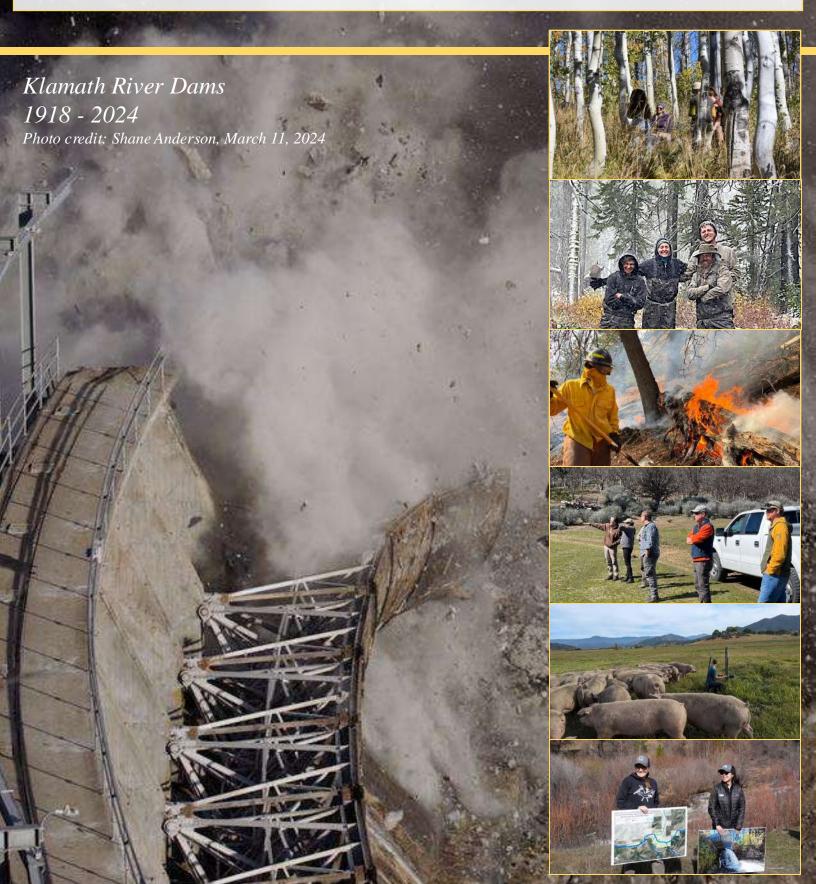


A Year in Review 2024

Scott River Watershed Council's Programs & Partnerships



SRWC & OUR PARTNERS: TOGETHER WE CAN

Welcome to our 2024 Year-in-Review Report - Join us as we reflect on the past year, celebrating the work accomplished by the Scott River Watershed Council, our dedicated partners, and the Scott Valley community. First and foremost, we extend our heartfelt gratitude to the landowners who make restoration and conservation efforts possible by opening their land to this important work. We also wish to thank our federal, state, and private funders for recognizing the value of our mission and supporting the health of the Scott River watershed. Our work would not be possible without our incredible staff—their passion and commitment to the Council's mission inspire us every day. To our Board of Directors, thank you for your leadership and steadfast representation of our community. Below, you'll find a list of our partners. (Click on their names to visit their websites!)

Ascend Wilderness Experience

Backcountry Press

BBW & Associates

Bella Vista Foundation

Broad Foundation

Bureau of Reclamation

California Climate Investments

California Department of Fish and Wildlife

Cal Recycle

California Trout

Cal Fire

CalTrans

Cascade Stream Solutions

<u>cbec</u>

Center for Watershed Sciences UC Davis

City of Etna

Coastal Conservancy

County of Siskiyou

ECOnorthwest

Etna Community Garden

Etna Farmers Market

Etna PAL

EFM

Farmers Ditch Company

Friesen Foundation

Gary Black Inc.

Humboldt State University

Jacob Martin Ltd.

Jefferson Resource Company

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

North Rivers Construction

NRCS (Natural Resources Conservation Service)

Occidental Arts and Ecology Center

Outdoor Equity Grants - State Parks

Pacificorp

Premier Clearing Inc.

Prunkuske Chatham, Inc. (PCI)

Quartz Valley Indian Reservation

Restoration Design Group

Resources Legacy Fund

Salmon River Restoration Council

Salmonid Restoration Federation

Shasta Valley RCD

Siskiyou RCD

Scott Valley Disposal

Scott River Ranch

Scott Valley Rotary

Siskiyou County Farm Bureau

Siskiyou Economic Council

Siskivou Land Trust

Siskiyou Prescribed Burn Association

Southern Oregon University

Stillwater Sciences

Sugar Creek Ranch

Swift Water Design

The Nature Conservancy

The Wildlands Conservancy

Trout Unlimited

Upstream Ecology

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



The Scott River Watershed Council (SRWC) is a placebased organization whose dedicated Board and staff work on the complex issues related to the conservation, restoration, and sustainable management of natural resources in the Scott River watershed, a tributary to the Klamath River.

This year marks a monumental milestone with the removal of the Klamath River dams, allowing fish to return to areas that have been inaccessible for over a century. Heartfelt thanks to everyone who contributed to making this historic achievement possible.

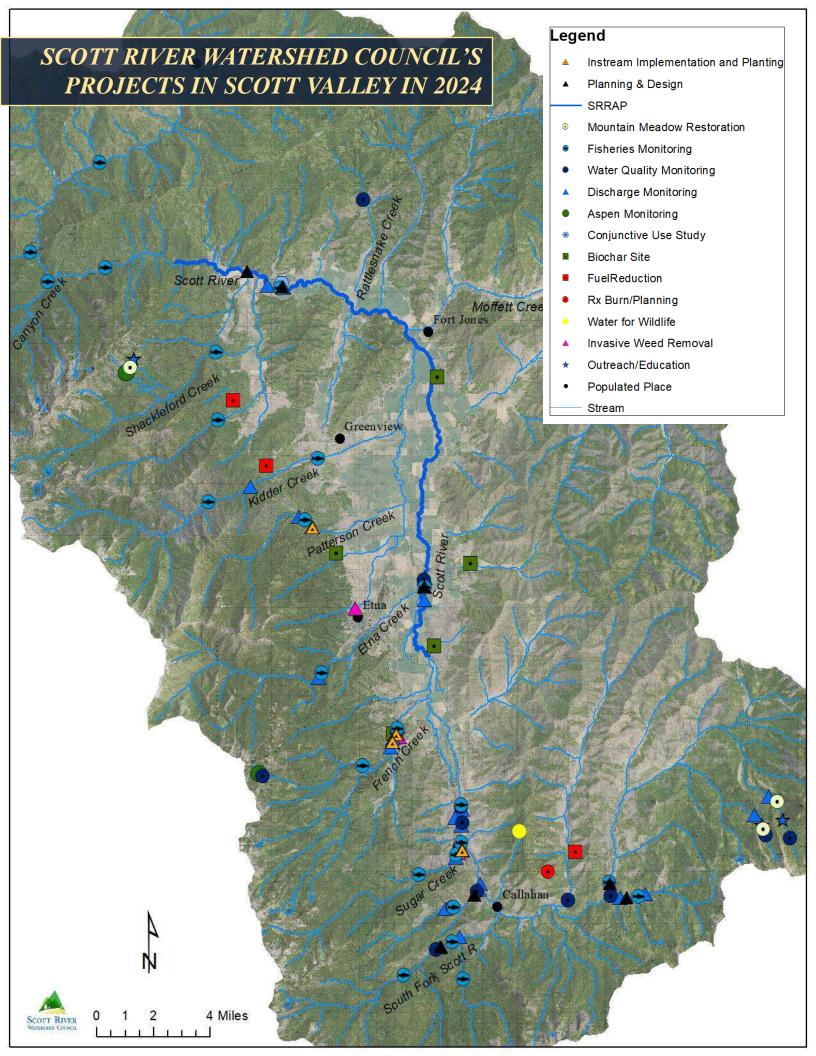
This Year in Review Report highlights the key focus areas of the SRWC and our partners from 2024. It aims to increase visibility of our work and encourage greater community engagement.

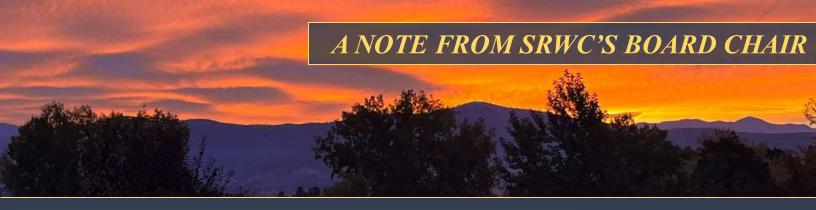
We have so many people to thank for making this an incredible year. This report aims to showcase the numerous partnerships that have contributed to our success and how the Scott Valley community is engaging in these important issues.



