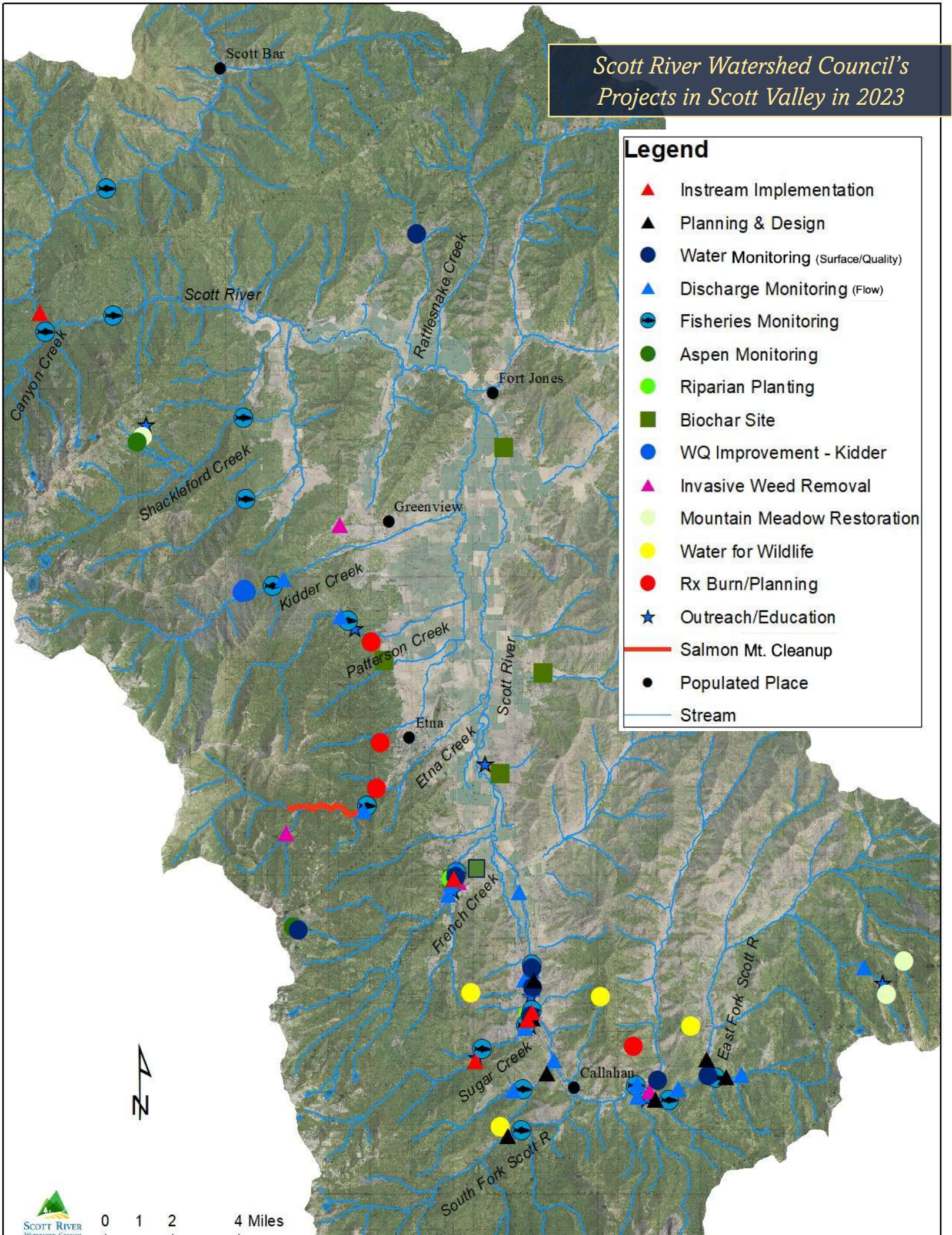


Our Community, Our Comrades, & Our Commitment

Welcome to our year-in-review report. We hope you enjoy taking a journey back through 2023 and the work done by the Scott River Watershed Council, our partners, and the Scott Valley community. First and foremost, we want to thank the landowners who allow restoration and conservation actions to take place on their land. We also would like to express our sincere gratitude to those federal, state, and private funders who see value in our work and the importance to the Scott River watershed. Of course, none of this would be possible without our dedicated staff. Their passion and commitment to the mission of the Council has been unwavering. To our Board of Directors, thank you for your community representation and leadership. Below is a list of our partners (click links to visit their website):

Ascend Wilderness Experience
Backcountry Press
BBW & Associates
Bella Vista Foundation
Broad Foundation
California Climate Investments
California Department of Fish and Wildlife
Cal Recycle
California Trout
Cal Fire
Caltrans
Cascade Stream Solutions
Center for Watershed Sciences UC Davis
City of Etna
Coastal Conservancy
Community Foundation of the Northern State
County of Siskiyou
Etna Community Garden
Etna Farmers Market
Etna PAL
EFM
Friesen Foundation
Gary Black Inc.
Humboldt State University
Jefferson Resource Company
Johnson Contracting LLC
Karuk Tribe
Klamath Bird Observatory
Klamath National Forest
Larry Walker Associates
Mattress Recycling Council
Mid Klamath Watershed Council
Moore's Gravel
North Coast Resource Partnership
NFWF (National Fish and Wildlife Foundation)
NOAA
North Coast Regional Water Quality Control Board
Northern California Resource Center
Northern Rivers Construction
NRCS (Natural Resources Conservation Service)
Occidental Arts and Ecology Center
Outdoor Equity Grants – State Parks
Pacificorp
Premier Clearing Inc.
Quartz Valley Indian Reservation
Restoration Design Group
Resources Legacy Fund
Salmon River Restoration Council
Salmonid Restoration Federation
Shasta Valley Resource Conservation District
Siskiyou RCD (Resource Conservation District)
Scott Valley Disposal
Scott River Ranch
Scott Valley Rotary
Scott Valley Unified School District
Seatone Consulting
Siskiyou County Farm Bureau
Siskiyou Economic Council
Siskiyou Land Trust
Siskiyou Prescribed Burn Association
Southern Oregon University
Stillwater Sciences
Sugar Creek Ranch
The Nature Conservancy
The Wildlands Conservancy
Torchbearr
Trout Unlimited
USDA Pacific Southwest Research Station
U.S. Fish and Wildlife Service
U.S. Department of the Interior (BOR)
United States Geological Survey
UC Davis
Watershed Research & Training Center
Wildlife Conservation Society
Yurok Tribe

Photo Credit: Jana Padilla


Scott River Watershed Council's Projects in Scott Valley in 2023
Legend
Instream Implementation
Planning & Design
Water Monitoring (Surface/Quality)
Discharge Monitoring (Flow)
Fisheries Monitoring
Aspen Monitoring
Riparian Planting
Biochar Site
WQ Improvement - Kidder
Invasive Weed Removal
Mountain Meadow Restoration
Water for Wildlife
Rx Burn/Planning
Outreach/Education
Salmon Mt. Cleanup
Populated Place
Stream
Scott Bar
Scott River
Canyon Creek
Rattlesnake Creek
Fort Jones
Shackleford Creek
Greenview
Kidder Creek
Patterson Creek
Scott River
Etna
Etna Creek
French Creek
East Fork Scott R
Sugar Creek
Callahan
South Fork Scott R
N
0 1 2 4 Miles
Scott River

Fostering Unity: Building a Culture of Sharing & Caring

Brad Henderson, Environmental Program Manager for the California Department of Fish & Wildlife and Amy Campbell, TNC's Environmental Water Transaction Project Director at TNC's Miners Creek Ranch.

Given intensifying climate change-driven drought conditions and the increased tension and regulatory pressure around water, SRWC continues to support efforts throughout Scott River and the Klamath Basin to find solutions to meet the water needs of both our human and wild communities. With our ongoing community outreach and educational programs, SRWC reaches a broad audience of people with different views about the world and the place we call home. Providing educational opportunities for students of all ages remains a core mission. In 2023, SRWC hosted or participated in 36 field tours or presentations, engaging over 1,240 people about issues facing the Scott River and forming new partnerships and strengthening others.

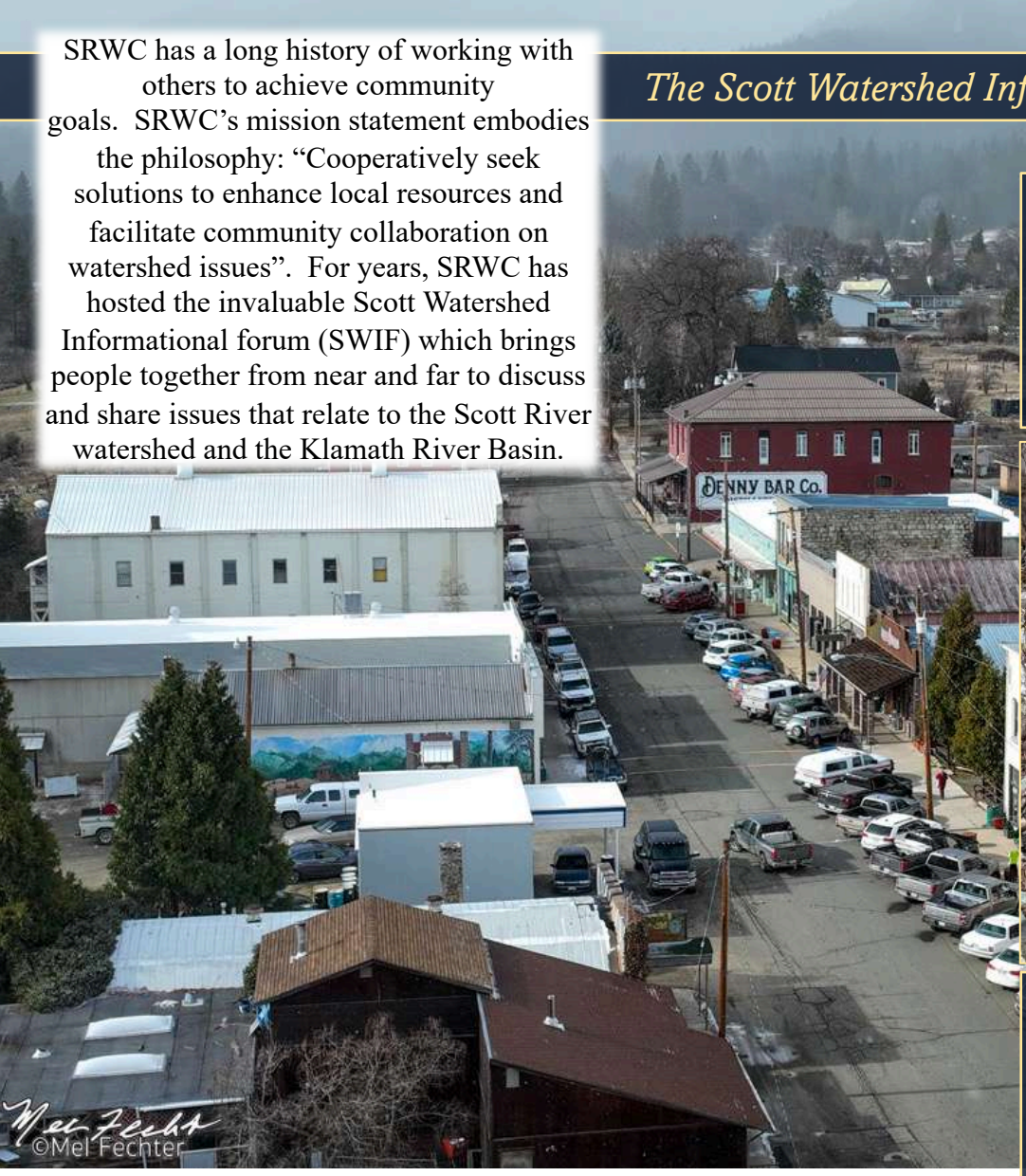
Our long-time friends Brock Dolman and Kate Lundquist from OAEC

At the end of September, SRWC hosted Making Meadows Matter, a workshop on using process-based restoration (PBR) for restoring meadows and streams. Process-based restoration partners with nature to harness the energy of water to meet restoration objectives. We focused on how to use PBR approaches to increase the capacity of degraded river and stream ecosystems to retain water, support biodiversity, create fire resiliency, and adapt to climate change. The workshop brought 50 people together, building connections and facilitating the sharing of ideas between people from varied organizations and agencies. A huge shout to many who made this event such a success!

Photos from the four-day workshop of a great group of people looking to find solutions, explore opportunities, and work towards a sustainable future.

The Scott Watershed Informational Forum (SWIF) 2023

SRWC has a long history of working with others to achieve community goals. SRWC's mission statement embodies the philosophy: "Cooperatively seek solutions to enhance local resources and facilitate community collaboration on watershed issues". For years, SRWC has hosted the invaluable Scott Watershed Informational forum (SWIF) which brings people together from near and far to discuss and share issues that relate to the Scott River watershed and the Klamath River Basin.



"Working for the Watershed Council has been a welcomed challenge, the camaraderie much needed and enjoyed, and as I see it, improvements in all the tasks the Council takes on."
Linda Bailey, Field Technician and Operation Manager

Linda & Sheryl on French Creek.

"To be part of the SRWC team is an honor, and to see how the human spirit can reverse and transform the environment is an incredible experience."
Sheryl Wilkens, Community Outreach Coordinator

SWIF 2023 was a 3-day event with multiple field tours and 20 presentations on topics ranging from beaver to wolves, agricultural water conservation efforts, fire, fisheries, Scott River Tailings, Klamath Dam removal, and more. The event was hosted at the historic Avery Theatre downtown Etna. For information on SWIF 2024, please visit https://www.scottriver.org/swif

One of three field tours for the 3- day event.

Participants in the Avery Theatre.

Harrison presenting at SWIF.

Efforts to bring fire, an agent of change, back to the lands of Scott Valley

California Indian Basketweavers Association
Rekindling Culture and Fire

Charnna Gilmore, Executive Director
Scott River Watershed Council
January 21, 2022

Forest and Mountain Meadow Resiliency, Fisheries Restoration, and River Recovery Actions on Working Lands in the Scott River

Scott River Watershed Council
Charnna Gilmore, Betsy Stapleton, Erich Yokel & SRWC Team
Salmonid Restoration Federation, April 27, 2023

Klamath Basin Fisheries Collaborative: Data Integration for Monitoring Dam Removal, Project Effectiveness Monitoring, and Species Management.