SCOTT RIVER WATERSHED COUNCIL'S PROGRAMS & OBJECTIVES

- > Community Connectivity emphasizes building bonds, supporting local businesses, and reconnecting Tribes with traditional lands. Public Engagement fosters collaboration and awareness through events and communication.
- > Conservation Land Acquisition and Management contributes to the need to set strategic lands into permanent conservation, with stewardship goals to enhance ecosystem services while supporting our local economics.
- ➤ Education & Research promotes learning and academic opportunities, including youth programs like the Youth Environmental Summer Studies (YESS) program, other season intern positions and both college and post graduate programs.
- > Fire & Forest Health combines prevention, mitigation, and restoration strategies to reduce wildfire risks and using fire as a land management tool.
- > Fisheries & Water Monitoring advances understanding of restoration effectiveness and climate change impacts.
- ➤ *Healthy Soils Initiatives* aims to provide support and services to encourage sustainable soil management and crop production.
- ➤ *Instream Implementation* improves habitats and groundwater recharge, along with riparian & floodplain ecosystems.
- ➤ Land and Water Use Support focuses on strategic planning to balance environmental conservation, community, economic, and social well-being in the face of climate change.
- ➤ *Mountain Meadows* restoration aims to enhance biodiversity, water storage, and overall biodiversity, forest resiliency and ecosystem health.
- > Planning & Design of restoration activities that leverage partnerships and professional knowledge to create actionable plans for future activities that aim to provide improved water and fisheries conditions.





Dear Friends,

As we reflect on the past year, it is with great pride and gratitude that I share our accomplishments and progress. We continue to grow in community outreach from our annual Scott Watershed Informational Forum (SWIF) and Youth Environmental Summer Studies (YESS), as well as our monitoring, forest health and fire, soil health, mountain meadows, instream implementation, and planning & design programs. Staying true to our mission "To facilitate communication and science based collaborative solutions for natural resource issues in Scott Valley" is our priority.

This year has been marked by collaboration, resilience, and an unwavering commitment to the Scott River Watershed. Together, we have reached new milestones, launched impactful projects, and built a stronger foundation for the future.

On behalf of the Board, I want to extend my heartfelt thanks to our dedicated staff, volunteers, partners, and supporters. Your passion and commitment are the driving forces behind our success. As we look ahead, I am excited for the opportunities that await. With your continued support, we are poised to make an even greater impact in the year to come.

Thank you for being part of our journey.

Shirley Johnson, Board Chair







Meet Our People

Governance Gurus – 2024 Board of Directors

Shirley Johnson, Chair Craig Thompson Jenn Bray Judd Hanna

Kory Hayden
Larry Alexander
Matt Thomas
Michael Stapleton



Vinnie McNeil and Tamila Medinnus also served earlier in the year but had to resign for personal reasons. Going forward, Craig will be dropping off due to an extremely busy schedule and we would like to thank him for his years of service. We are honored to have both Michael Thamer and Joey Gentry joining us in 2025.

THE DREAM SCHEMERS







For the past decade, Charnna Gilmore, Betsy Stapleton and Erich Yokel have worked as a leadership team, combining their complementary skills to build one of the state's most effective and productive place-based, non-profit organizations. Charnna, as Executive Director, Betsy, as Project Development and Permitting Specialist, and Erich, as Monitoring Supervisor and Project Manager, have worked together to expand the focus of SRWC. Under their leadership, the organization has grown from concentrating solely on instream restoration and habitat improvements to addressing a broader spectrum of upland issues. This shift has enabled SRWC to tackle critical challenges such as forest health, watershed resilience, sustainable land management, and the interplay between upland ecosystems and water resources. By integrating these diverse aspects of conservation and fueled by their deep passion to serve the community, they have significantly enhanced the Scott Valley's ability to address complex issues in the face of a changing climate.



Sally Ayers Smith, Contract Manager, Susan Rickey, Administrative Assistance, and Amanda Schmalenberger, Bookkeeper

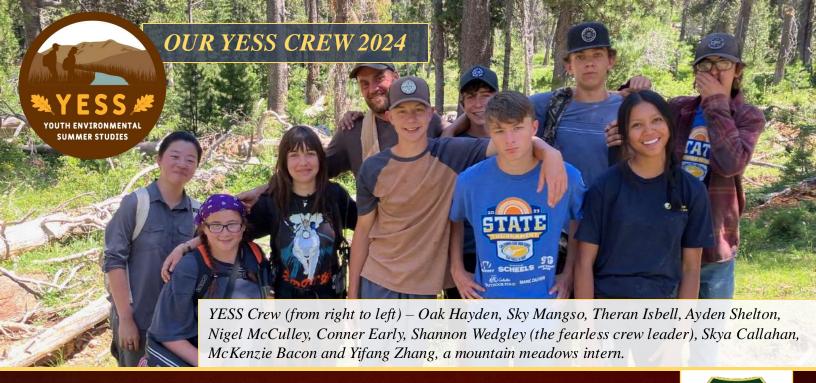
We are incredibly fortunate to have a dedicated administrative team.

Together, they work hard to keep the Council's daily operations running smoothly. Their efforts boost our staff's productivity, ensure organizational efficiency, and serve as the foundation of our work

Thank you, Amanda, Sally and Susan from the Council and our community.







Youth Environmental Summer Studies (YESS) – Cohort 8

In the summer of 2024, Scott Valley faced challenging times with the Shelly Fire. It was during this time we hosted eight youth participants for the 8th season of the Youth Environmental Summer Studies (YESS) program. As evacuations, road closures and poor air quality impacted our community, our crew leader Shannon Wedgley and his crews stayed busy doing environmental science, natural resource, and watershed health fieldwork.

They experienced hands-on work identifying and eradicating noxious weeds, worked in mountain meadows building beaver dam analogs, completed salmon surveys, and provided much needed work during the Shelly Fire at the local animal shelters. We are appreciative to be able to collaborate with professionals from the Salmon River Restoration Council (SRRC), the Mid Klamath Watershed Council (MKWC), and the Watershed Research and Training Center (WRTC).

A huge thank you to our funders for making this program possible! Additionally, thank you to the families of these students for entrusting their care and safety to us during this precarious time.























INTERNS OF THE WILD, THE WEEDS AND THE WATER

This summer, my work in the field of fisheries was not only a valuable experience but also a journey of personal growth that taught me the true essence of teamwork. Even in the face of challenging tasks, I learned the importance of collaboration and communication, which made our collective efforts more rewarding. Each obstacle we encountered required patience and resilience, qualities that I now carry with me. I am incredibly grateful for the opportunity to immerse myself in a field that I am passionate about, surrounded by fellow enthusiasts who share my love for fish and wildlife. This season not only deepened my appreciation for the work we do but also reinforced my commitment to pursuing a career in fisheries, where I can continue to learn and contribute to this vital field. - Leena Racataian

This summer meant a lot to me. It was my third year working with SRWC and second year as a Weed Warrior. I appreciate being one of the Weed Warriors. I get to work outside and learn more about the places I love, Scott Valley and the Salmon River. It feels good giving back to the places that I live and explore in. Each day we are out there pulling weeds I learn something new about the area, whether it is about the trees or the other native plants that we are trying to protect. We make it a point to take the time to learn about the things we interact with out there.

- Luna Buchin

Bright Marshall, Leena Racataian and Luna Buchin out on Scott River.



We want to extend our heartfelt gratitude to the team at the Klamath National Forest, especially Maija Meneks and Jennifer Iaccarino, for providing this incredible opportunity to these former YESS students! Supporting their aspirations in conservation work is truly invaluable. Their work to combat invasive weeds across the forest and deepening their understanding of strategies to support the Scott and Salmon Rivers' fisheries is an essential element to the future health and sustainability of our ecosystems.

Lilia Neely, Scott Valley
native & former YESS
student and current Cal Poly
Humboldt University's
fisheries student, worked the
summer taking stream flow
measurements and working
on monitoring groundwater
and treating invasive weeds.

Our wonderful Mountain Meadows crew explored the wilds of the Klamath Mountains, Yifang Zhang, Mayra Kwasnikow, and Madison Erpelding.



ETNA FARMERS MARKET

The Etna Farmers Market is a vital asset to our community, offering numerous benefits that go beyond just fresh produce. It fosters local economic growth by supporting small-scale farmers and artisans, creating a direct connection between consumers and producers. This encourages the circulation of money within the local economy, ensuring that profits stay close to home. Farmers markets also promote healthier eating habits by providing access to fresh, often organic, and seasonal foods that may not be available in traditional grocery stores. They serve as a social hub, where neighbors can interact, build relationships, and strengthen community ties. Additionally, these markets often prioritize sustainability by reducing the carbon footprint associated with transporting food long distances, thus supporting environmental responsibility. In essence, the Etna Farmers Market cultivates not only physical health but also a sense of belonging and shared values within the community.

Season 2025 will be open from May 24th through September 27th.

Shirley Johnson, Market Manager





COMMUNITY CONNECTIONS, CONTRIBUTIONS, & PUBLIC ENGAGEMENT - Engaging ~1,560 people



Public Engagement Activities 2024 A total of ~1,560 participants

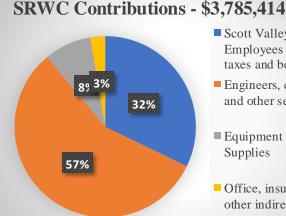
Field tours w/community members, funders, agencies, Tribes 15 12 Presentations at forums, workshops & meetings

Hosted Workshop in Scott Valley



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

> Scott River Watershed Council September 18, 2024 Yreka Rotary Club Meeting



- Scott Valley Local Employees - Wage, taxes and benefts
- Engineers, contractors and other services
- Equipment and Supplies
- other indirect expenses

Office, insurances and

The mission of the Scott River Watershed Council is to facilitate communication and science based collaborative solutions for natural resource issues in Scott Valley.

We promote and support education, restoration, and scientific planning and monitoring in order to ensure the sustainability of the natural and human communities of the watershed, now and for future generations.



We invite you to join us for this exceptional event to learn what makes Scott Valley and the Klamath Mountains so distinctive. Dr. Bill Hirt, a distinguished local geologist, will generously share decades of expertise on our region and why it stands as one of the most biodiverse locales on Earth.



Bill became interested in rocks and minerals at about age 6 and went on to earn his degrees in geology from UCLA and UC Santa Barbara. He joined the faculty at College of the Siskiyous as the geology instructor in 1991 and retired from full-time instruction at the end of 2018. Bill continues to teach regional geology short courses for the College and also works part time as an EMT for Mount Shasta Ambulance. He lives in Weed with his wife, Nancy, and dog/force-of-



May 2, 2024 5:30pm

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.

SWIF 2024 was a 3-day event with multiple field tours on French Creek, in the Scott River Tailings, South Fork and East Fork of the Scott River. During the evening, SRWC partnered with the Salmon Restoration Federation, Trout Unlimited, and California Trout to host a Water Transaction workshop. This workshop was designed for landowners, practitioners, and agency staff to learn more about appropriative and riparian water rights, different forms of water transactions, and the permitting pathways for various types of water projects both domestic and agricultural.

Over the next day and half, there were 18 presentations on topics ranging from beaver, mountain meadow restoration efforts, agricultural water conservation efforts, fire in the Klamath, fisheries, Klamath National Forest and CalFire efforts in the region and soil health presentations. We had two moderators for this event, Clayton Creager, retired Klamath Basin Stewardship Coordinator for the North Coast Regional Water Quality Control Board and Scott Valley's own Emma Morris moderator, the Soil Health & Scott Valley Agriculture's Water Conservation Efforts Forum. Emma is a Program Manager for Resiliency and Sustainability at the Siskiyou Economic Development Council. She also works on her family's ranch, the Bryan-Morris Ranch. The event was hosted at The Towers in Fort Jones.

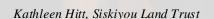
Please Save the Date for SWIF 2025 – February 19th-21st, for more information click SWIF 2025



Will Harling, Mid Klamath Watershed Council





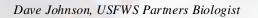




Natalie Kelly & Danika Carlson, KNF



Clayton Creager, Moderator







On June 18th and 19th SRWC hosted a low-tech process-based restoration (LTPBR) workshop at Rock Fence Creek for our staff and volunteers and other members of the Klamath Meadows Partnership (KMP). Garret Costello and Annie Barr of Symbiotic Restoration and also Karen Pope and Adam Cummings of the Forest Service's Pacific Southwest Research Station led the training. The training included discussion of LTPBR concepts and philosophy, the essence of which is allowing the energy of the natural system to do the majority of the work, the use of technology (LiDAR, GIS, modeling, etc.) to support field work, and lots of hands-on instruction and practice building LTPBR structures. Participants include representatives from the Karuk Tribe, the Forest Service, Salmon River Restoration Council, Mid Klamath Watershed Council, the Watershed and Resources Training Center, and The Nature Conservancy.

In conjunction with the LTPBR training, SRWC hosted a KMP meadow inventory training the following day. This was a day for training the crews of several KMP member organizations on the updated KMP meadow inventory protocol to prepare for the summer's inventory work. In addition to SRWC, other participants were the Forest Service, Salmon River Restoration Council, and Mid Klamath Watershed Council.

Karen and Adam, used data from the Sierra Nevada to develop the Lost Meadows Model (LMM), to predict locations of potential riparian meadows. The LMM polygons include existing meadow as well as areas that are not currently meadow but may have been meadow historically and been degraded by hydrologic alteration and/or conifer encroachment. One of the KMP's goals is to develop an inventory of meadows to calibrate the LMM to the Klamath. The meadow inventory work done this summer by SRWC and other KMP members will contribute to that goal.





PIT ARRAY CONSTRUCTION WORKSHOP 2024

On August 19th – 23rd, SRWC hosted a highly successful Passive Integrated Transponder (PIT) array antenna-building workshop. The event kicked off at The Nature Conservancy's Miners Creek Ranch with an engaging, hands-on session. Participants delved into the principles of copper coil activation for PITs, learning about induction levels and addressing common interference challenges.

The workshop transitioned into practical field applications, where attendees installed antennas and a live PIT array system in-stream. This segment involved troubleshooting array technology and collaborating on customized solutions to enhance data accuracy and reliability. Another highlight was a session on solar power systems, covering efficient methods to power battery backup banks using solar energy—an essential skill for maintaining remote PIT arrays sustainably.

The workshop drew a diverse group of participants, including fish biologists from the California Department of Fish and Wildlife and staff from the Yurok Tribe and the Mid Klamath Watershed Council. Dr. Zachary Sherker, a knowledgeable PhD scientist, shared invaluable expertise on electromagnetic frequencies and the intricate design of PIT array systems.

The insights and skills shared during the workshop significantly advanced understanding of the Klamath Basin fisheries. This collaborative effort is set to enhance participants' ability to protect this vital ecosystem. Data collected from efforts like this will be integrated into the Klamath Basin Fisheries Collaborative (KBFC), which grew from a shared commitment to monitoring and evaluating restoration in the Klamath River Basin.

The KBFC is currently replacing the 2017 Klamath River Basin (KRB) PIT Tagging Database with a new standardized system. This updated database will streamline data sharing across organizations and support assessments of water and fisheries management, ecosystem restoration projects, and the anticipated impact of dam removal on multiple fish species in the Klamath Basin. Learn more at https://www.kbfishc.org.

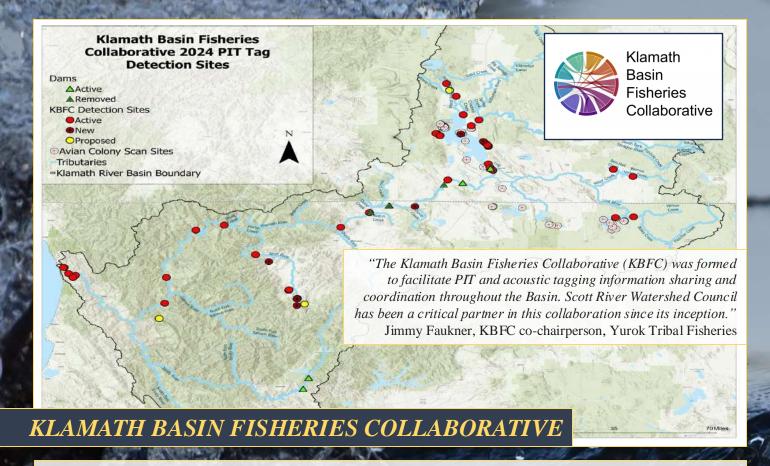




The Watershed Solutions Network (WSN) is a collaborative initiative dedicated to addressing critical watershed and natural resource challenges through community-driven solutions, innovation, and education. Bringing together diverse stakeholders, including conservation professionals, local leaders, and passionate advocates, WSN fosters knowledge sharing, resource management, and sustainable practices to protect and restore vital ecosystems.

Through workshops, field trips, and hands-on projects, WSN empowers participants to explore innovative solutions for watershed health, such as habitat restoration, water conservation, and climate resilience strategies. By uniting regional people, WSN strengthens community networks and enhances the capacity of individuals and organizations to safeguard natural resources for future generations.

One of our most highly anticipated events last summer was a trip to the Klamath Region and watershed to celebrate and learn about the dam removals and meet our Klamath region members who work and live in this basin. The Klamath River Trip unfolded in segments, allowing participants to join or depart the trip at various points. Our journey, hosted by WSN members and friends, began at the mouth of the river, guided by Sammy Gensaw (Cohort 3), and traversed the watershed with stops along the Scott River, guided by Charnna Gilmore (Cohort 3), the Upper Klamath Basin, guided by Ben DuVal (Cohort 3), and concluded at the headwaters of the Klamath Watershed. Cohort 3 and others from the Region came together for this exciting trip from the mouth to the headwaters of the Klamath River!