Betsy Stapleton*, Alta C. Harris, Nancy Leonard PhD, and Sumner M. Burdick
*Presenter

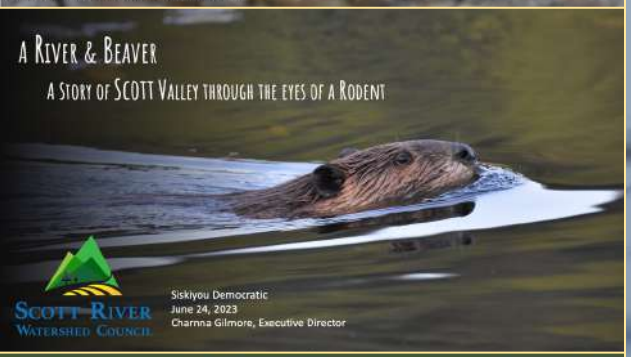
Beaver Dam Analogues – Summary of Five Years of Monitoring in the Scott River

Scott River Watershed Council

Erich Yokel

Harrison Morrow
Betsy Stapleton
Charnna Gilmore

Salmonid Restoration Federation - April 28, 2023



A River & Beaver

A Story of Scott Valley through the eyes of a Rodent

Siskiyou Democratic
June 24, 2023
Charnna Gilmore, Executive Director

Klamath National Forest & Scott River Watershed Council Collaboration

June 28, 2023

Touring on EFM/SRWC's Patterson Creek Wood Loading project.

Community Connections, Contributions, and Public Engagement

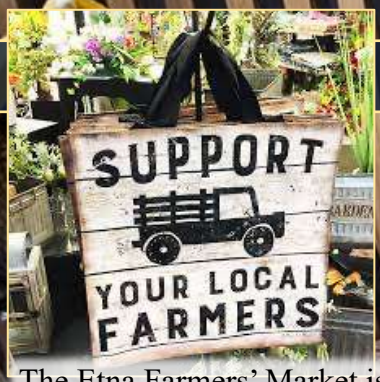
Public Engagement Activities 2023 A total of ~1,240 participants	
Field days or presentation for universities	4
Field tours w/community members, funders, agencies, Tribes	10
Presentations at forums, workshops & meetings	15
Participation in regional and statewide meetings	7

www.ScottRiver.org

Increased traffic to SRWC's website by 18% over 2022

Erich Yokel presenting SRWC's work at SRF.

Etna Farmers Market



The Etna Farmers' Market is a seasonal market operating from the middle of May to the end of September each year. With the generosity of the SRWC we have a permanent home where we can gather in a community around our locally grown produce. The farmers market offers a location for local farmers to share their passion for growing food for our local economy and the well being of our residents.

This year we were awarded a California Nutrition Incentive Program grant through the California Department of Food and Agriculture which was implemented this past season. We were able to support local WIC participants and Seniors additional money to purchase additional produce. This grant will also be available for the 2024 season. ***Eating more fruits and vegetables grown without modified seeds or pesticides supports our health.***

The market also supports other vendors providing our valley with spices, vinegars, baked goods, jewelry, soaps, lotions and so much more. We are often entertained by our local musicians providing the vendors and community with their talents.

We ***all*** thank you for your continued support in shopping at the Etna Farmers' Market. See you in May 2024.

Shirley Johnson
Market Manager

Etna Community Garden & Dick Short

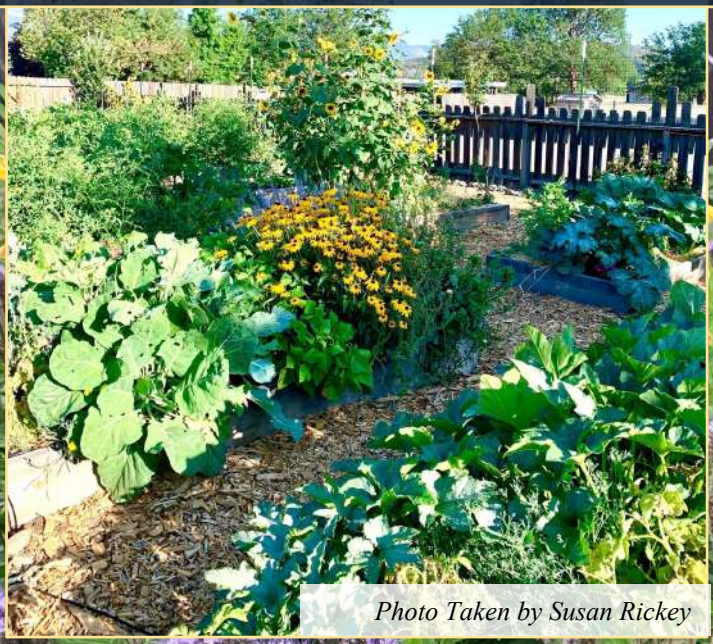


Photo Taken by Susan Rickey

Photo Taken by Tamila Medinnus

Photo Taken by Jana Padilla

Etna's most favorite resident, Dick Short, getting his photo taken in the Etna Community Garden. Megan Peterson, an excellent freelance writer, wrote a wonderful article in the Enjoy Magazine.
Click here to read article.

Scott Valley Community Compost

The Scott Valley Community Compost program is still scrapping it up! Building off the 2023 season, SRWC continues to work with Community Composting for Green Spaces and the California Alliance for Community Composting (CACC) through funding from CalRecycle to serve as a composting hub at the SRWC office. SRWC is working to scale up this effort, along with putting on composting workshops in 2024.

In the summer of 2023, the Scott Valley Community Compost program was featured in the Enjoy Magazine. This article was written by Megan Peterson, a wonderful freelance writer. [Click here to read this sweet article.]

Jenn Rogge, 2023 Compost Coordinator

CalRecycle

CALIFORNIA CLIMATE INVESTMENTS
Cap and Trade Dollars at Work

CACC
California Alliance for Community Composting

Annual Etna Clean Up Event

On April 20th-22nd, SRWC partnered with the Scott Valley Rotary, the City of Etna, the Mattress Recycling Center, and the Scott Valley Disposal to hold its annual clean-up event. A big thank you to Mike Kalpin for all his hard work making this event such a success. This event was free to the community and considered a huge success.
Thank you to everyone involved.
The Etna Clean Up Event will be held on April 19th & 20th 2024 in celebration of Earth Day!

CITY OF ETNA
INCORPORATED
JUNE 10, 1904
SISKIYOU COUNTY, CA

ROTARY
INTERNATIONAL

Mattress
Recycling
Council

Scott Valley
DISPOSAL

Annual Etna Creek Clean Up Event

For the past seven years, the Youth Environmental Summer Studies (YESS) Crew, Klamath National Forest, SRWC staff, and community members have removed thousands of pounds of garbage from the slopes above Etna Creek on Salmon Mountain. Etna Creek is the sole drinking water for the City of Etna. With the increased public acknowledgment of the negative impacts on water quality, the amount of dumping over the past six years seems to have decreased. Unfortunately, there is still a fair amount of household garbage, tires, furniture, appliances, and more. We are confident that with continued public education efforts and events such as the annual Etna Clean Up event, this activity will diminish substantially. Thank you so much to those who have come out and donated your time and energy to keep our water clean and safe for residents and our guests. Please join us on July 8, 2024, for the next clean-up event! Contact Charnna Gilmore at 530-598-2733 if you would like to get involved, all volunteers welcome!

Youth Environmental Summer Studies (YESS) Program

FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

CALIFORNIA STATE PARKS
SINCE 1864

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

Coastal Conservancy

CITY OF ETNA POLICE ACTIVITIES LEAGUE PAL

Youth Environmental Summer Studies (YESS) Program

In the summer of 2023, we had the opportunity to host eight vibrant, intelligent, and hardworking youth for our Youth Environmental Summer Studies (YESS) program. Our youth crew was able to learn about environmental science, natural resource fieldwork, and watershed health while working with professionals from SRWC, the Salmon River Restoration Council (SRRC), the Mid Klamath Watershed Council and a great crew from the Watershed Research and Training Center. To start off our 6-week program, the crew got their hands dirty with noxious weed identification and eradication. They spent time in Big Meadows where they cut and piled fallen woody debris. Additionally, they collected critical data at some of SRWC's project sites, spent time in other areas of the Klamath Basin working on trails, conducting salmon surveys and learning about our wonderful region. Thank you to our funders!

"*In 2023, working with the SRWC transformed me. Not just with watershed knowledge, but with profound self-discovery and a deep sense of community.*" Shannon Wedgley, YESS Crewleader

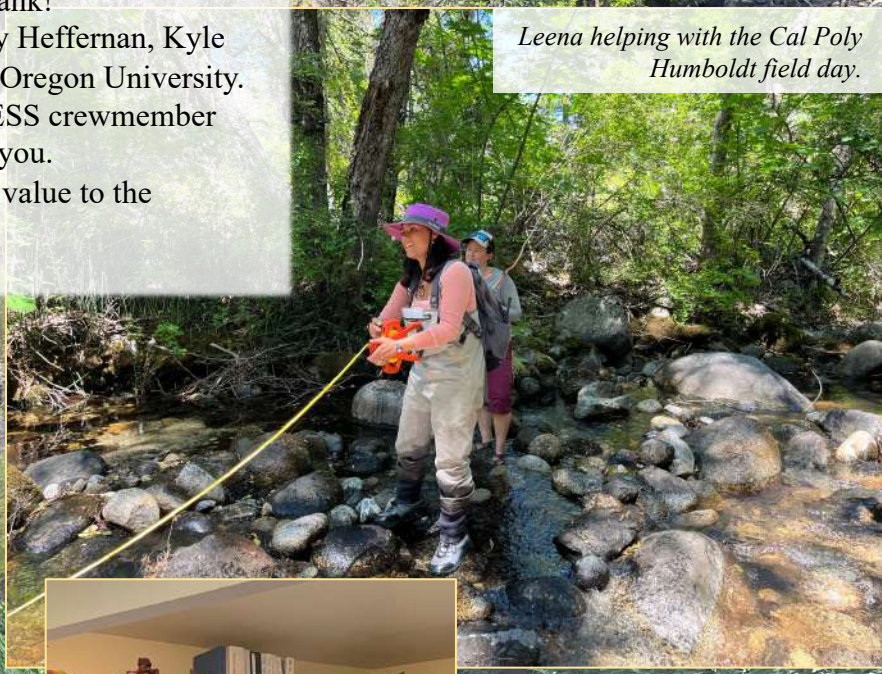
The goal of the program is to provide local youth with work skills through a variety of different experiences.

Here is how Crew 2023 rated their experience.

Youth Enivornmental Summer Studies - Season Review 2023	Student A	Student B	Student C	Student D	Student E	Student F	Student G	Student H	Average Overall Score
I learned new information about environmental science and conservation	5	4	4	5	4	4	4	4	**4.25**
I worked in a variety of outdoor work environments and learned new technical skills.	5	5	5	5	5	4	5	3	**4.63**
I will value my experience working on the YESS crew this summer.	5	5	5	5	5	5	5	5	**5**
I am considering working someday in an environmental science field.	3	5	3	5	3		4	3	**3.71**
dedicated, approachable, and concerned for our safety and well being.	5	4	5	5	5	5	5	5	**4.88**
My crew was hard-working.	4	4	4	5	4	4	4	4	**4.13**
My crew was supportive and respectful of one another and other staff.	4	4	4	5	4	5	4	4	**4.25**
The partnering agencies and organizations we worked with had supportive staff to work with.	5	5	4	5	5	5	5	5	**4.88**

SRWC College Internship – A Summer of Learning, Experiences & Making Memories

During the summer, SRWC hosted five summer college interns. Frank Brownell has worked for SRWC during the past three summers, now a sophomore at Oregon State University (Go Beavers!).
Our favorite saying was "Just be Frank!"
We also enjoyed having three students, Kennedy Heffernan, Kyle Christmas and Nicholas Pflug, all from Southern Oregon University.
Finally, Leena Racataian, one of our former YESS crewmember and student at College of the Siskiyou.
Thank you to each of you for adding such value to the SRWC 2023 summer!
We love you all!



Leena helping with the Cal Poly Humboldt field day.

Frank doing what he does best, working hard and serious.

Kyle taking a flow measurement on the East Fork of the Scott River.

Nick being a good sport and playing a game with SRWC staff.

Kennedy doing some monitoring in Patterson Creek.

Erich sharing the methodology about taking stream flow..

One of the only photos that exist of Frank smiling!

Our Commitment to Education

"My experience working with the Watershed Council in 2023 was truly exceptional! Engaging in diverse projects was not only enjoyable but also immensely gratifying. I'm truly thankful for the valuable experience and opportunities provided by the SRWC team." Leena Racataian, College Summer Intern & Former YESS crewmember & current Field Technician

SRWC hosted California State Polytechnic University, Humboldt and John Hopkins University during the summer of 2023. Both classes were focused on giving the students a deep immersion into the Klamath River Basin, its diversity and immense natural beauty. The Klamath River Basin is an ideal location to study restoration, ecology, and natural history because of the expansive diversity in habitat types, hydrology, geology, ecology, vegetative communities, land ownership, and land use. These students and teachers brought enthusiasm, curiosity, and they pulled a few Marlahan Mustard plants. Fun was had by all!

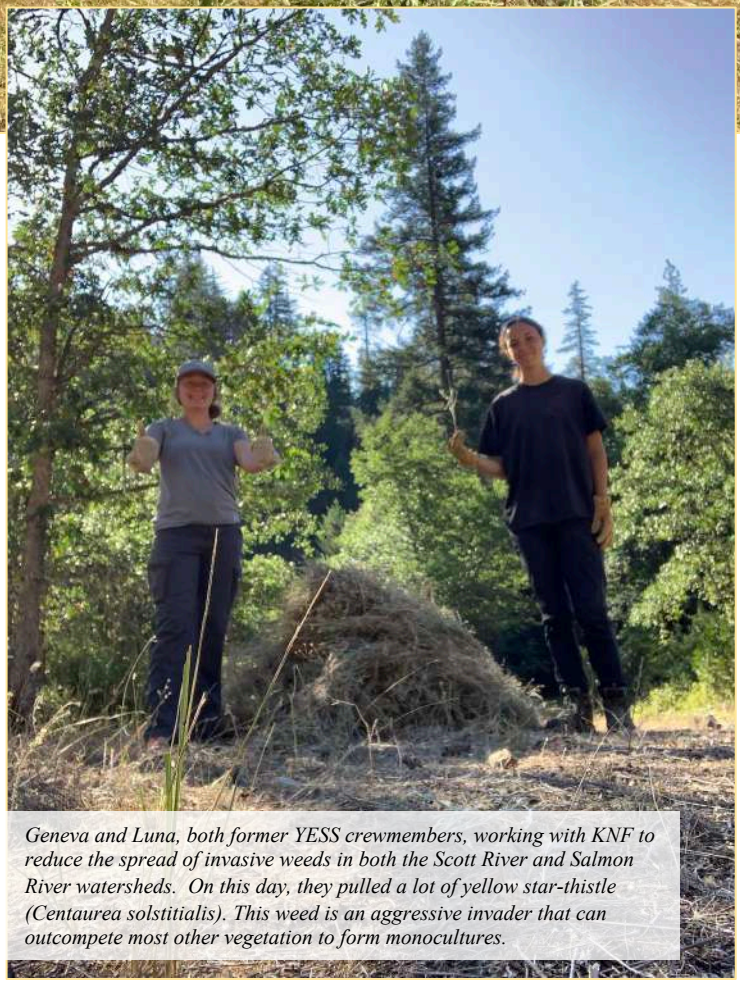
Weed Warriors Unite!