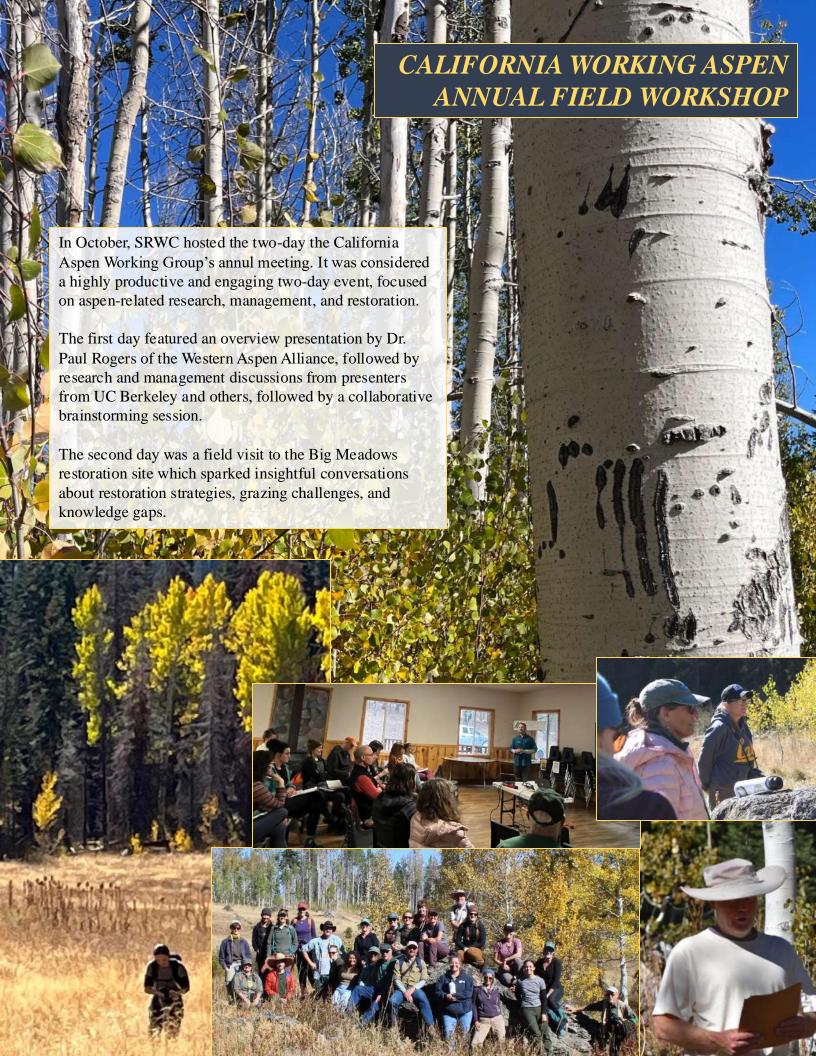
"If you want to go fast, go alone. If you want to go far, go together" is the motto for the Klamath Basin Fisheries Collaborative (KBFC), and the group exemplifies this by bringing together the many entities monitoring fish across the Klamath Basin. The goals of the KBFC are to foster information sharing and coordination among data collection entities working across the Basin, including Tribes, non-governmental organizations, federal and state agencies, the Pacific States Marine Fisheries Commission (PSMFC), and academic institutions to grow a network of collaborators and build capacity to monitor all the basin fish species and advance research to inform fisheries management and restoration actions.

In 2024, the Klamath dams were removed, allowing the fish of the basin to use the whole system for the first time in over 100 years, making communication and collaboration between the monitoring groups even more essential. SRWC is proud to be a founding member of KBFC and continues to provide leadership to the organization by serving on the steering committee. This past year, KBFC has ensured that all the groups are using the same structure for their monitoring data, so that when a comprehensive database goes online in the very near future the data will be aligned. An annual conference in June allowed for an in-person exchange of information and strengthening of human relationships to support the technical work.

The PSMFC KBFC support team shared that the contribution of the SRWC representative serving on the KBFC leadership team continues to be instrumental in building new relationships and maintaining existing ones throughout 2024. This dedication also contributed to further advancing the financial support of the KBFC work for 2025-2026, as well as identifying an opportunity to secure funding to broaden the monitoring collaborative across the Klamath Basin.

Looking forward to 2025, SRWC is excited to participate in a KBFC monitoring collaboration between the Yurok and Karuk tribes, the United States Geological Survey, the United States Fish and Wildlife Service, and the California Department of Fish and Wildlife to understand how juvenile Chinook Salmon utilize cold water areas in the mainstem Klamath in the journey to the sea. In addition to the Basin wide focus, the KBFC collaboration has provided vital resources to SRWC for our fish monitoring program here in the Scott because what we are learning about growth rates and habitat utilization by juvenile Coho Salmon contributes to the larger understanding of fish life histories strategies.

If you'd like to learn more about KBFC, please go to: https://www.kbfishc.org/





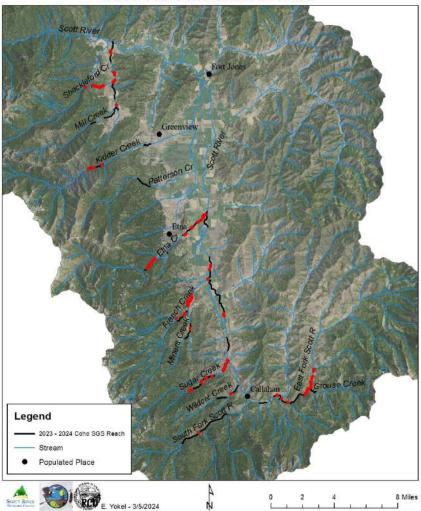
The Scott River Fisheries Monitoring Program is a collaborative effort between the SRWC and the Quartz Valley Indian Reservation (QVIR) to support and expand ongoing annual work to document both juvenile and adult Chinook salmon (*Oncorhynchus tshawytscha*) and coho salmon (*Oncorhynchus kisutch*) within the Scott River and its tributaries. This work integrates into other efforts throughout the basin to help inform fisheries and water management along with future restoration activities. To follow SRWC's fisheries work, please visit <u>SRWC's Reports.</u>







2023 - 2024 Scott River Coho Spawning Ground Surveys Observed Coho Salmon Redds



During the 2023-2024 coho salmon spawning season, staff from the Quartz Valley Indian Reservation (QVIR), Scott River Watershed Council (SRWC) and Siskiyou Resource Conservation District (SRCD) conducted spawning ground surveys on 38.3 miles of 17 streams in the Scott River watershed.

Between November 2, 2023 and January 16, 2024, a total of 251 coho salmon redds and 168 carcasses were documented in the cooperative survey effort. The highest concentration of redds per survey mile were found at the Scott River at Sugar Creek Confluence, the Middle French Creek, the Lower and Middle Sugar Creek and the East Fork Scott River at Kangaroo Creek reaches.

For a full report on these valuable efforts, please visit the <u>Scott River Coho Salmon Spawning</u> Ground Surveys 2023-2024 Season.

By analyzing sulfur content in eye lenses, researchers from UC Davis worked retrospectively identify habitats used during juvenile stages, as eye lenses record habitat information over time. This helps determine the proportion of returning adult coho that utilized Beaver Dam Analog (BDA) habitats and the timing and extent of such use.

Additionally, adult coho otoliths (ear stones) were analyzed for strontium, which varies geographically in the Klamath watershed. This allows precise mapping of habitat use in tributaries like Sugar and French Creeks. Combined sulfur and strontium analyses provide insights into habitat-specific growth rates and the role of BDAs in supporting coho populations.

Watershed

Juvenile coho salmon in Etna Creek, below City of Etna's water diversion. 2024/08/03 09:34

The juvenile salmonid monitoring utilizing direct observation during the period of June 25 through September 10, 2024. Given the relatively high abundance and spatial distribution of coho salmon spawners during the 2023-2024 winter, the emphasis of this effort was placed on, where possible, delineating the upstream extent of habitat being used by rearing juvenile coho. As such, direct observation surveys in this season were often started further upstream in a tributary than in previous years and did not seek to encompass all accessible sections of stream. Crews worked upstream from their starting point, snorkeling slow-water habitats they encountered along the way. Where upstream movement was not limited by landowner access, crews continued surveying until they completed 10 consecutive pools without identifying juvenile coho. 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 a given habitat. It is worth noting that various factors such as turbidity and salmonid predilection for habitats with lots of cover make it difficult to count and speciate all individuals in an area during a survey. The numbers reported in this field tech note are estimates and should not be merely considered anything else. To read full report, please click SRWC's Scott River Juvenile Direct Observation Report 2024.

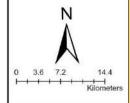
Juvenile coho salmon in Etna Creek, below City of Etna's water diversion.

SCOTT RIVER FISHERIES PROGRAM – JUVENILE SALMON DIRECT OBSERVATION





2024 Direct Observation Surveys



Additional data collected includes habitat types (e.g., pool, flat water, riffle, etc.) and basic characteristics of those habitats such as area, temperature, dissolved oxygen, and the dominant substrate. Most reaches were surveyed one time with a crew of two people for a total 16.3 miles surveyed (see map above). Summary table of 2024 direct observation survey efforts (see table below).

<u>Reach</u>	Survey Distance (km)	<u>Habitat</u> <u>Units</u> <u>Surveyed</u>	<u>Coho</u> <u>Count</u>	O. mykiss Count	<u>Chinook</u> <u>Count</u>
Kelsey Creek	0.8	21	200	535	0
Canyon Creek	2.0	26	239	495	0
Shackleford Creek	1.9	25	1,083	366	0
Mill Creek	0.8	8	0	122	0
Scott River RKM 40.7-42.8*	2.1	9	80	108	3
Kidder Creek RKM 10.9-11.7	0.8	11	540	311	0
Kidder Creek RKM 18.6-20.2	1.6	21	194	812	0
Scott River RKM 68.6-70.6	2.0	14	560	307	14
Etna Creek RKM 0-0.4	0.4	4	750	67	0
Etna Creek RKM 9.1-10.7	1.0	19	416	471	0
North Fork French Creek	1.2	15	212	208	0
Scott River RKM 85.2-85.7*	0.3	7	200	167	0
Sugar Creek	3.0	33	162	280	0
Wildcat Creek	1.3	22	157	397	0
South Fork Scott River	4.5	27	357	579	0
Boulder Creek	2.6	47	204	276	0
Fox Creek	0.7	17	9	15	0
East Fork Scott River	2.2	20	804	700	0
Grouse Creek	2.3	22	4	301	0
Totals	31.5	368	6,171	6,517	17

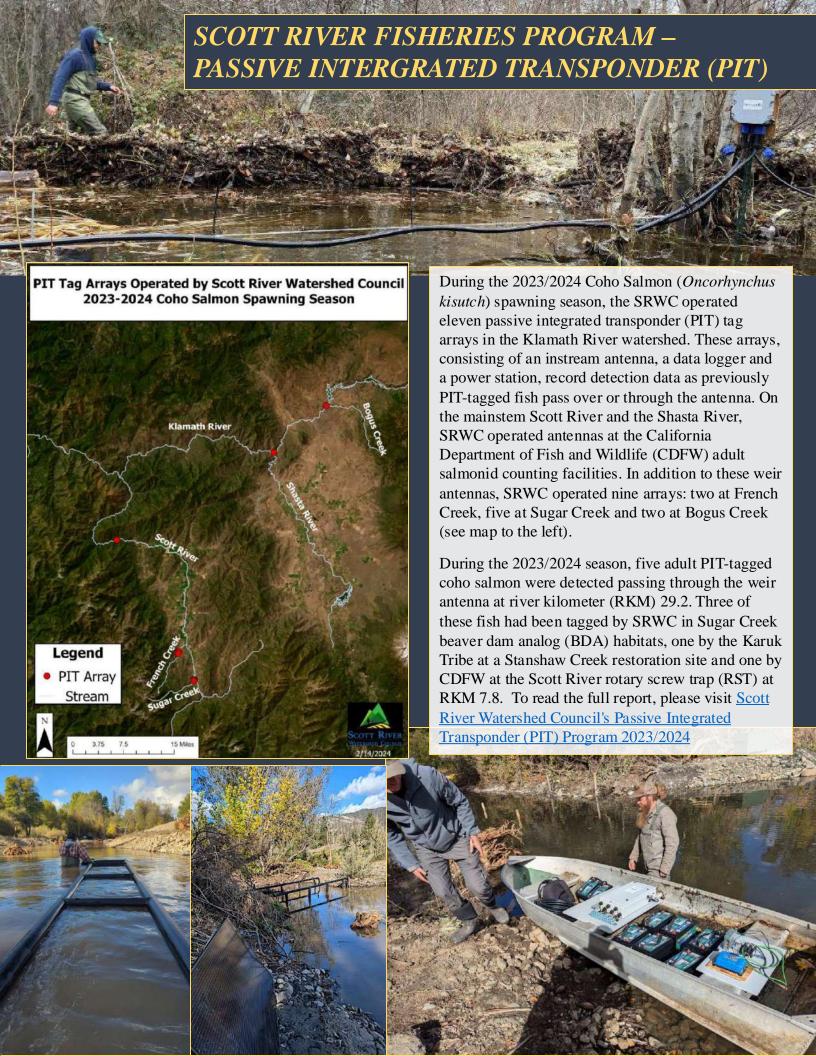
SCOTT RIVER FISHERIES PROGRAM – JUVENILE FISH SAMPLING EFFORTS

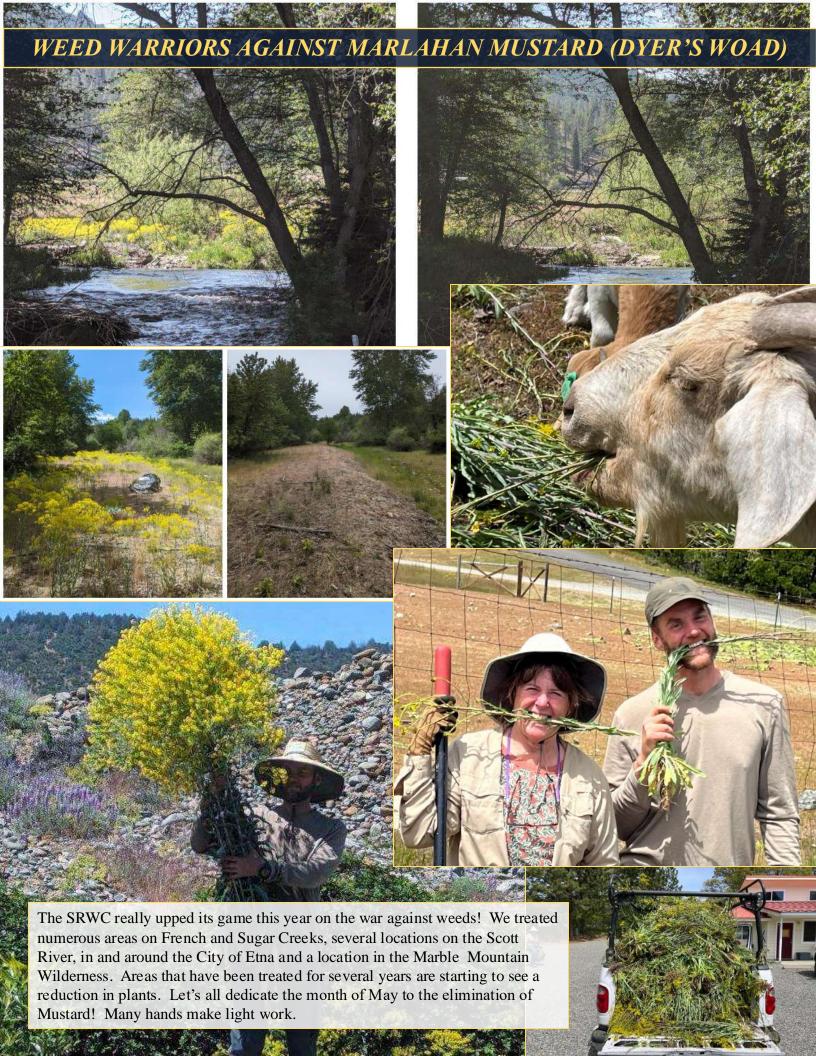




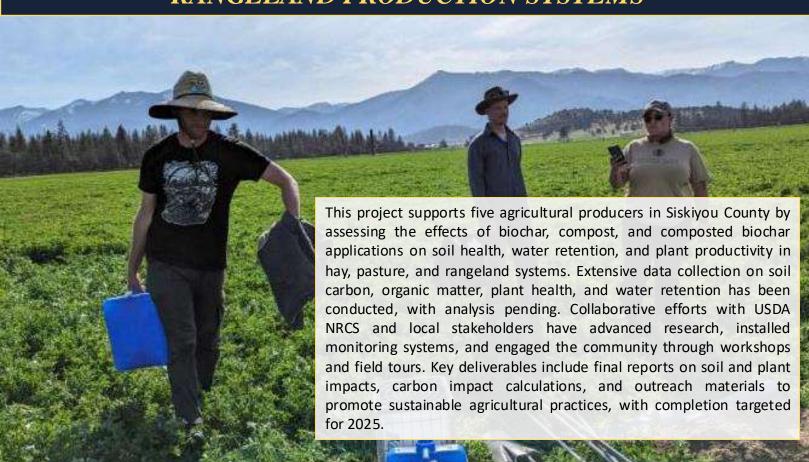
Between August 2023 and March 2024, Scott River Watershed Council (SRWC) staff conducted seven juvenile fish sampling efforts in four streams in the Scott River watershed: Canyon Creek, French Creek, Sugar Creek and a side channel of the mainstem Scott River. SRWC staff used seines and minnow traps to capture and collect data from fish inhabiting both restored and untreated habitat units in these streams. All captured salmonids were anesthetized, weighed and measured. 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. To read the entire report, please visit the SRWC Juvenile Fish Sampling Report 2023 -2024

				(Steelhead)	(Steelhead)
	Chinook	Coho	Coho	O. mykiss	O. mykiss
Location	Captured	Captured	PIT-Tagged	Captured	PIT-Tagged
Canyon Creek Pools	2	151	109	76	2
French - Beaver Dam Pond		717	403	24	2
French - Control Pools		829	327	246	2
French - FRGP SC		148	120	10	1
French - Pretreatment Upstream Stilling Well		166	60	41	
French - SC BDA 1 Pond		529	180	16	2
Scott River - At Sugar/Scott Confluence				141	
Scott River - Upstream of Sugar/Scott Confluence		239	132	288	2
Sugar - Above OCP Outlet		134	55	60	
Sugar - BDA 1 Pond		657	404	571	10
Sugar - Beaver Dam Pond		242	88	19	
Sugar - Below Natural Beaver Dam		218	95	76	
Sugar - Beneath Hwy 3 Bridge		93	29	29	
Sugar - Control Pools		181	103	96	
Sugar - Flow Station Pool		373	167	7	
Sugar - OCP		27	21	23	1
Total	2	4,704	2,293	1,723	22