YESS Crew 2023 in Salmon River, working with the awesome folks at the Salmon River Restoration Council, pulling invasive weeds in their beautiful watershed.

Over the years, the Klamath National Forest have been major supporter to youth development through work programs like the Youth Environmental Summer Studies (YESS) program. This year, they increased their commitment and funded a Salmon Scott River Ranger District (SSRD) Crew Resource Support aimed to provide young adults in rural Siskiyou County vital training and experience in natural resources. This program also allowed for the District to expand its capacity to help meet goals of monitoring and restoring the health of areas across the Scott Salmon River Ranger District that were affected by the River Complex Fire and associated suppression activities.

Job training and development, includes cross-training opportunities with natural resource specialists in the fields of botany and fisheries, and at times will work in wildlife, forestry, range, recreation, hydrology, and/or archaeology. A primary focus is to improve the health of native plant communities through invasive species management and fish habitat restoration and monitoring.

We are grateful for the partnerships with KNF and the resources they bring to support our local young people.



Geneva and Luna, both former YESS crewmembers, working with KNF to reduce the spread of invasive weeds in both the Scott River and Salmon River watersheds. On this day, they pulled a lot of yellow star-thistle (Centaurea solstitialis). This weed is an aggressive invader that can outcompete most other vegetation to form monocultures.

Weed Warriors Against Marlahan Mustard (Dyer's woad)

Two weed warriors from John Hopkins out on the East Fork on the Beaver Valley Headwater Preserve owned by The Wildlands Conservancy.

Linda showing off her longest root for the day!.

Local goats LOVE Marlahan Mustard!

Dyer's woad (*Isatis tinctoria*) is a problematic, invasive weed in the intermountain west, including far northern California. It grows in both disturbed and undisturbed sites and can be commonly found along roadsides, fencerows, and ditch banks, as well as in pastures, rangeland, and natural areas. It is sometimes also found growing in field crops.

Dyer's woad is thought to have been introduced into California in the Scott Valley of Siskiyou County, where it is locally referred to as "Marlahan mustard." Until a couple of decades ago, it was primarily confined to Scott Valley, but it has subsequently spilled over into Shasta Valley. It continues to spread throughout Siskiyou County and into Modoc, Shasta, and other northern California counties. During medieval times, dyer's woad was one of the most valuable plant commodities in Europe, cultivated in southeastern Russia as a source of blue dye as early as the 13th century.

Colonists first introduced it to the eastern United States late in the 17th century for the same purpose. Its dye is now only of very minor importance in the U.S., but the plant has successfully invaded and colonized extensive areas of California, Oregon, Idaho, Utah, Wyoming, and Montana. Dyer's woad is a 'B' listed noxious weed in California. – University of California Agriculture and Natural Resources, Statewide Integrated Pest Management Program

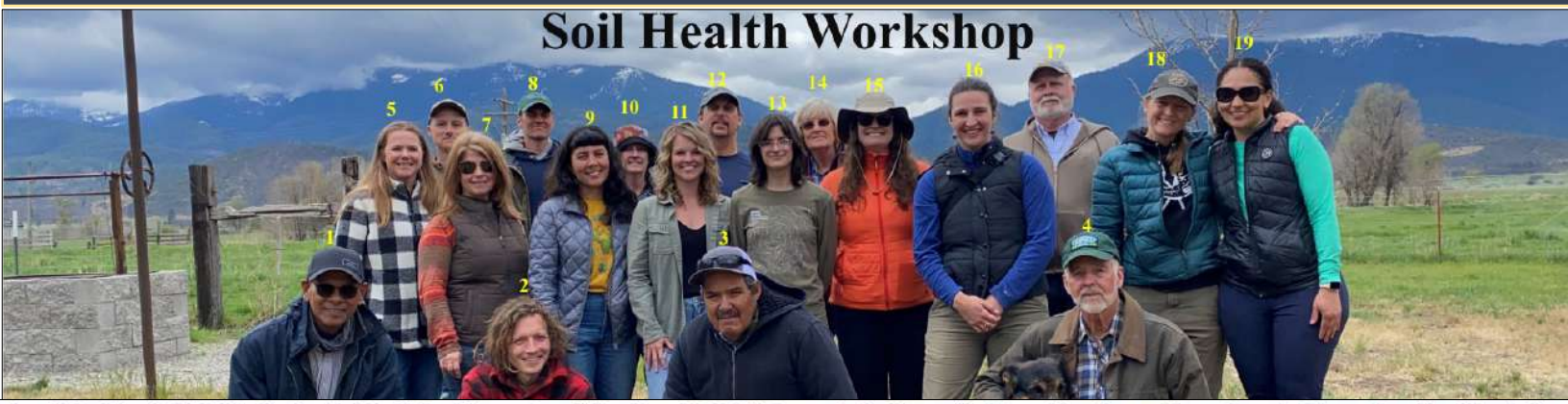
Here are two great links:

To learn more about Dyer's woad:
https://www.youtube.com/watch?v=e7i4l9wkHJ4

How to remove Dyer's woad:
https://www.youtube.com/watch?v=e7i4l9wkHJ4

John Hopkins students doing their part on Beaver Valley Headwater Preserve.

Soil Health Workshop



1. Kabir Zahangir, Ph.D, West-Regional Soil Health Specialist;
2. Jacob Johnson North Coast RCD, CA;
3. Venancio Hernandez, NRCS Soil Conservationist Tech, Tulelake, CA;
4. Gareth Plank, Landowner, CA;
5. Mindy Nicoletti, Area Resource Conservationist, Red Bluff, CA;
6. Chris Gebauer, MLRA Soil Survey Leader, Klamath Falls, OR;
7. Katharine Bruce, NRCS Soil Conservationist, Tulelake, CA;
8. Shannon Wedgley, Project Manager, Scott River Watershed Council , CA;
9. Tiffany Perez, NRCS Soil Conservationist, Weaverville, CA;
10. Anne Stephens, NRCS District Conservationist, Susanville, CA;
11. Kayla Meyer, North Coast RCD, CA;
12. Hud Minshew, California State Conservation Agronomist;
13. Brooke Hogan, MLRA Soil Scientist, Klamath Falls, OR;
14. Margaret Smither-Kopperl, Ph.D., Manager, USDA-NRCS Lockeford Plant Materials Center;
15. Rachael Nagelkirk , NRCS Easement Engineer, Yreka, CA;
16. Arianna Skikos , NRCS Soil Conservationist, Eureka, CA;
17. Jim Patterson, NRCS District Conservationist, Yreka, CA;
18. Charnna Gilmore, Executive Director, Scott River Watershed Council, CA;
19. Jacqueline Vega-Pérez- Area 1 Resource Soil Scientist, Red Bluff, CA;

Elize Blacker Modoc RCD, CA, is missing from the photo.

In 2021, the SRWC secured funding from the Natural Resources Conservation Service (NRCS) to support a scientifically-based study on soil health. The study's objective is to assess the impact of applying biochar, compost, and composted biochar on hay, pasture, and rangeland production systems in Scott Valley, involving five agricultural producers, including Scott River Ranch. The project aims to enhance understanding of the potential benefits of using biochar in the agricultural setting, including improvements in carbon storage, increased organic matter, enhanced plant productivity, and greater availability of plant water. Additionally, the study intends to calculate the overall carbon footprint associated with the production and application of biochar, contributing valuable insights to sustainable agricultural practices in the region.

To support this important work, NRCS has adopted a conservation approach to support resilient agriculture, addressing priority natural resource concerns. Jacqueline Vega, a former Area 1 Resource Soil Scientist, collaborated with Scott River Ranch and SRWC to highlight some of the work being done for soil health within the Scott Valley. These workshops were intended for NRCS field office staff involved in conservation planning and aimed to enhance knowledge of soil health principles, cover crop management, soil indicators, and Web Soil Survey information. The Scott Valley workshop was a huge success, and much was learned by all.

Soil Health Using Biochar Study

Shannon working on the monitoring equipment at the French Creek Ranch.

NRCS
Natural Resources Conservation Service

Biochar - What is it?

Biochar is a fine-grained charcoal made by pyrolysis: The process of heating biomass (wood, manure, crop residues, solid waste, etc.) with limited to no oxygen in a specially designed furnace capturing all emissions, gases, and oils for reuse as energy.

An Ancient Soil Conditioner: Biochar has been used in agriculture for more than 2,500 years and is becoming increasingly popular in modern agriculture and horticulture as a safe, sustainable soil amendment.

Biochar retains approximately 50% of the carbon from the raw biomass: When applied to soil, it sequesters that carbon for centuries, reducing the overall amount of atmospheric CO2 by removing it from the active cycle.

Forest managers throughout the northern region of California are looking to find ways to quickly and efficiently reduce forest fuel from overstocked forests. Climate change driven increased drought frequency and high temperatures, along with reduction in rainfall and dwindling snowpack, is setting the stage for catastrophic wildfires that threaten the forest ecosystem, timber revenues, and communities. One tool to reduce large amounts of excess forest fuel is the creation of biochar. Biochar can potentially be useful in agricultural applications. Biochar has been shown to store carbon and increase organic matter, increase plant productivity, and increase water retention and irrigation efficiency in agricultural settings. These benefits may allow agricultural producers to be more resilient to the effects of climate change as well as sequester carbon from local overstocked forests.

SRWC is working with five agricultural producers in Scott Valley by conducting a scientifically-based study to determine the effects of the application of biochar, compost and composted biochar on hay, pasture, and rangeland production systems. The project is building on NRCS Conservation Practice Soil Carbon Amendment 808 which will evaluate the effectiveness of locally produced biochar and compost as soil amendments and testing composted biochar as practice enhancement. In December 2020, SRWC managed the production of 432 yards of biochar from 373 bone dry tons of forest fuel thinning with funding from the North Coast Regional Partnership and the CA Natural Resources Agency, and California Climate Investments. This biochar was transported to five agricultural producers in the Scott Valley that were interested in testing the effectiveness of a biochar application in their production systems. Finding for this study scheduled to be finalized by the end of 2024.

Cabin Meadows and Rock Fence Meadow Restoration

In collaboration with SRWC, Dr. Chhaya Werner, of Southern Oregon University, has established a seed bank study in Cabin Meadows and Rock Fence watersheds. Seed banks are seeds that are dormant in the ground and germinate when conditions are right. Some seeds can be viable for decades! The study will provide information on the seed bank diversity, viability and abundance, which will inform restoration planning for the project area. The seed bank samples are being grown in a greenhouse at SOU.

SRWC is also working with The Wildlands Conservancy and the Friesen Foundation to identify impacts of grazing timing on the meadow plant community. Numerous10 m square plot have been established to capture the variable impacts. In 2023 all plots were in the Cabin Meadows Creek watershed; in 2024 it will expand into the Rock Fence Creek watershed and possibly other areas within the grazing allotment.

Geneva & Luna building enclosures.

Dr. Chhaya Werner setting up her field study.

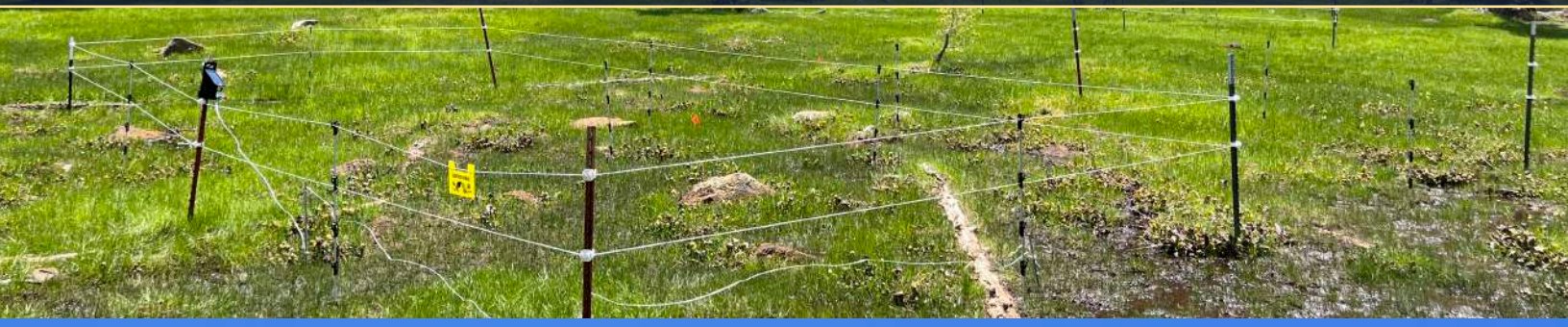
Wonderful crew working to better understand these critical areas of our watershed..

"Some of the many things I love about working for SRWC is the variety of work I get to do--from planning meadow restoration to conducting spawning surveys-- and the amazing team of people I get to work with. I still marvel at my luck to have a job that requires me to tromp through creeks and explore mountain meadows."
Megan Ireson, Meadow Coordinator

Darlingtonia californica, also called California pitcher plant or cobra lily is a species of carnivorous plant.

Megan and her dogs.

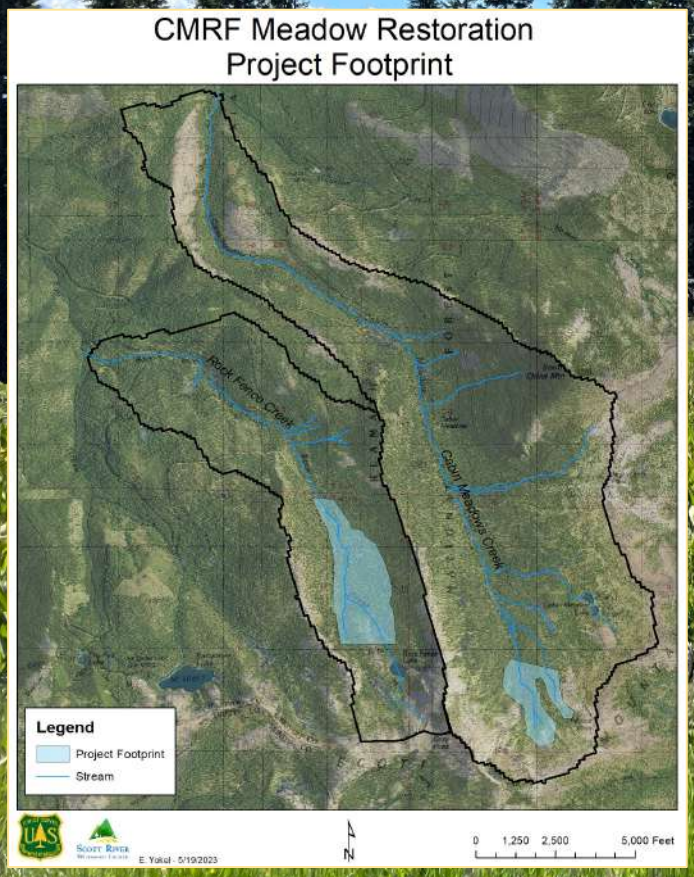
Cabin Meadows and Rock Fence Meadow Restoration



Working with a high-powered team of collaborators, SRWC is embarking on holistic restoration planning to assess current conditions in these two watersheds, tributaries to the East Fork Scott River, and develop restoration plans that address roads, stream health, meadow health, and hydrology. Healthy meadows store water during spring run-off and release it late in the summer, store more carbon than forests, create natural fire breaks, provide refuge for wildlife during and after fires, and have cultural value. The meadows in the Cabin Meadows Creek and Rock Fence Creek (CMRF) watersheds (see map below) have been degraded by impacts from intense grazing, road-building that disrupts hydrologic connectivity, incision of streams channels that drains groundwater, and conifer encroachment.