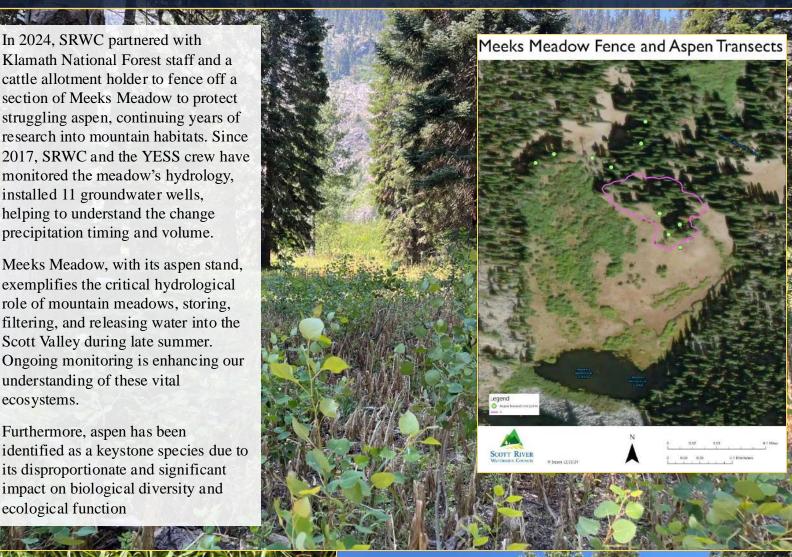


MEEKS MEADOW ASPEN RESTORATION

In 2024, SRWC partnered with Klamath National Forest staff and a cattle allotment holder to fence off a section of Meeks Meadow to protect struggling aspen, continuing years of research into mountain habitats. Since 2017, SRWC and the YESS crew have monitored the meadow's hydrology, installed 11 groundwater wells, helping to understand the change precipitation timing and volume.

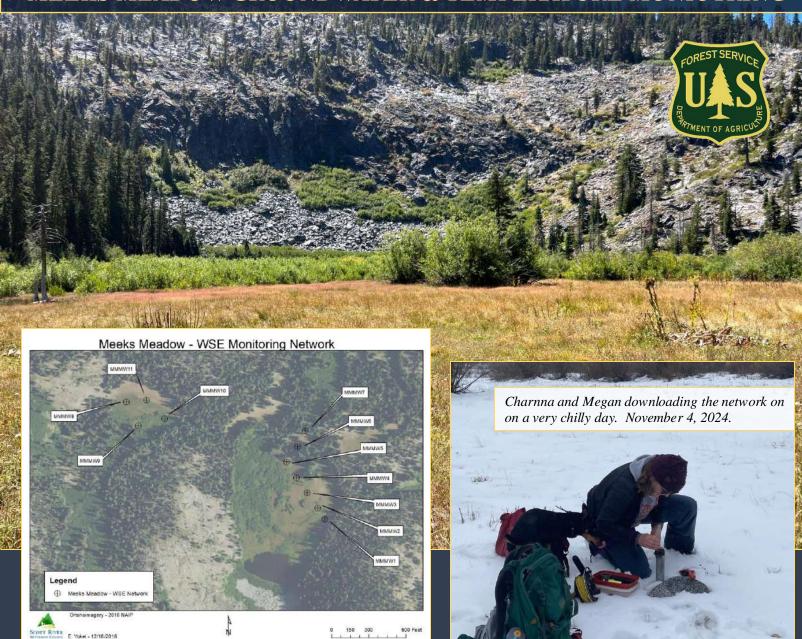
Meeks Meadow, with its aspen stand, exemplifies the critical hydrological role of mountain meadows, storing, filtering, and releasing water into the Scott Valley during late summer. Ongoing monitoring is enhancing our understanding of these vital ecosystems.

Furthermore, aspen has been identified as a keystone species due to its disproportionate and significant impact on biological diversity and ecological function

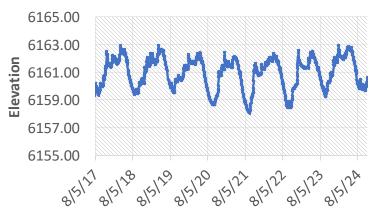




MEEKS MEADOW GROUNDWATER & TEMPERATURE MONIOTRING







In the summer of 2017, SRWC and the YESS crew installed eleven water surface elevation (WSE) wells throughout the lower and upper meadows (see map below). The wells are set to log the elevation of the groundwater every 30 minutes.

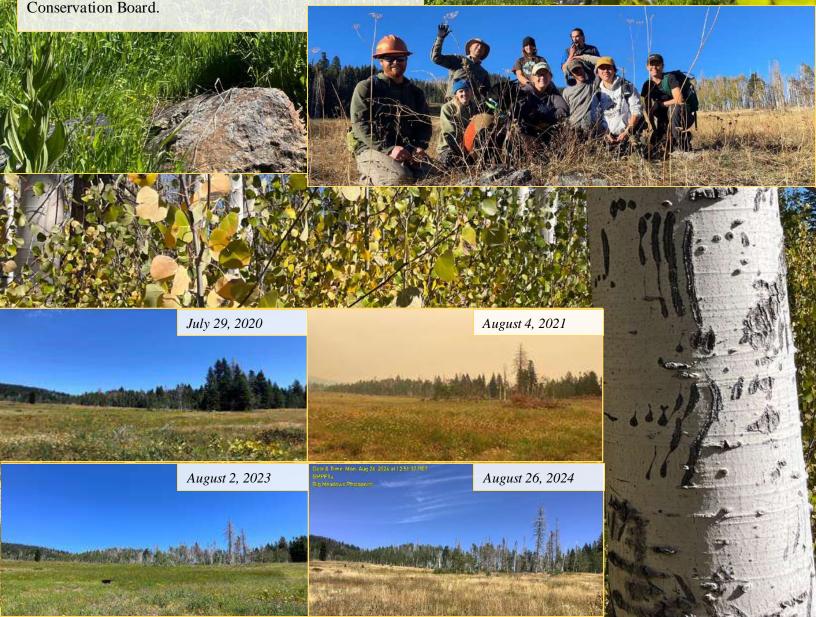
This information is proving to be extremely valuable when trying to understand the impacts of change in the timing and amount of precipitation. There is also a logger that is logging the barometric pressure and the temperature. Being able to monitor those important elements over time will be invaluable.

BIG MEADOWS ASPEN & MOUNTAIN MEADOW RESTORATION

The project will expand cattle-exclusion fencing by 25 acres, enhancing protection for wet meadows and aspen stands within an existing 75-acre enclosure. Additional goals include removing encroaching conifers from 5 acres of aspen and wet meadow, treating invasive plant species, and restoring gullies in meadows using low-tech, process-based restoration methods.

In 2024, the project included annual installation and removal of fencing to protect 75 acres of mountain meadow and Scott Valley's largest aspen stand, along with new cattle-exclusion fencing around a rare high-elevation cottonwood stand. Invasive weed management was conducted along road systems and within a 2-acre area in the Marble Mountain Wilderness which is located adjacent to and upslope from this critical area. Key partners included EFM (landowner) and Klamath Bird Observatory, with funding from the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Wildlife







SCOTT RIVER MOUNTAIN MEADOW RESTORATION PROGRAM INVENTORY, PLANNING AND DESIGN

Objectives

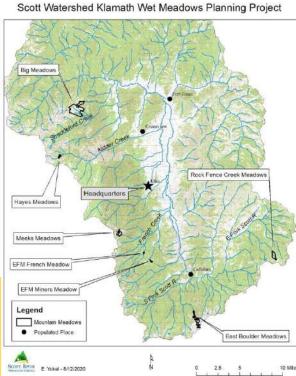
- Inventory meadows in the Scott River watershed
- Identify high priority meadows for restoration
- Develop restoration plans for 800 acres of meadow and/or "potential meadow"
- Identify pathways for environmental compliance and permitting for restoration projects

Activities in 2024

• Meadow inventory including desktop identification, field verification & data collection



Meadow Chronicles Crew (right to left, photos below) – Donald Flickinger (aka Flick), Yifang Zhang, Tim Wilhite, Madison Erpelding and Mayra Kwasnikow (photo above).









Project Partners

- Klamath National Forest
- Klamath Meadow Partnership
- United States Forest Service Pacific Southwest
 - Quartz Valley Indian Reservation
 - Stillwater Science

Project Funders

California Department Fish and Wildlife & Wildlife Conservation Board

SCOTT RIVER MOUNTAIN MEADOW RESTORATION PROGRAM CABIN MEADOWS & ROCK FENCE



Upstream Ecology & SRWC Making Magic in Rock Fence Creek

Jordan Vermillion and Janeva Sorenson of Upstream Ecology spent three days working with SRWC staff in Rock Fence Creek to getting low-tech, process-based structures installed before winter. We created some impressive pools before a snowstorm cut our week short.

SRWC and many others are beginning to understand the importance of these headwater mountain meadow complexes. These areas are integral parts of California's water infrastructure. When functioning properly, they improve a catchment's water yield, quality, and predictability by attenuating and dispersing high flow, recharging groundwater, improving water quality, and retaining sediment.

Objectives

- •Develop comprehensive restoration plans for both sub-watersheds
- •Initial restoration work: hydrologic restoration and conifer removal
- •Install educational kiosks explaining value of meadows and planned restoration projects

Activities in 2024

- Installed kiosks
- •Worked with partners to collect existing conditions data (vegetation, ground water, discharge, amphibians, roads and stream crossings, channel morphology and conditions, photo monitoring)
- •Instream structures built in Rock Fence Creek

Project Partners

Klamath National Forest (landowner)
USFS Pacific Southwest Research Station
USFS Region 5 Ecology Program
Quartz Valley Indian Reservation
Stillwater Sciences
BBW & Associates

Project Funders

Wildlife Conservation Board/North Coast Resource Partnership/United States Forest Service

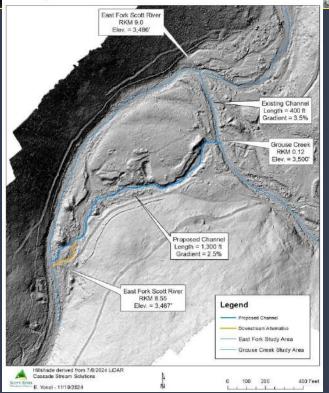


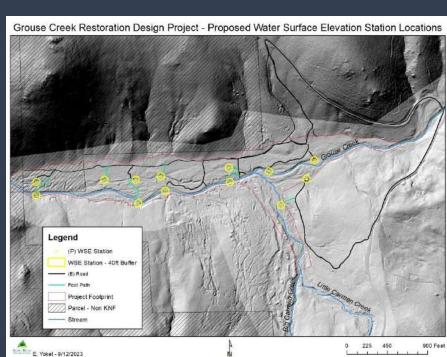
EAST FORK SCOTT RIVER AND GROUSE CREEK PLANNING AND DESIGN PROJECT



This project aims to establish sustainable reach-scale processes that restore and maintain floodplains, wetlands, stream channels, and aquatic habitats, reducing the influence of past mining activities while protecting downstream conditions and respecting the rights of landowners and leaseholders. Specific goals for the **Grouse Creek Floodplain** and **Big Carmen area** (35 acres, 0.9 miles of Grouse Creek, 0.26 miles of Big Carmen Creek) include improving groundwater levels during base flow periods to support riparian and wetland vegetation, doubling floodplain activation during winter for at least one month annually, increasing retention of fine sediments and organic matter, and enhancing water quality at the Grouse Creek East Fork confluence by addressing temperature, sediment, and base flow concerns. In the **Grouse Canyon Reach** (6 acres, 0.76 miles), the focus is on identifying and planning the remediation of anthropogenic barriers to fish passage, ensuring connectivity during critical migration periods. For the **East Fork and Grouse Confluence area** (80 acres, 1 mile), the project seeks to support salmonid recovery by creating and restoring habitat features that enhance riverine diversity. Objectives include increasing summer rearing habitat, winter slow-water rearing habitat (off-channels and side channels), and suitable spawning habitat for coho salmon by at least 100% in each category, promoting a more resilient and diverse aquatic ecosystem.

Proposed Grouse Creek Confluence Channel





EAST FORK SCOTT RIVER AND GROUSE CREEK PLANNING AND DESIGN PROJECT

SRWC is conducting critical groundwork to inform the planning and design of restoration efforts in the East Fork and Grouse Confluence reach. As part of this initiative, SRWC is monitoring ambient and cold-water temperatures to identify vital cold-water inputs that support aquatic habitat health. Additionally, we installed 12 water surface elevation monitoring stations to collect precise data on hydrological patterns. This work will provide essential insights to guide effective habitat restoration and water management strategies.



NOYES VALLEY CREEK - MONITORING



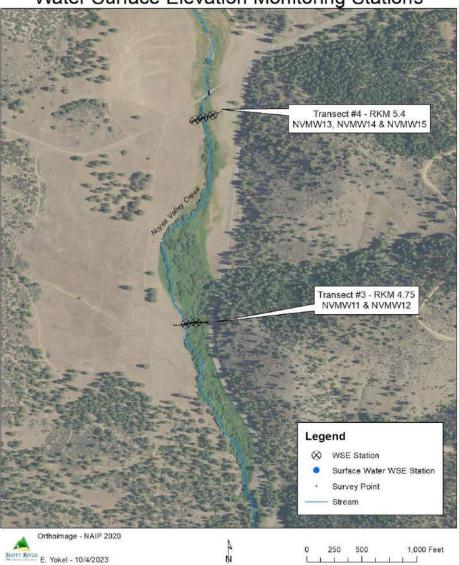
The SRWC established ten water surface elevation (WSE) stations in the Lower Reach and five WSE stations in the Upper Reach to document the WSE of the surface water and adjacent shallow groundwater.

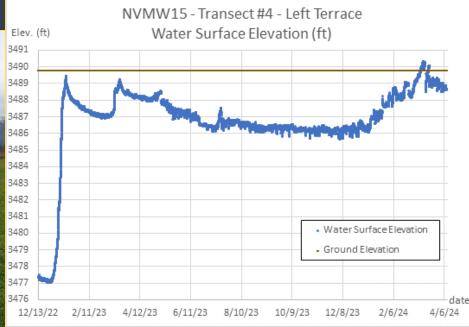
Noyes Valley Creek (photo below) was dry when the WSE stations were installed on December 13, 2022.

Comprehending the interaction between groundwater and surface water is crucial for guiding restoration design efforts and assessing whether water availability affects riparian health, a critical element of overall stream function.

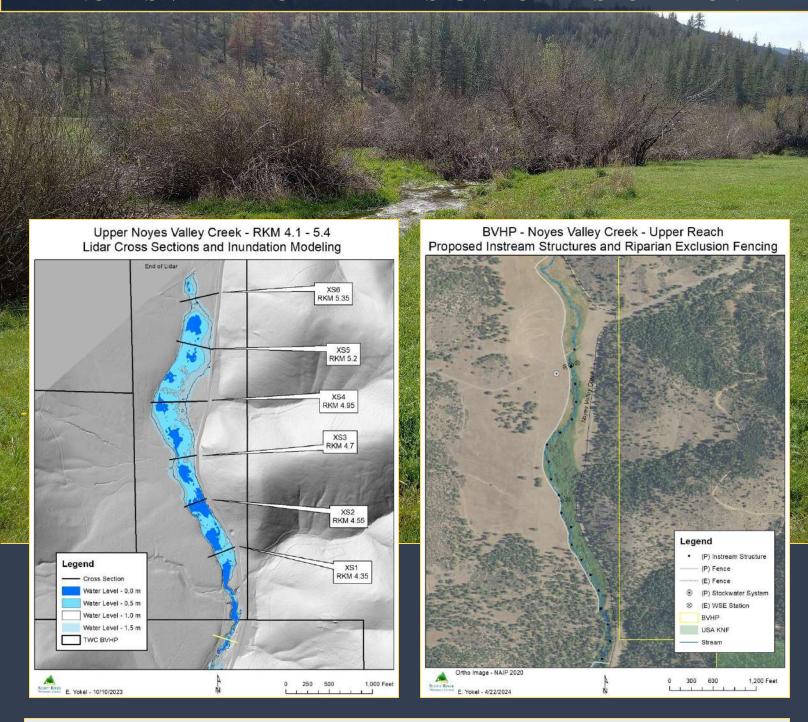


Upper Noyes Valley Creek
Water Surface Elevation Monitoring Stations





NOYES VALLEY CREEK – DESIGN FOR RESTORATION



Restoration designs include utilizing process-based restoration techniques, specifically beaver dam analogs (BDAs), as seen in other areas where SRWC has employed this restoration method since 2014. The anticipated benefits are to encourage groundwater recharge, potentially enhancing summer baseflow conditions, improved water quality in the East Fork of the Scott River and reoccupation of beaver. This project is part of a larger instream effort being led by CalTrout on the lower Noyes Valley Creek and the East Fork. The landowner, The Wildland Conservancy, has been supportive and aims to provide ecological uplift to this important area of the Scott River watershed.

Beavers play a vital role in shaping and sustaining the intricate ecosystems of streams and wetlands, fostering rich biodiversity. By mimicking the impact of beaver dams, BDAs hold promise for initiating restoration efforts that encourage natural beaver colonization and the formation of new dam complexes.

NOYES VALLEY CREEK & BEAVER

Footprint of a formal beaver pond. The dam has broken down over time, but evidence of its structure remains. Beaver chewed a conifer that once stood in ponded water behind the beaver dam. April 28, 2024.

Clyde Fowler's documentation of relocation efforts in the Callahan area (photo to the right) offers a fascinating insight into the dynamic history of environmental management and conservation in the region.

Historical record reveals a compelling narrative of beaver transplantation in Noyes Valley Creek, tracing back to 1949. This documentation provides evidence of a deliberate attempt to bolster local ecosystems through the introduction of beavers. Specifically, between July 15 and August 14, 1949, a total of ten beaver, comprised of four males and six females, were carefully translocated to Noyes Valley Creek, marking a pivotal moment in the region's conservation history.

There are historical records that document these relocation efforts. Such endeavors not only highlight the foresight of conservationists but also underscore the ongoing commitment to the importance of beaver.