SRWC worked with the Klamath National Forest and North Rivers Construction to remove two failed culverts in tributaries to the East Fork Scott River. Both culverts, in Rock Fence Creek and Cabin Meadows Creek, were undersized, so during high flow events (such as spring run-off), the creek flowed over the road, damaging the road and carrying sediment downstream to the East Fork Scott River.

A groundwater monitoring network was also installed in 2023 and will allow the scientific team to understand the hydrology of the meadow and monitor the impacts of restoration activities on groundwater levels and therefore inform the development of a complete restoration plans.



Shannon and Aaron installing a groundwater well equipment.

Big Meadows and Aspen Restoration Project

Big Meadows Photo Points 1h, July 29, 2020

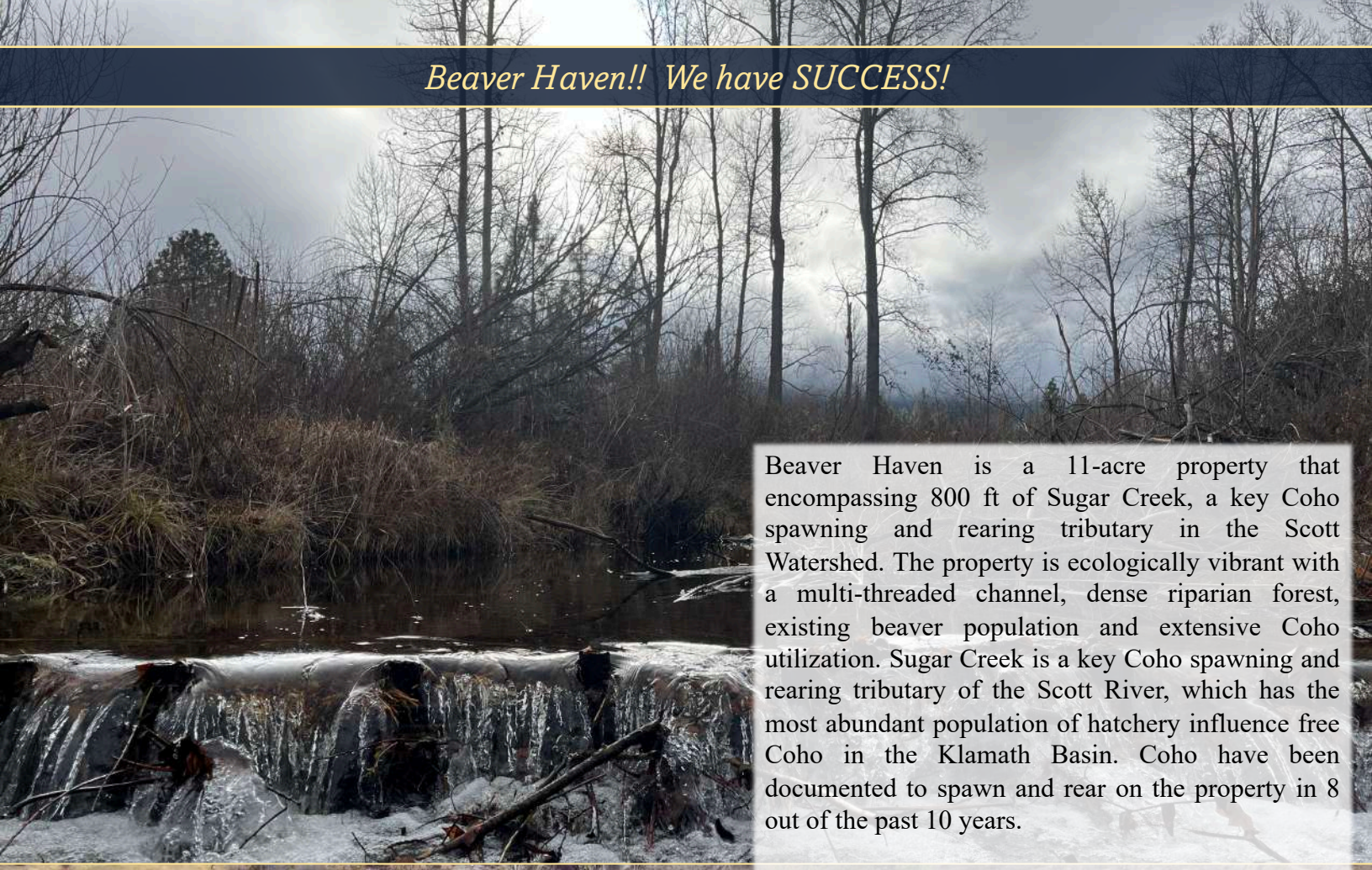
Big Meadows Photo Points 1h, August 4, 2021

Big Meadows Photo Points 1h, August 2, 2023

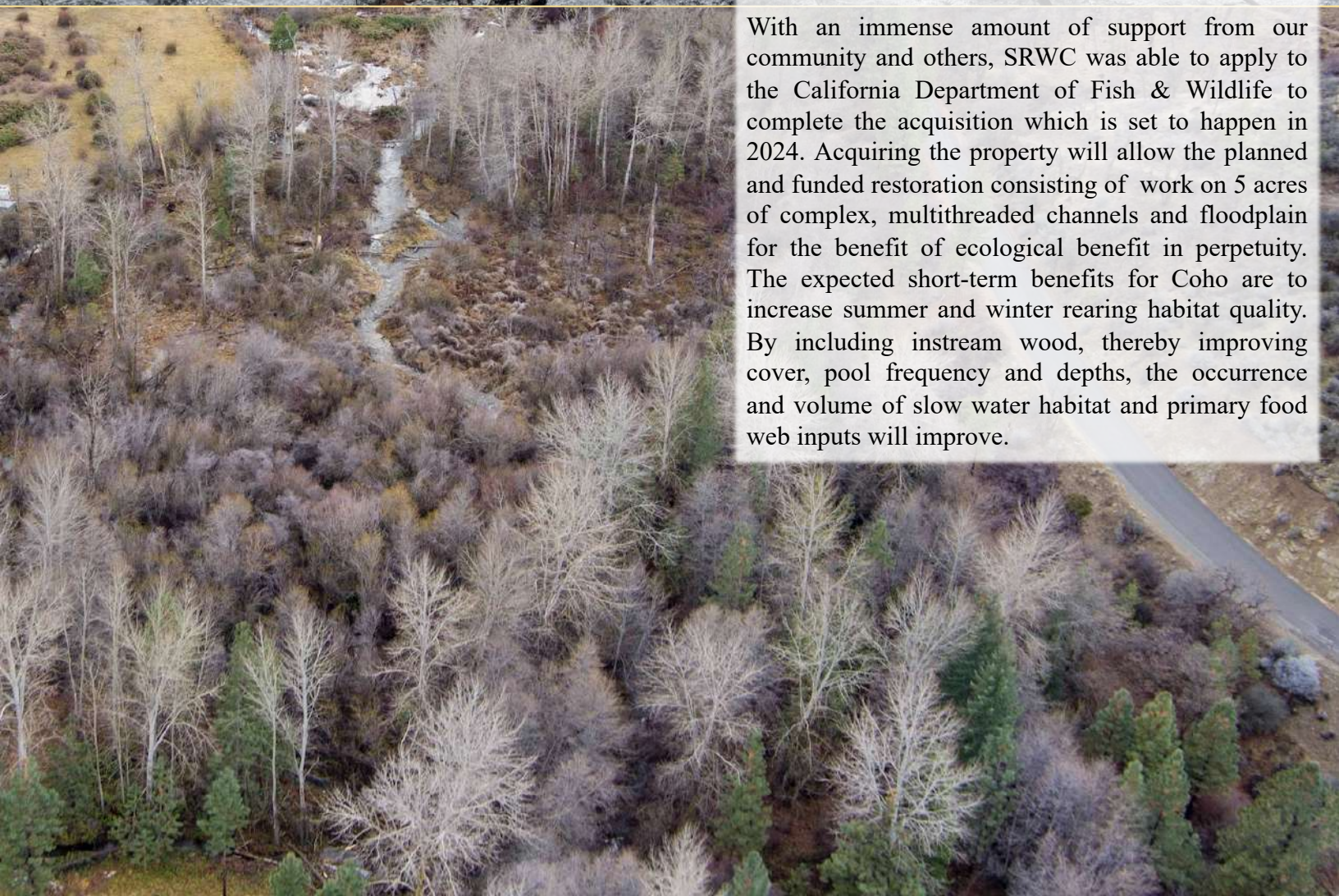
Big Meadows Mountain Meadow and Aspen Restoration Project is designed to enhance aspen and mountain meadow habitats at Big Meadows, a property that is privately owned by Ecotrust Forest Management (EFM). EFM owns approximately 40,000 acres in the Klamath Mountains of Siskiyou County, known as the Scott River Headwaters Property. The Scott River Headwaters Property Management Plan, developed by EFM, specifically identifies and prioritizes the restoration of aspen woodlands. As such, EFM and SRWC partnered with the goal of improving these critical habitats. The Big Meadows complex is one of the largest mountain meadow systems within the Scott River watershed. Besides the expansive meadow system, this area is known for large areas of aspen, which are only found in a few locations within the Scott River watershed. The elevations within the project area range from just over 6,000 feet to nearly 6,500 feet.

To read the full for the work done from 2017-2023, please click here: Big Meadows and Aspen Restoration Project 2017-2023

Beaver Haven!! We have SUCCESS!



Beaver Haven is a 11-acre property that encompassing 800 ft of Sugar Creek, a key Coho spawning and rearing tributary in the Scott Watershed. The property is ecologically vibrant with a multi-threaded channel, dense riparian forest, existing beaver population and extensive Coho utilization. Sugar Creek is a key Coho spawning and rearing tributary of the Scott River, which has the most abundant population of hatchery influence free Coho in the Klamath Basin. Coho have been documented to spawn and rear on the property in 8 out of the past 10 years.



With an immense amount of support from our community and others, SRWC was able to apply to the California Department of Fish & Wildlife to complete the acquisition which is set to happen in 2024. Acquiring the property will allow the planned and funded restoration consisting of work on 5 acres of complex, multithreaded channels and floodplain for the benefit of ecological benefit in perpetuity. The expected short-term benefits for Coho are to increase summer and winter rearing habitat quality. By including instream wood, thereby improving cover, pool frequency and depths, the occurrence and volume of slow water habitat and primary food web inputs will improve.

WILDLIFE RESCUE
SONOMA COUNTY

Scott Valley Beaver – Our First Love

Little Tooth found unable to swim in French Creek on January 18, 2023.

On January 18th, 2023, two SRWC employees were conducting a Coho Salmon spawning ground survey on French Creek when they came upon an extremely rare sight. There on the bank of the stream, in the middle of the day, sat a lone juvenile beaver. The surveyors crossed to the opposite bank in an effort to avoid disturbing the beaver and stopped for a few moments to observe its behavior. From its labored movements it quickly became apparent that this creature was suffering from some sort of ailment. Eventually, the young beaver crawled into the creek, only to be immediately swept downstream into a high velocity riffle. As it was being pushed through the swift, rocky channel, SRWC technician Shannon Wedgley jumped into the creek and collected the injured animal. Wedgley set the beaver in a safe area on the streambank and began making calls to coworkers and community members to figure out how to proceed.

SRWC staff member and French Creek landowner, Betsy Stapleton, brought an enclosure down to the creek and the beaver was placed inside, before being carried to a place on the Stapletons' property for temporary safekeeping. Meanwhile, SRWC staff began making calls to every wildlife rehabilitation center in Northern California. After being told by many organizations that they did not have the facilities to care for a beaver, a contact was finally made with the Sonoma County Wildlife Rescue (SCWR), where there is a dedicated space for rehabilitating aquatic mammals. It was decided that an SRWC's biologist, Harrison Morrow, would leave the following morning to try to get this creature the specialized care it needed.

SRWC's Executive Director, Charnna Gilmore, brought the beaver to her home, outfitting its enclosure with everything she could find to make it more comfortable. When the morning came, the small beaver "Little Tooth" was packed into the back of a vehicle and driven 5 hours from Etna to Petaluma. Upon arrival, several Sonoma County Wildlife Rescue staff members were attentively on hand to intake the beaver and began treatment and testing to discover what was plaguing the creature. These tests eventually revealed that this was a female beaver suffering from a neurological disorder, and reintroduction into the wild would not be possible. SCWR decided that the only option was to end the beaver's suffering through euthanasia.

This news deeply shook the SRWC community. To have gone to such great lengths to get her the care she needed, only to have such a tragic ending, was difficult to process. The memory of this experience and this special creature is never far from the minds of the SRWC team that did what they could to help her.

Scott Valley Beaver – Our Forever Love

Harrison & Molly out looking for beaver and juvenile Coho Salmon.

This Project will focus on the restoration potential, drought and wildfire risks, and current beaver status within the Scott River watershed. Research will be conducted mostly remotely, with field visits as needed and from information sharing with the three organizations doing much of the monitoring in the Scott Valley. SRWC, Quartz Valley Indian Reservation, and the Siskiyou RCD will collect on-site data.

The project team proposes compiling data for and then drafting an evidence-based beaver management plan that prioritizes increased landscape drought and fire resilience and minimizes human-beaver conflict in the Scott Watershed.

Through a combination of geospatial and in-situ data, Molly Alves, a Wildlife Biologist for the Tulalip Tribes of Washington and currently master student in Wildlife Biology Department of Wildland Resources at Utah State University and Dr. Emily Fairfax will analyze the current state and restoration potential of river networks within the Scott River watershed, then make recommendations for how each portion of the river network would best manage current and future beaver populations to maximize climate resilience benefits and minimize conflict with humans and human infrastructure. The plan will align with statewide beaver management goals described in the new California Department of Fish and Wildlife (CDFW) Beaver Restoration program and help to inform the creation of a California State Beaver Management Plan.

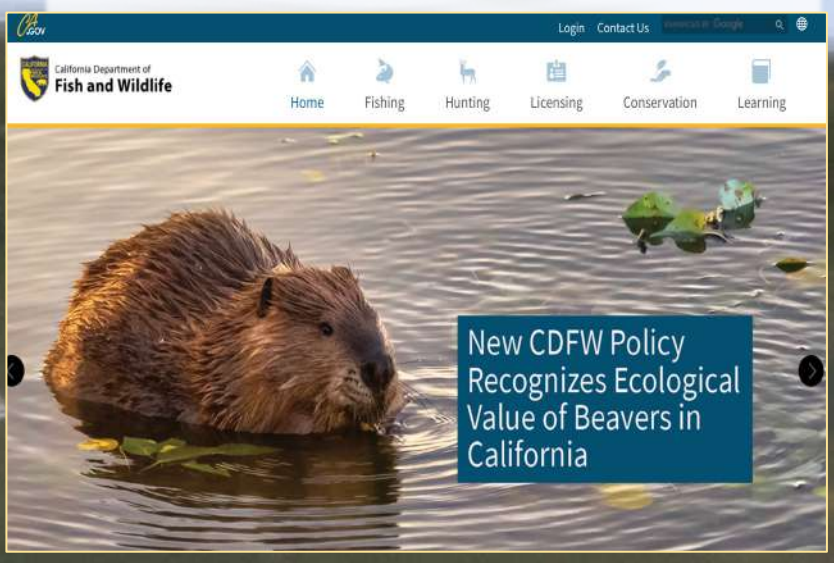
As the state begins preparing to engage in non-lethal management of beavers ranging from coexistence strategies to relocation programs, we want to provide a clear, science-based framework and case study for how to maximize beaver-built climate resilience benefits specific to a given watershed without compromising animal welfare or creating excessive risk to human infrastructure or existing ecosystems.

There are many people to thank, including SRWC, for making change to beaver policy at the State level! Thank you to all the beaver lovers out there!

Some of our biggest beaver heroes are at Occidental Arts and Ecology Center, Brock Dolman & Kate Lundquist.

[Visit their Bring Back the Beaver site!](#) Thank you to your steadfast commitment to change for our furry friends!

[Watch California's first conservation beaver release in nearly 75 years!](#)



Klamath Basin Fisheries Collaborative (KBFC)

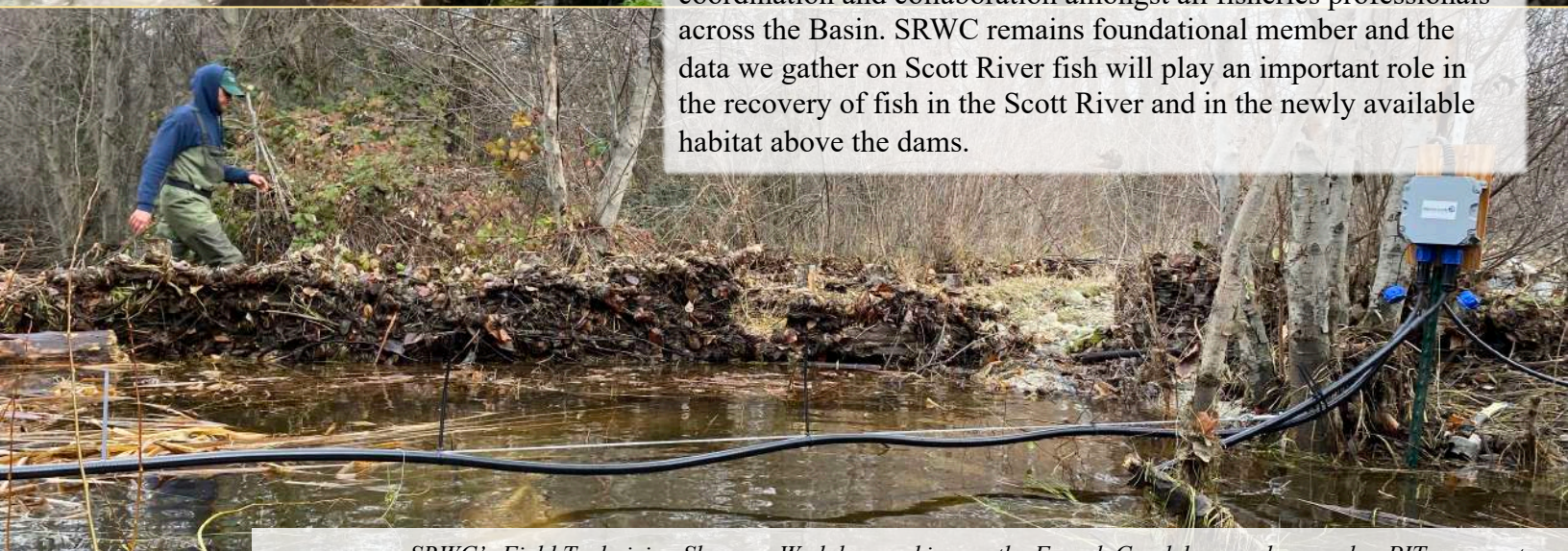
2023 Annual meeting in Yreka

SRWC's own Harrison Marrow talking to KBFC members about PIT Tag array management.

As a founding member of the Klamath Basin Fisheries Collaborative (KBFC), Scott River Watershed Council was proud to support the 2023 annual meeting. The meeting took place in Yreka California and had representatives from over 30 data gathering entities (Tribes, NGOs, governmental agencies, and academic institutions) who gathered to talk about fisheries science in the Klamath Basin. The meeting confirmed a governance structure for the organization, offered lectures on a variety of topics and included field tours to Irongate Dam hatchery, Bogus Creek PIT Tag Arrays and Klamath River restoration sites.

The KBFC, under the able direction of the Pacific States Marine Fisheries Commission, has gathered all the Passive Integrated Transponder Tag (small tags like those inserted in dogs for ID) information from tags placed in Klamath Basin Fish since the early 2000's and is organizing and integrating it into a single database so that researchers can track fish across the Klamath Basin and the newly connected river habitats with the removal of the Klamath dams. This will create an understanding of how fish are responding to changes in the environment, restoration efforts and Klamath Dam removal.

KBFC is poised to thrive in 2024, continuing to promote coordination and collaboration amongst all fisheries professionals across the Basin. SRWC remains foundational member and the data we gather on Scott River fish will play an important role in the recovery of fish in the Scott River and in the newly available habitat above the dams.



SRWC's Field Technician Shannon Wedgley working on the French Creek beaver dam analog PIT array setup

Scott River Fisheries Monitoring Program

Juvenile Coho Salmon.

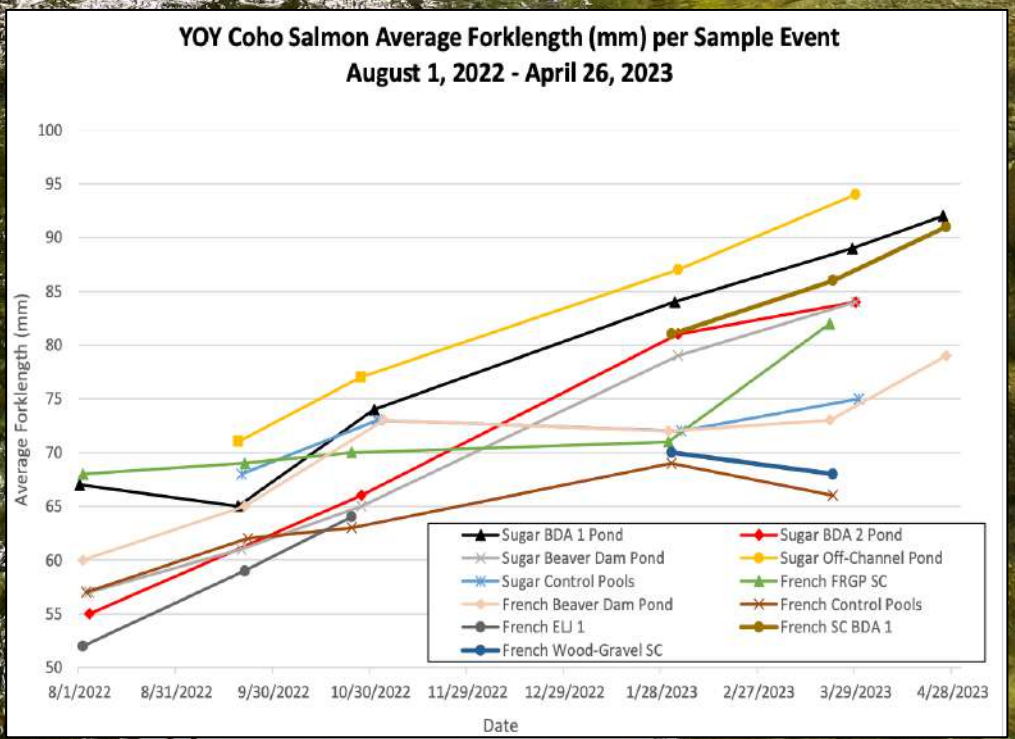
Sampling table to collect critical data. .

From August 2022 through April 2023, the SRWC conducted six in-hand fish sampling events in habitats on French Creek, Sugar Creek and the mainstem Scott River. The data collected from these efforts is available to be used to determine the efficacy of different kinds of restoration techniques as it pertains to fish populations, as well as to track baseline population conditions over time. Since 2016, SRWC has continually operated a passive integrated transponder (PIT) array networks in the Scott River watershed that allows for tagged fish to be detected as they move throughout the streams in question. Detection data collected at the array stations provides insight into how habitat use varies seasonally, when smolts are outmigrating from their natal streams.

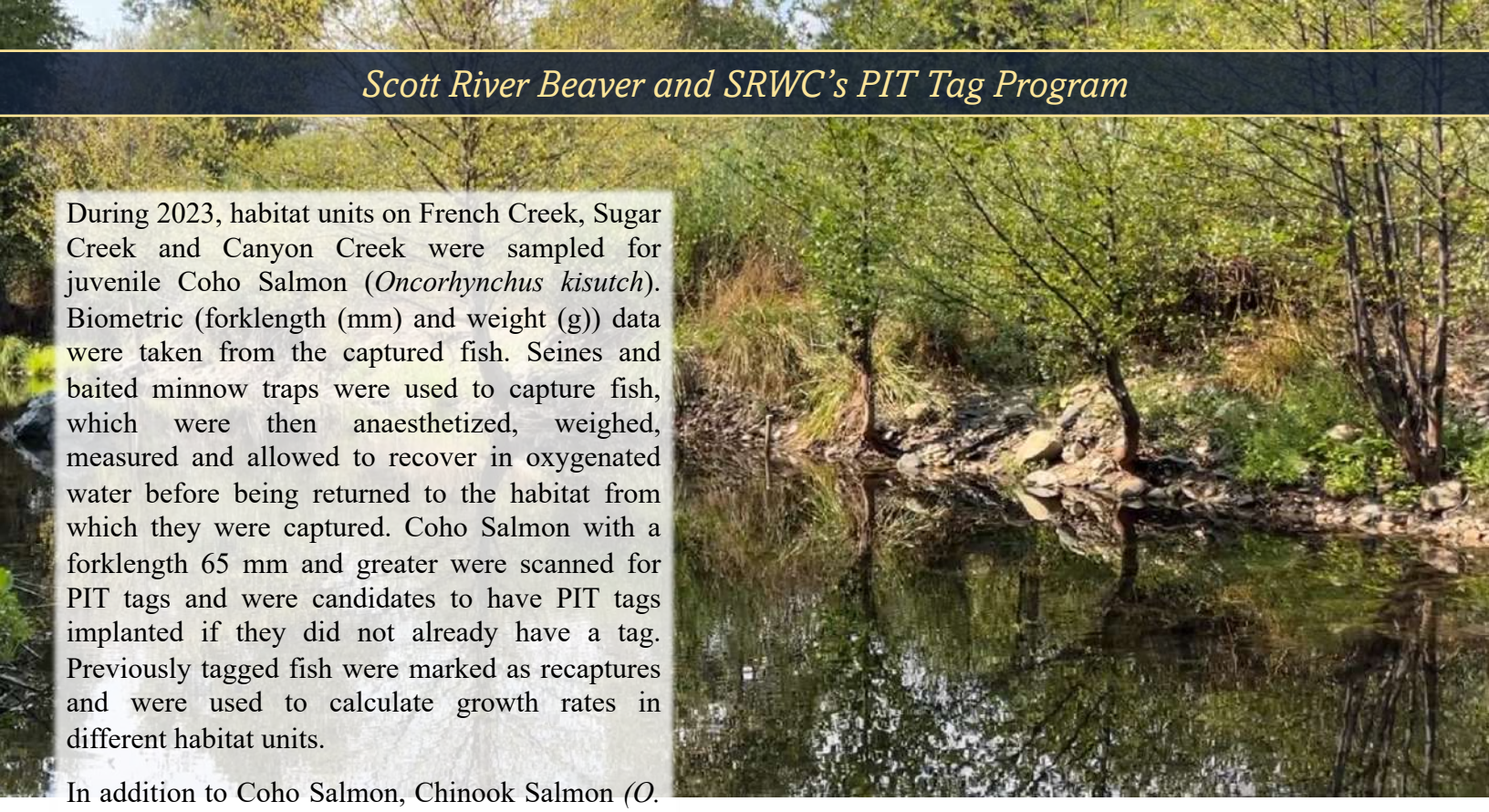
SRWC also maintained and operated a PIT antenna on the California Department of Fish and Wildlife (CDFW) weir at river kilometer (RKM) 29.2 on the Scott River. Adult salmonids returning to spawn in the fall and winter passed through this point and were scanned for tags. These efforts allow SRWC to track factors such as preference for certain spawning habitat and trends in which rearing locations produce returning adults.

To read the full report, please visit: [2022-2023 Fish Monitoring Summary Report]

SRWC staff used seines and minnow traps to capture and collect data from fish inhabiting both restored and unrestored habitat units in these streams. All captured salmonids were anaesthetized, weighed and measured. Coho Salmon (*Oncorhynchus kisutch*) greater than 65 mm were eligible to receive a PIT tag. PIT tagged Coho were identified when recaptured at sampling events, in which case size comparisons were made to determine growth rates. Networks of remote PIT arrays were also operated in these streams, allowing for tagged Coho to be detected as they moved through the watershed. The figure to the right is a summary of the growth (measured by the forklength of the fish) in different habitats.



Scott River Beaver and SRWC's PIT Tag Program



During 2023, habitat units on French Creek, Sugar Creek and Canyon Creek were sampled for juvenile Coho Salmon (*Oncorhynchus kisutch*). Biometric (forklength (mm) and weight (g)) data were taken from the captured fish. Seines and baited minnow traps were used to capture fish, which were then anaesthetized, weighed, measured and allowed to recover in oxygenated water before being returned to the habitat from which they were captured. Coho Salmon with a forklength 65 mm and greater were scanned for PIT tags and were candidates to have PIT tags implanted if they did not already have a tag. Previously tagged fish were marked as recaptures and were used to calculate growth rates in different habitat units.

In addition to Coho Salmon, Chinook Salmon *(O. tshawytscha*) and rainbow trout/steelhead (*O. mykiss*) were anaesthetized, weighed and measured when captured, although no PIT tags were implanted into these fish. All non-salmonid organisms captured in the nets or traps were returned to the habitats from which they were taken without being processed.

"Working with the Scott River Watershed Council in 2023 has been the highlight of my career. I am continually inspired by the passion, curiosity and humility of my coworkers. The pleasure of working with these people is only rivaled by the joy of living and communing with the beautiful ecosystems in this watershed."
Harrison Morrow, Fisheries Biologist Lead

Harrison doing a spawning survey on Shackleford Creek.

In the fall of 2021, beavers began constructing a dam on French Creek around river kilometer (RKM) 2.5. The pond upstream of that dam has proven to be a site of relatively high juvenile Coho Salmon numbers in the last two years. This fall, the beaver dam pond was seined on three occasions, with over 100 Coho being captured each time (Table 1).

Table 1. Salmonid catch data from French Creek beaver dam pond. August - October 2023.

French Beaver Dam Pond			
Date	8/11	9/7	10/12
Coho Salmon Catch	107	246	239
Coho Salmon Tagged with PIT tag	32	134	161
Coho Salmon Recaptures	0	12	63
Steelhead Catch	2	4	8

Tagging table working on collecting data. .

Scott River Fisheries Monitoring Program

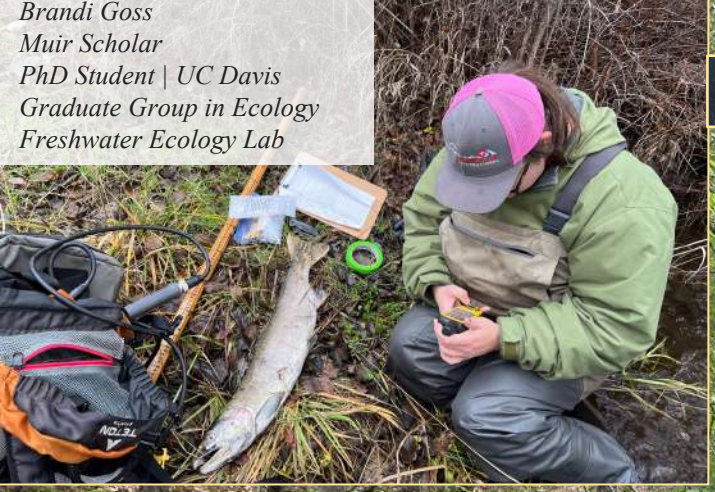
The ***Scott River Fisheries Monitoring Project*** is a collaborative effort between the Scott River Watershed Council and the Quartz Valley Indian Reservation to support and expand ongoing annual work to document both juvenile and adult Chinook Salmon (*Oncorhynchus tshawytscha*) and Coho Salmon (*Oncorhynchus kisutch*) within the Scott River and its tributaries. This work will integrate into other efforts throughout the basin to help inform fisheries and water management along with future restoration activities. Funding for this project was provided by the California Department of Fish and Wildlife's Climate Change Impacts on Wildlife Fund and the United States Fish and Wildlife Service's Bipartisan Infrastructure Law (BIL) Funds. This project specifically provides resources to monitor Chinook and Coho Salmon, both juvenile distribution throughout the basin, and the number and spatial distribution of returning spawning adults.

This monitoring effort utilized direct observation during the period of July 18, 2023, through September 19, 2023. Field crews snorkeled all slow-water habitats they encountered, and occasionally surveyed riffle units. Crews documented the presence or absence of Chinook Salmon, Coho Salmon, and rainbow trout/steelhead (*Oncorhynchus mykiss*), with estimates of the number of juveniles in each surveyed habitat. It is worth noting that various factors such as turbidity and salmonid's predilection for habitats with lots of cover make it difficult to observe, identify by species and count all individuals in an area during a survey. The numbers reported in this field tech note are the best estimates of the number of target species encountered.

To read the full report, please visit: Scott River Direct Observation Report – Summer 2023

Reach	Survey Distance (Miles)	Habitat Units Surveyed	Coho Count	O. mykiss Count	Chinook Count
Kelsey Creek	0.2	10	20	484	3
Canyon Creek	0.6	27	286	556	37
Shackleford Creek	0.6	16	154	817	0
Mill Creek – (Canyon Reach)	0.5	12	211	157	0
Scott River RKM (40.7-42.8)	1.3	16	0	42	0
Kidder Creek	0.3	9	0	537	0
Patterson Creek	1.0	20	0	268	0
Scott River RKM (68.6-70.6)	1.2	19	15	155	0
Etna Creek	0.8	26	653	1,291	0
French Creek	0.7	23	843	515	0
Lower Sugar Creek	0.7	35	1,750	454	0
Upper Sugar Creek	2.1	45	64	438	0
Wildcat Creek	1.2	41	200	1,018	0
South Fork Scott & Boulder Creek	1.0	22	0	435	0
East Fork Scott & Big Mill Creek	2.1	38	18	1,943	0
Totals	**14.3**	**359**	**4,214**	**9,110**	**40**

Brandi Goss
Muir Scholar
PhD Student | UC Davis
Graduate Group in Ecology
Freshwater Ecology Lab



Scott River Fisheries Research Work

Since 2014, SRWC and University of California, Davis, Center for Watershed Sciences (UCD-CWS) and their project partners, have contributed significantly to the overall understanding of how these restored habitats are impacting coho salmon production and survival. With support from Bella Vista Foundation, and others, to continue to evaluate the effectiveness of process-based restoration techniques such as beaver dam analogues (BDAs) and the reconnection of floodplains.

As coho adults return from the ocean, spawn, and die, we are able to, retrospectively, look at habitat usage during the juvenile life stage by examining eye lenses sulfur content. As a fish ages, successive eye lenses are added to the eye, which effectively enables researchers to "go back in time" to understand what habitats were used during the juvenile life stage. Such information is critically important from a recovery perspective and would tell us 1) relative proportions of returning adult coho that used BDA habitats as juveniles and 2) to what spatial and temporal extent such habitat usage occurred. At the same time, we propose to remove adult coho otoliths (calcium carbonate ear stones) and analyze them for strontium. Strontium values differ throughout the Klamath watershed (Hodge et al. 2016) and can be used as geographic markers when incorporated into salmon otoliths (Phillis et al. 2018). The combination of these geographic (strontium) and habitat markers (sulfur) would enable the SRWC to pinpoint the habitats used in specific Klamath River tributaries (e.g., Sugar and French Creek) and determine the relative proportion of returning adult coho that used BDAs during their juvenile life stage. In addition, otolith analysis would allow us to quantify growth rates between BDA and non-BDA habitat.

"Working with the Watershed Council this year has been a whirlwind of absolutely phenomenal restoration projects and comradery. Our team of dedicated, passionate, extremely talented, hardworking and charismatic humans never cease to warm my heart and inspire me. I am incredibly grateful to be part of the crew and look forward to an awesome 2024!"
Aaron Elliott, Field Technician

Developing a plan for surveys.

Aaron appreciative of beaver sign.

The crew getting ready to *head* to the creeks.

A "Jack" Coho which is believed to be a precocious male. He came back to the Scott one year earlier than normal. Forklength is approximately 30 cm.

Scott River Fisheries Monitoring Program

Female (top) and male (bottom) Coho Salmon found on French Creek, December 26, 2023

The Scott River Fisheries Monitoring Project is a collaborative effort to support and expand ongoing annual work to document both juveniles and adult Chinook and Coho Salmon spawners within the Scott River and its tributaries. The California Department of Fish and Wildlife supported resources to conduct spawning surveys to identify the spatial distribution of utilized spawning beds for both Coho Salmon and Chinook Salmon.

Working closely with the Quartz Valley Indian Reservation (QVIR) and the Siskiyou Resource Conservation District (SRCD), the 2023/2024 spawning season was a coordinated and comprehensive approach to collecting this important data. This information will help inform water management practices that help to identify, prioritize and support redd (egg nest) health and vitality. A full report of their findings will be published in February 2024.

Gilmore girls headed out to survey.

Shannon on a snowy survey.

Harrison retrieving the otolith.

Megan working a deep pool.

A pair of ear bones called otoliths.

Male Coho bring nutrients back from the ocean.

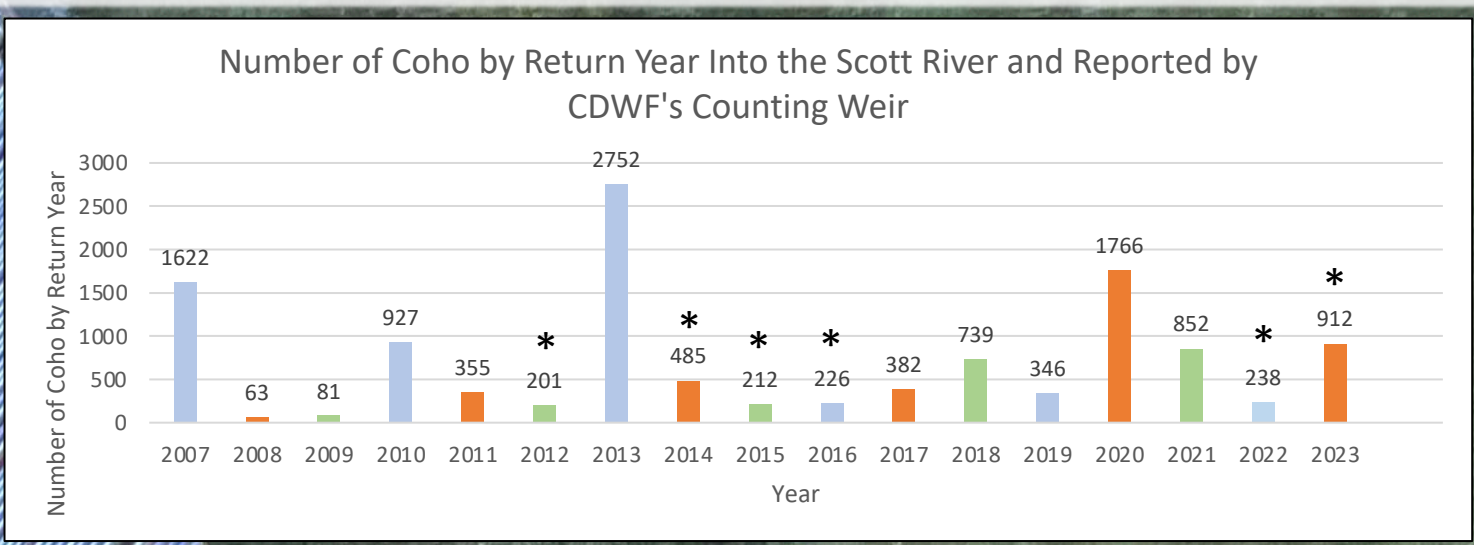
A Picture is Worth a Million Words

On December 10, 2023, David Herasimtschuk visited several of SRWC restoration projects on French Creek.
The photos above are some of the amazing moments he captured.
© Freshwaters Illustrated / David Herasimtschuk.

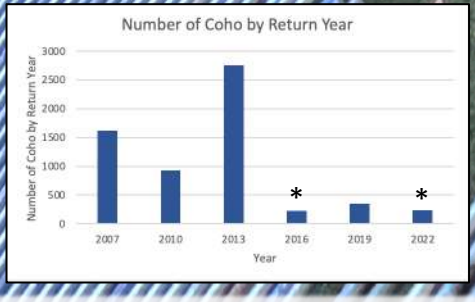
Status of the Scott River Coho Population

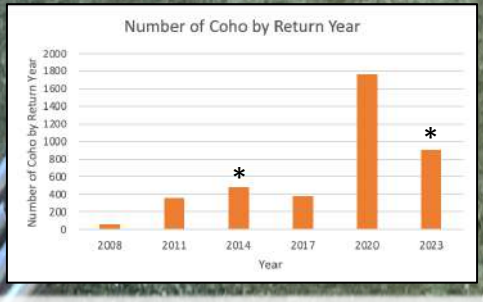
It is well known that the Scott River supports a core, functionally independent population of Southern Oregon Northern California Coast (SONCC) Coho Salmon, one of the most productive natural stocks in the Klamath River basin. In 2014, National Marine Fisheries Service identified the depensation threshold was 242 adult Coho Salmon which can cause less successful reproduction due to low population densities caused by factors such as difficulty in finding mates or other impacts based on less desirable spawning conditions. To attain viability, 6,500 spawners have been identified as the federal recovery target. To read the full report, please visit: National Marine Fisheries Service. 2014. Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon (Oncorhynchus kisutch). National Marine Fisheries Service. Arcata, CA.

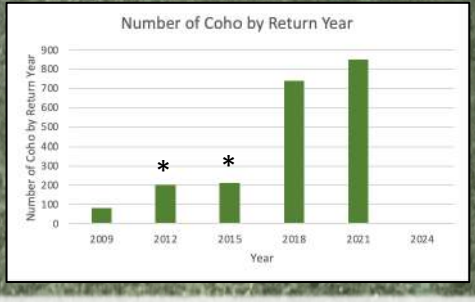
In 2007, the California Department of Fish and Wildlife (CDFW) began to monitor the returning adults using a counting weir. This weir is located downstream of the Scott Valley, on the Scott River within the canyon reach. There are three cohort (or groupings of fish). Coho Salmon, unlike other salmonids that utilize the Scott River, emerge in the late spring and generally remain in the system for approximately 9 to 11 months before outmigrating to the ocean. They typically will remain in the ocean for approximately 18 months and return as spawning adults. The CDFW weir documents their return through a counting facility and the numbers can be used to evaluate the health of different cohorts over time. Click here to read CDFW Final Scott River Salmon Studies Report 2022. Below is the summary of this data and includes provisional data from 2023.



Cohort 1	# of Fish	Change over Time	# of fish under/over depenstation level	# of fish under/over viable target	Cohort 2	# of Fish	Change over Time	# of fish under/over depenstation level	# of fish under/over viable target	Cohort 3	# of Fish	Change over Time	# of fish under/over depenstation level	# of fish under/over viable target
2007	1622		1372	-4878	2008	63		-187	-6437	2009	81		-169	-6419
2010	927	-43%	677	-5573	2011	355	463%	105	-6145	* 2012	201	348%	-49	-6299
2013	2752	197%	2502	-3748	* 2014	485	37%	235	-6015	2015	212	205%	-38	-6288
* 2016	226	-92%	-24	-6274	2017	382	-21%	132	-6118	2018	739	449%	489	-5761
2019	346	53%	96	-6154	2020	1766	362%	1516	-4734	2021	852	215%	602	-5648
* 2022	238	-31%	-12	-6262	* 2023	912	-48%	662	-5588	2024				







Please note, when river flows exceed 1,000 cubic feet per second (cfs) at the Scott River gage, CDFW is required to remove the weir due to safety reasons. The years where the weir had to be removed based on these conditions have been marked with an asterisks (*) and should be assumed that addition fish returned but are not accounted for in the data.

Finding Ways to Bring Fire Back to Our Lands

Burn Pile Workshop

March 18th 9-4pm

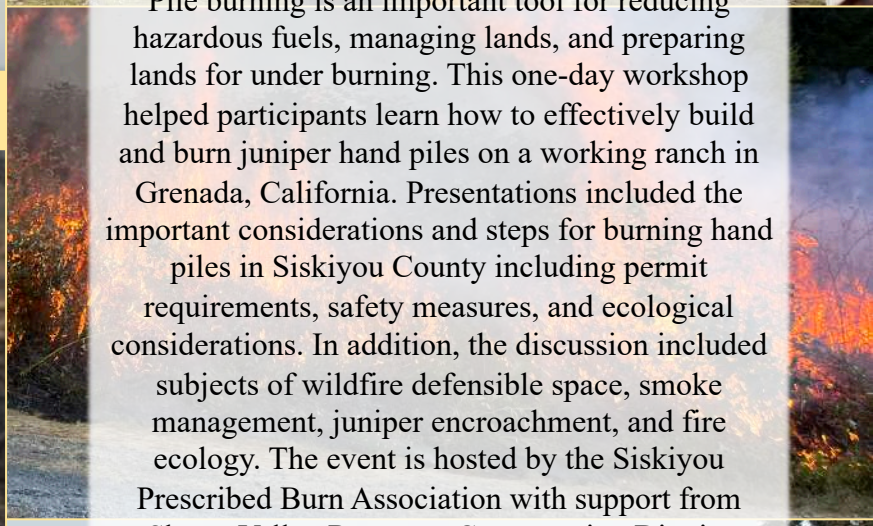
Join us for a day of learning, burning, and connecting with your community.

WORKSHOP HELD IN 2023

This workshop will focus on:

- Pile construction
- Smoke management plans
- Permitting
- Networking with other farmers, ranchers, and community members

The work upon which this publication is based was funded in whole or in part through a Regional Forest and Fire Capacity subaward from the Watershed Research and Training Center, by a grant awarded by the California Department of Conservation.



Pile burning is an important tool for reducing hazardous fuels, managing lands, and preparing lands for under burning. This one-day workshop helped participants learn how to effectively build and burn juniper hand piles on a working ranch in Grenada, California. Presentations included the important considerations and steps for burning hand piles in Siskiyou County including permit requirements, safety measures, and ecological considerations. In addition, the discussion included subjects of wildfire defensible space, smoke management, juniper encroachment, and fire ecology. The event is hosted by the Siskiyou Prescribed Burn Association with support from Shasta Valley Resource Conservation District (SVRCD), Scott River Watershed Council (SRWC), Quartz Valley Indian Reservation (QVIR), Watershed Research and Training Center (WRTC), Community Alliance with Family Farmers (CAFF).

Scott Valley Community and Forest Resilience – Using Prescribed Burning

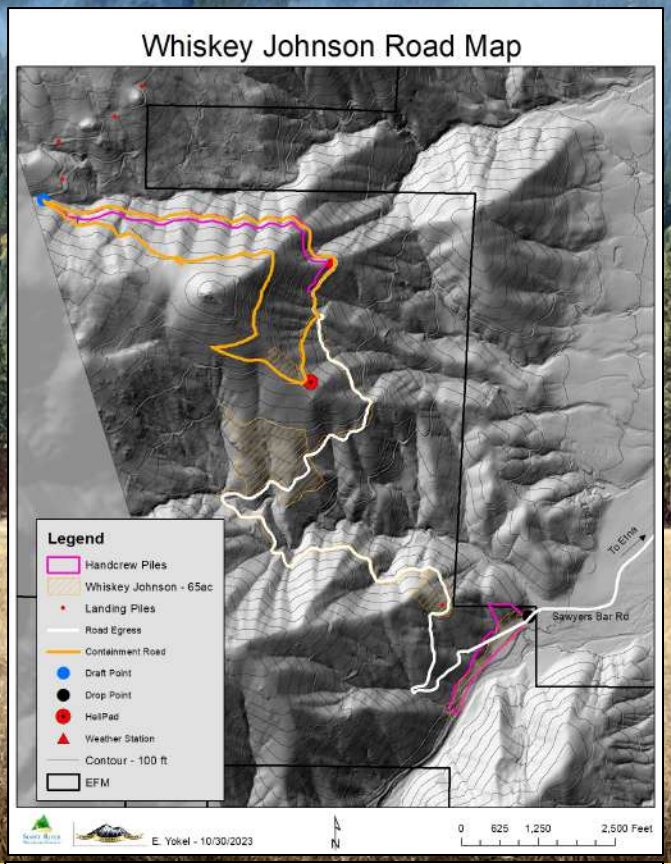
SRWC continues to work closely with other Siskiyou County prescribed fire leaders and the Siskiyou Prescribed Burn Association (SPBA).

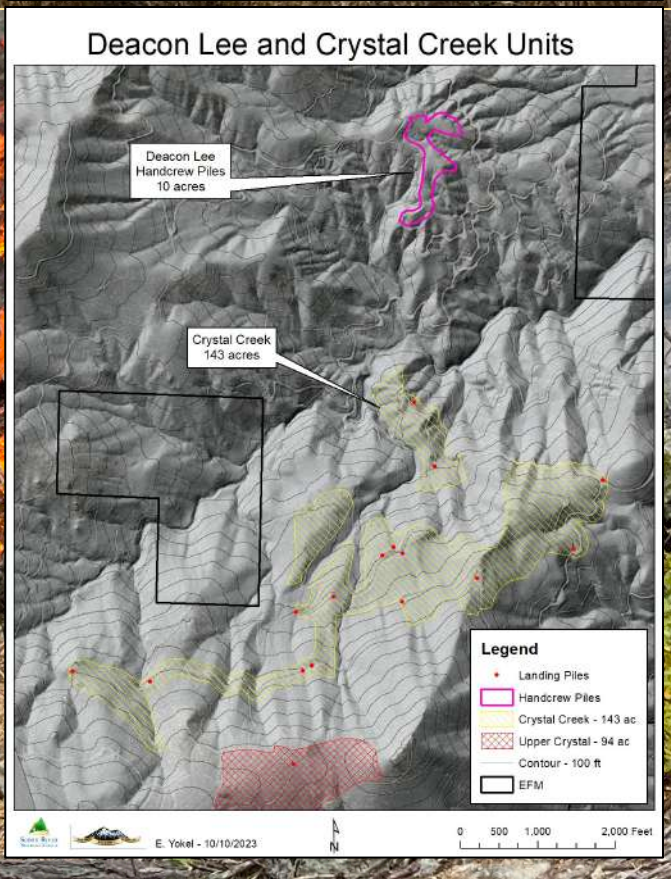
In the fall of 2023, SRWC and its partners from the Quartz Valley Indian Reservation, Mid Klamath Watershed Council, Shasta Valley RCD, Jefferson Resource Company, and Etna Fire Department conducted pile burning on 45 acres of privately owned lands to the west of the City of Etna and the surrounding neighborhoods.

The funding for these activities is from the State Coastal Commission with the objective of building capacity within the Scott Valley community to bring good fire back to this fire dependent region

Finding Ways to Bring Fire Back to Our Lands

"This summer, I came back to work at the Watershed Council after being away for 5 years. It has been a fun and inspiring return. It is amazing to see how much the team has grown and accomplished. The diversity, complexity and pace of projects is uplifting and challenging in the best kind of ways. I am happy, humbled, and so thankful to be part of this meaningful work." Peter Thamer, Project Manager





Scott Valley's Fuel Treatment Project

CAL FIRE

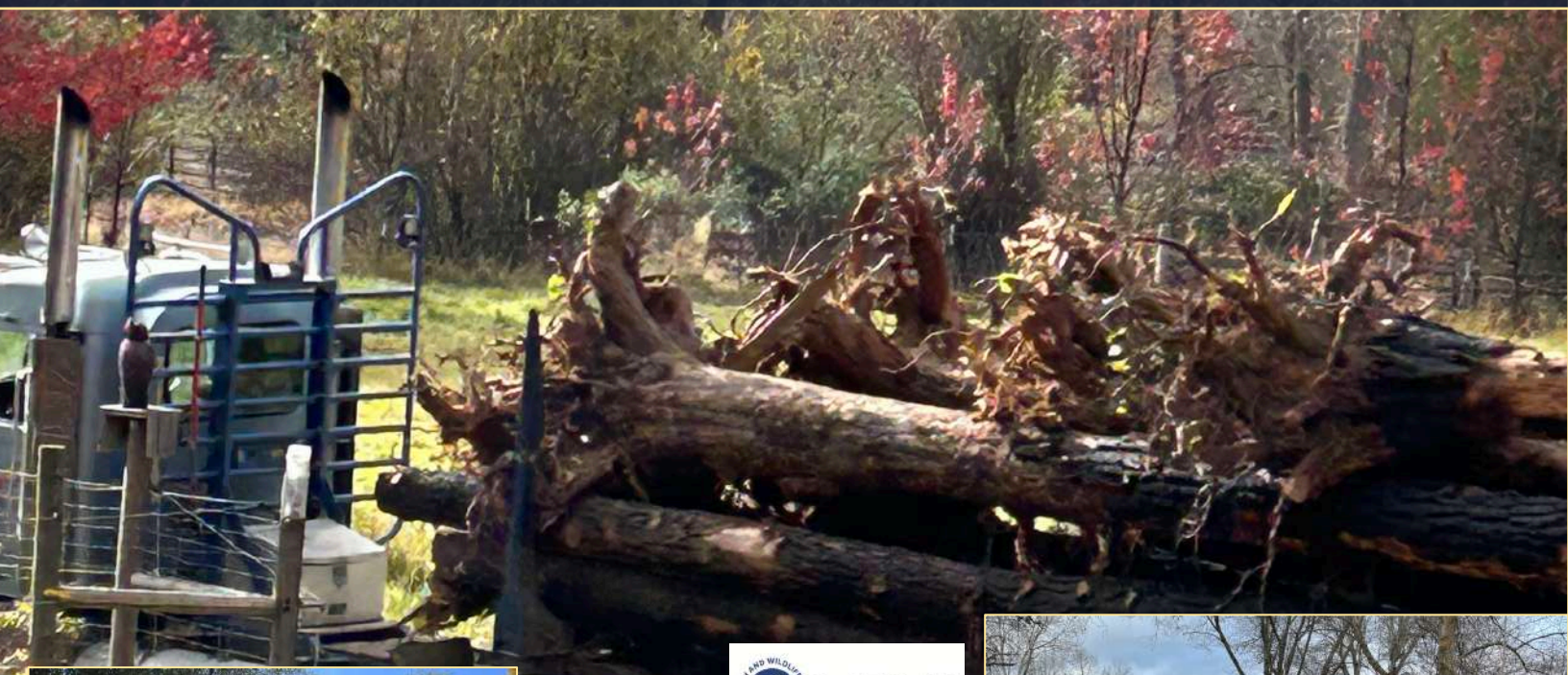
we help people Northern California Resource Center

The Project concentrates on actions that will remove forest fuels within the Wildland Urban Interface areas (WUI) and will treat roadsides to create and connect strategic fuel breaks and reduce the impacts of catastrophic wildfire and decrease possible ember showers within areas of the community at very high risk. By strategically tying into prior work and focusing on treating the most densely forested areas, building off the landowner responsible 100' defensible space, the Project will connect and enhance past and ongoing fuel reduction work within the Scott Valley. Removal of dead, dying and reducing stocking density of small to medium diameter live trees, fundamentally altering the spatial arrangement of trees to minimize crown-to-crown spread of fire will limit the size, intensity and the rate of spread of fire and will increase safety of wildfire evacuation operations for both public and fire personnel. This work is happening in Kidder Creek and Quartz Valley areas.

"I've met a lot of great people in the Scott River watershed including tribes, ranchers, small business owners, and visitors that just want to be heard when it comes to natural resource management. We are trying to listen to people's ideas and put them towards win-win solutions like doing a better job of managing our forest landscapes that influence the watershed. There's a lot of work to be done that will only succeed if there's a long-term commitment by people willing to listen to other people's interests."

Joe Croteau, CALFIRE Project Manager

French Creek – A Stronghold Tributary for Coho Salmon Recovery



The purpose of the project is to improve summer and winter rearing habitat and spawning opportunities for Coho salmon. Construction of 5 Engineered Log Jams (ELJs), augmentation of 15 tons of spawning gravel, and riparian planting completed.

Juvenile Coho direct observation and Beaver Presence surveys were completed pre-implementation, and none were detected. Post-implementation adult Coho spawning surveys were undertaken and 3 Coho redds were detected in the gravel placed as part of the project. Photo trapping has indicated beaver utilization of the reach post-implementation. Otoliths, eye lenses, scales and a fin clip have been obtained from carcasses recovered from the project reach.

This project was on private property was Coho Enhancement Fund (CEF) and administrated by National Fish & Wildlife Foundation.

Cascade Stream Solution was the engineer, North River Construction the contractor and the wood was purchased from Smith Dysert Logging Inc.

Big Mill Creek-East Fork Sediment Reduction and Habitat Restoration Project

BEAVER VALLEY HEADWATERS PRESERVE - THE WILDLANDS CONSERVANCY

As a component of the ***Big Mill Creek-East Fork Sediment Reduction and Habitat Restoration Project*** lead by CalTrout, SRWC contributed to the ***Beaver Valley Headwater Preserve Instream and Design*** and the ***Beaver Valley Headwater Preserve Riparian and Road Inventory***.

This project provides an excellent opportunity to collaborate with a variety of stakeholders and provide future ecological uplift on a critical reach of the Scott River.

SRWC was tasked with a variety of monitoring networks, including a water surface elevation monitoring network on Noyes Valley Creek (see map below), instream flow (discharge) stations (5 in total) and water temperature network.

Sixteen (16) water temperature stations were operated in the East Fork Scott River and tributaries during the base flow period of water year 2023. Three tributaries to the East Fork Scott River (Mule Creek, Big Mill Creek and Noyes Valley Creek) were bracketed with temperature stations (upstream East Fork, tributary upstream of the confluence and downstream East Fork) to document the effects on the thermal regime of the tributary.

Additionally, SRWC surveyed and documented conditions on over 30 miles of road and identified and quantified 28 gullies. SRWC is working with CalTrout and the project team to move project objectives forward in 2024.

Noyes Valley Creek - Water Surface Elevation Monitoring Network

THE WILDLANDS CONSERVANCY

CALIFORNIA TROUT

FISH · WATER · PEOPLE

Field Note from SRWC's Aaron Elliott

During December 2023 the SRWC crew embarked on an exciting mission of adding biological health to an engineered floodplain that was constructed in 2020 on the lower section of the beautiful Sugar Creek tributary. This floodplain creates vital refugia for juvenile salmonid species during high flow periods in winter and spring months. The area is particularly important as it is a highly utilized spawning and rearing habitat for Coho Salmon. Additionally, this floodplain planting project aims to supply a food source for the local beaver.

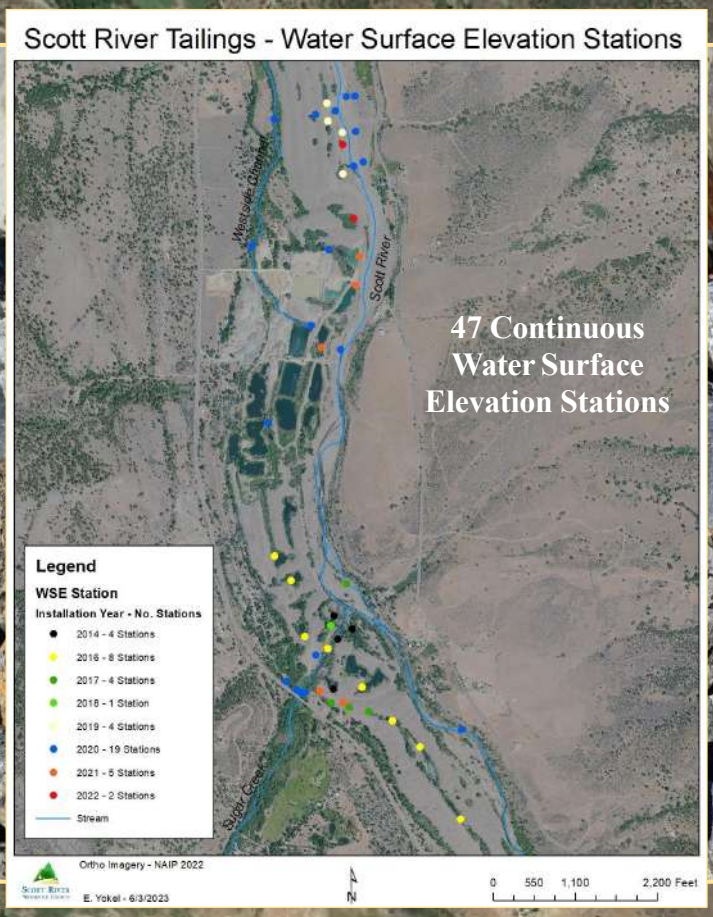
With the assistance of the landowner, Mike Kalpin and North Rivers Construction, planting beds were dug approximately 8-12 feet deep. Because of the porous nature of the dredge mined tailing substrate sand was added to the bottom of the beds and then sprayed with high pressure water in order to fill the interstitial spacing. The beds were then layered with a mix of conifer and cottonwood nursing logs to retain moisture along with locally sourced organic dairy manure and locally grown straw for nutrient uptake and additional sources of decomposition. Additionally, some beds included biochar to promote microbial activity.

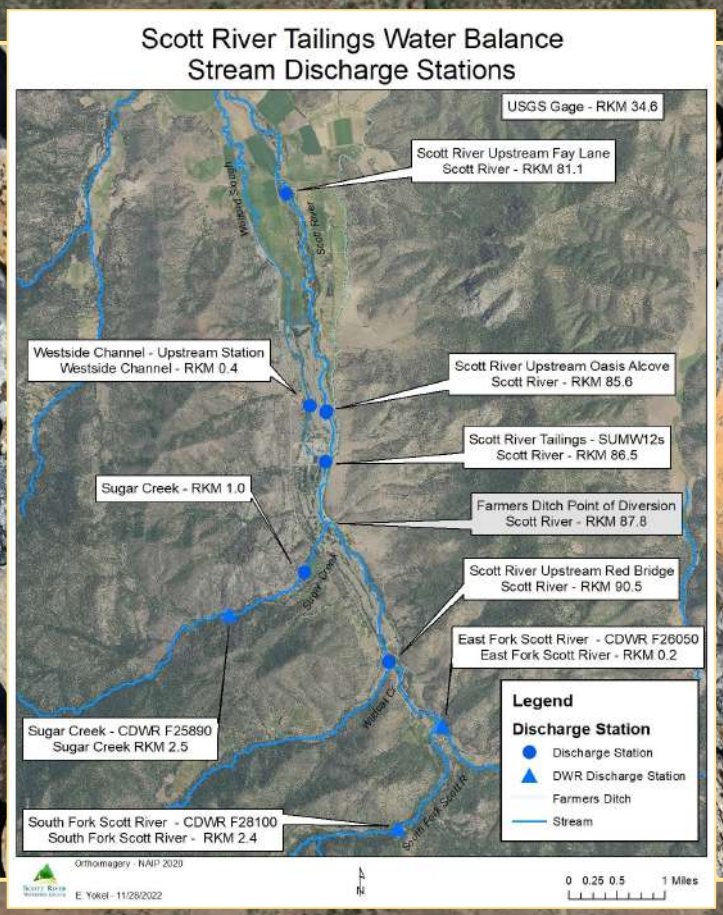
Each of these lasagna style beds was then planted with 60-100 willow cuttings varying in length from 6 to 12 feet and 1-5 cottonwood cuttings were then planted in the centers. The willow was planted in a circle around the circumference, known as *facilitation cluster*, a methodology modeled from work done in the Elwha by Joshua Chenoweth, Yurok Tribe's Senior Riparian Ecologist.

Scott River Tailings - A Decade of Understanding Through Monitoring

Upper portion of the tailings reach.

Throughout 2023, SRWC continued to work with private landowners to collect empirical data with the hopes this information will be used to inform any future restoration designs or actions to address these legacy mining impacts. Looking forward to 2024, SRWC continues to seek solutions that can address the complex issues associated with this reach of the Scott River.





Lower portion of the tailings reach.

Scott River Tailings - A Decade of Caring for Our Water

On a hot day, July 24, 2014, SRWC and its project partners, Dr. Michael Pollock from NOAA, Mr. Mark Cookson from USFWS, and Scott Valley landowners, began a project that would change the course of history for the Scott River Coho Salmon populations. California's first permitted beaver dam analog was installed at the site which now supports the annual rearing of thousands of juvenile Coho Salmon and is also the home of a robust population of beaver.

Monitoring activities include fish utilization, surface and groundwater elevations, stream temperature, dissolved oxygen, riparian vegetation, change in habitat abundance, macroinvertebrate production, and beaver activity.

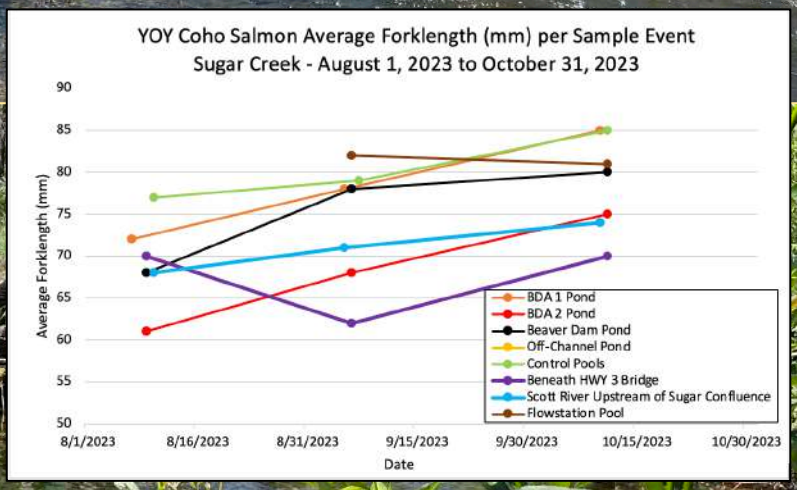
Over the years the project has been funded by the United States Fish & Wildlife Service (USFWS), National Oceanic & Atmospheric Administration (NOAA), Bella Vista Foundation, Coho Enhancement Fund (CEF) administered by the National Fish & Wildlife Foundation (NFWF), Humboldt State University (HSU), California Department of Fish & Wildlife (CDFW), SRWC, countless hours of volunteer hours and of course, our rodent friends, the beaver.

Between August and October 2023, habitat units on French Creek, Sugar Creek and Canyon Creek were sampled for juvenile Coho Salmon (*Oncorhynchus kisutch*). Biometric (forklength (mm) and weight (g)) data were taken from the captured fish.

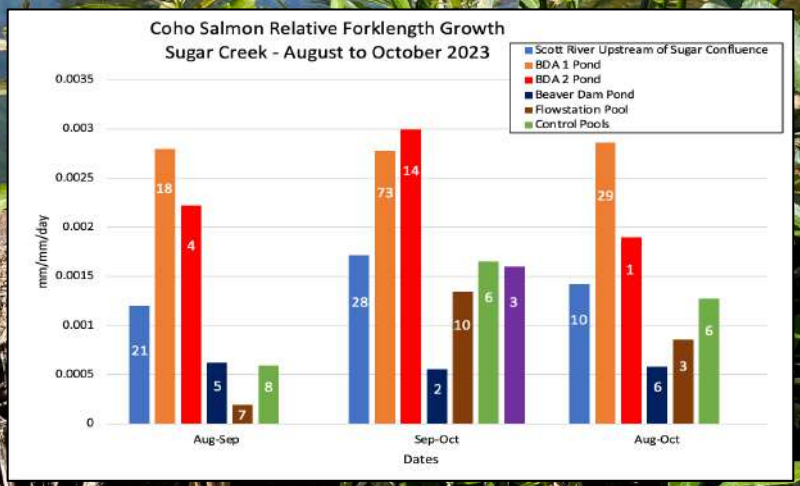
Seines and baited minnow traps were used to capture fish, which were then anaesthetized, weighed, measured and allowed to recover in oxygenated water before being returned to the habitat from which they were captured. Coho Salmon with a forklength 65 mm and greater were scanned for Passive Integrated Transponder (PIT) tags and were candidates to have PIT tags implanted if they did not already have a tag. Previously tagged fish were marked as recaptures and were used to calculate growth rates in different habitat units.

In addition to Coho Salmon, Chinook Salmon *(O. tshawytscha*) and rainbow trout/steelhead (*O. mykiss*) were anaesthetized, weighed and measured when captured, although no PIT tags were implanted into these fish. All non-salmonid organisms captured in the nets or traps were returned to the habitats from which they were taken without being processed.

Photo taken on June 12, 2023



Average Coho Salmon forklength for each sampled unit on Sugar Creek. August - October 2023.



Coho Salmon relative forklength growth - Sugar Creek all sampled habitats. August to October 2023. The white numbers in the columns represent the sample size.

The Scott River Recovery Action Plan (SRRAP)

Why hasn't the Scott River's channelization, confinement, and incision, which are the fundamental drivers of the loss of groundwater, in-stream flow, and associated habitat, been addressed to date? For decades the required scale of the restoration, and the social and economic complexity in achieving it, have been daunting and overwhelming barriers. However, with climate change, drought, regulatory, and economic pressures there is increasing recognition that now is the time to "Go big or go home" if we are to have any chance of warding off extirpation of species and the loss of human communities.

The "***Scott River Recovery Action Plan***" ("Project") is working to integrate and make actionable existing restoration and management plans and prioritizations with a comprehensive geophysical and economic analysis, regulation issues and community engagement to achieve landscape scale recovery of the Scott River's ecological function.

In 2023, a committee of people, all interested in seeking meaningful solutions, met quarterly to begin work on developing a cooperative and comprehensive recovery plan for the basin. By bringing people from all sectors of our community to develop this plan we feel there will be a stronger chance of maintaining the Valley's social and resource based economic cohesion, which, in the long run, will result in improved and sustainable outcomes.

RESOURCES LEGACY FUND

The Nature Conservancy

Northern California Resource Center

CALIFORNIA TROUT

SISKIYOU LAND TRUST

Siskiyou County Farm Bureau

SCOTT RIVER WATERSHED COUNCIL

INITIAL PHASE OF THE SCOTT RIVER WATERSHED COUNCIL STRATEGIC ACTION PLAN

OCTOBER 2005 UPDATE

Fiscal Administrator:
Siskiyou Resource Conservation District
P.O. Box 268
Etna, CA 96027

The SRRAP builds on the foundational work done for the Strategic Action Plan (SAP). Its mission was: "*This plan for the Scott River watershed for the purpose of cooperatively establishing a common strategy for restoration and management actions…As the SRWC works to implement the SAP and begins development of future phases, proposed changes to the document is expected. The SAP will always be a living document.*"

Scott Watershed Informational Forum (SWIF) 2024

For more information for this free forum, please click here.

February 21st , 22nd & 23rd

February 21st

Scott River Field Tour - 9:00am – 4:00pm
514 N. Hwy. 3, Etna CA

Field tours that will focus on work being done for both fisheries and forest health. A great way to gain firsthand knowledge and insights into ongoing projects and an opportunity to witness the real-world impact of the work being done in the Scott River watershed.

February 21st

Siskiyou Water Transaction Workshop
5:00pm – 7:00pm
11219 N. Hwy. 3, Fort Jones, CA

This workshop is designed for ag landowners, ranchers, and watershed planners to learn more about appropriative and riparian water rights, different forms of water transactions, and the permitting pathways for various types of water projects.

February 22nd

Scott Watershed Informational Forum (SWIF)
8:00am – 5:00pm
11219 N. Hwy. 3, Fort Jones, CA

A day full of great presentations on topics that range from the importance of mountain meadows and Cascade frogs, the critical role that fire plays in our bioregion, work around conservation easements, upland fuel management and holistic planning efforts taking place in the Scott River watershed. And of course, no SWIF can go without having a presentation and discussion about BEAVER!

February 22nd

SWIF Happy Hour
5:00 – 6:00pm
11219 N. Hwy. 3,
Fort Jones, CA

February 23rd

Soil Health & Scott Valley Agriculture's Water Conservation Efforts
8:00am – 12:30pm
11219 N. Hwy. 3, Fort Jones, CA

A deep dive into soil health, and valuable insights into soil structure, water movement, and overall soil health from Zahangir Kabir, Ph.D., West-Regional Soil Health Specialist with USDA NRCS. Additionally, important work happening with groundwater recharge with Dr. Laura Foglia, water conservation projects with the Siskiyou Farm Bureau and a conjunctive study starting in 2024.

SCOTT RIVER
WATERSHED COUNCIL

www.ScottRiver.org