PROJECT 34-D-2 BEAVER PLANTS FROM MAY 1, 1949 TO OCTOBER 31, 1949

DATE OF PLANT	KIND	MALE	WEIGHT	FEMALE	WEIGHT 31 46	TOYAL 4	COUNTY TRAPPED Stakayou	Elevation Trapped	COUNTY Planted	ELEVATION PLANTED	LOCATION OF PLANT	
7/15/49	SHASTA	. 2	42 26	2				2,500	Siskiyou	3,500°		
7/18/49	SHASTA	1	10	2	9	3	SISKIYOU	2,5001	Siskiyou	3,500	Noyes CREEK (BOLSTER)	
7/22/49	SHASTA	2	51 31	. 1	24 50 11	6	Staktion	2,500'	Siskiyou	5,300'	MULE CREEK	
7/29/49	SHASTA	2	23 34	5	29 26	Ŋ	ŠįSKIYOU	3,000	SISKIYOU	5,400*	GROUSE CREEK	
8/3/49	SHASTA	2	50 54	2	42 24	4	S1 SK 1 YQU	2,800	Sisk!You	4,000*	FRENCH CREEK	
8/8/49	Shasta	2	32 43	2	28 40	14	SISKIYOU	2,800'	Siskiyou	6,000 *	MIDDLE SOULDER CREEK	
8/14/49	SHASTA	1	12	2	48 40	3	SJSKIYOU	2,8001	SISKEYOU	3,200*	Noves Creek (Bolster)	



Over the years, SRWC has collaborated with UC Davis and Cal Poly Humboldt to support critical research on the impacts of restoration on food webs, macroinvertebrates, and fish health. Support from the Karuk Tribe and Quartz Valley Indian Reservation has been instrumental in developing a comprehensive fisheries monitoring program. North Rivers Construction, true river restoration professionals, continue to bring their talents to bear in these incredible projects. The Wildlands Conservancy's support with instream wood was invaluable to the success of the Refugia Project in 2024. Additionally, having Moore's Gravel conveniently located nearby has been a consistent resource over the years.





































This project represents a decade of work to understand this complex area through extensive monitoring and on-the-ground experience. We've worked closely with an incredible team of engineers, landowners, permitting agencies, and funders, to bring this vision to life. To mark this milestone, we gathered for a small celebration, including a symbolic ribbon cutting and a toast to Gaia with a shot of orange juice. As we removed the turbidity curtain, we proudly opened this newly created habitat to Sugar Creek, where juvenile coho salmon are expected to thrive.

We want to extend a huge thank you to the landowners who have allowed this project to take place on their private property. We're also grateful to our funders, the North Coast Resource Partnership, Bureau of Reclamation, the U.S. Fish and Wildlife Service, and the State Coastal Conservancy. In addition, we'd like to acknowledge other key project partners: Stillwater Sciences, Cascade Stream Solutions, Quartz Valley Indian Reservation, North Coast Regional Water Quality Control Board, California Department of Fish and Wildlife, and the National Oceanic and Atmospheric Administration.

The large wood used in this project, along with three other in-stream projects we constructed this year, was sourced from a stand of dead and dying trees on The Wildlands Conservancy. Contributing to forest health on the Beaver Valley Headwaters Preserve while using the wood in our project was a true win-win.

Finally, a huge thank you to North Rivers Construction, our exceptional implementation contractor and truly the best in the business!

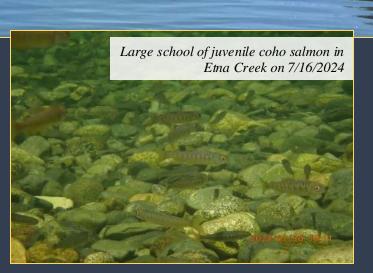




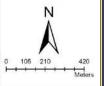
WHIPPLE FAMILY RANCH RESTORATION PLANNING AND NATURE BASED RESTORATION PROJECT

Lots of great beaver activity including some dam building on the mainstem Scott River

Specific objectives of this Project are to restore natural processes on 1.25 miles of the Scott River, 0.25 miles of Etna Creek and 80 acres of floodplain. We are looking at ways to improve fish habitat such as increasing pool frequency, depth and fish cover in summer and off channel/floodplain in winter. We are also actively working on reducing invasive species within the project area. As such, SRWC's Youth Environmental Summer Studies (YESS) crew removed invasive species on approximately 2.4 acres in the project area. Species targeted for removal include Dyer's woad, spotted Knapweed, and Yellow Star Thistle



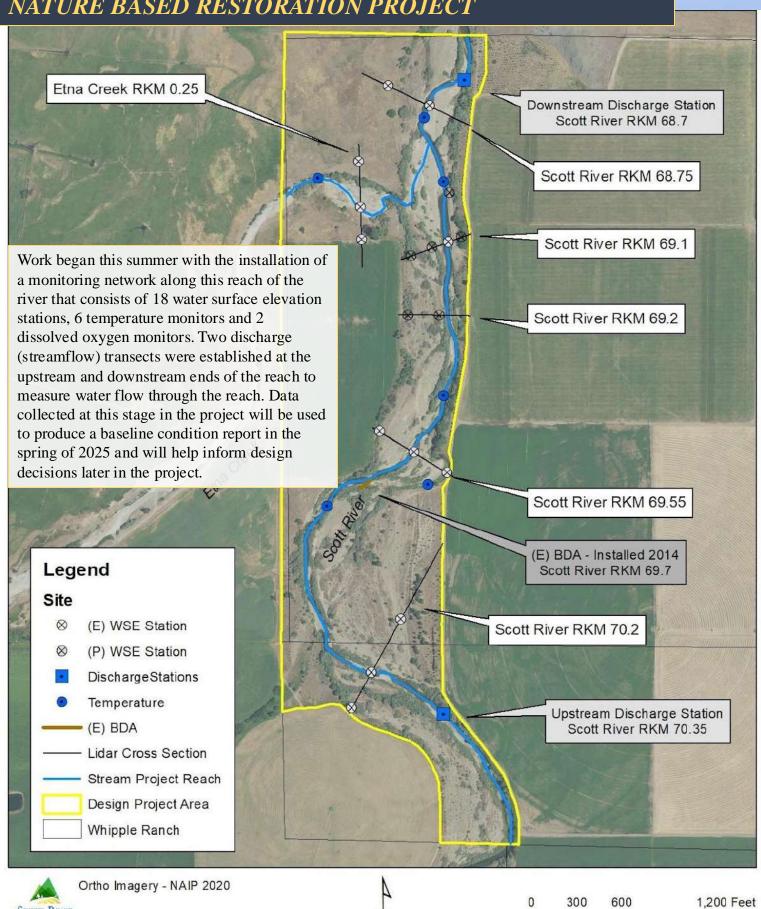
Scott River RKM 68.6-70.6 2024 Direct Observation Surveys



On July 15 & 16, 2024, 14 pools were surveyed between Scott River river kilometer (RKM) 68.6-70.6. Water temperatures ranged from 16.9-20.0 °C during the survey period. 560 coho salmon were observed in this reach. Four addition pools were surveyed between RKM 0-0.44 in Etna Creek. Water temperatures ranged from 12.9-18.4 °C during the survey period. 750 coho were observed in this reach, with the majority coming from one pool, see map below.

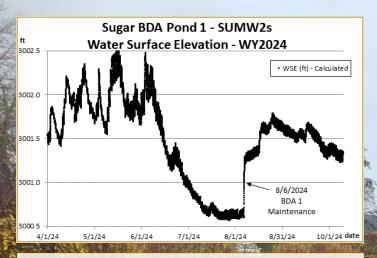
SRWC has partnered with Restoration Design Group to assess conditions within the project reach and will provide two engineered restoration designs by the end of the project.

WHIPPLE FAMILY RANCH RESTORATION PLANNING AND NATURE BASED RESTORATION PROJECT



SCOTT RIVER

E. Yokel - 6/18/2024



On August 6, 2024, we conducted our annual maintenance on the lowest three BDA (Beaver Dam Analog) structures. As a result of this essential activity, a 0.6 ft increase in the water surface elevation (WSE) was observed over a 24-hour period, from 8:00 AM on August 6, 2024, to 8:00 AM on August 7, 2024.

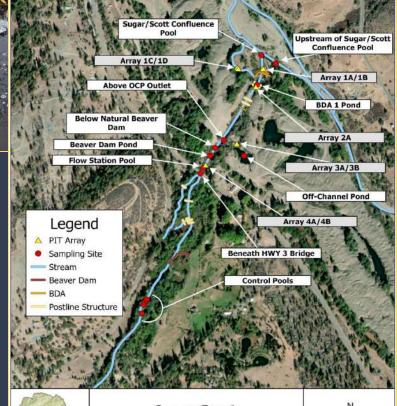


For the past decade, SRWC and its partners have been monitoring the impacts of BDAs (Beaver Dam Analogs) on fisheries. In 2024, as in previous years, these areas were sampled alongside numerous other habitats (see the table below of the total juvenile fish caught during the 2023/2024 season). Juvenile coho salmon measuring 70 millimeters (mm) or more in length are tagged with a Passive Integrated Transponder (PIT) for tracking and monitoring purposes.

Location	Chinook Captured	Coho Captured	Coho PIT-Tagged	O. mykiss Captured
Canyon Creek Pools	2	151	109	76
French - Beaver Dam Pond		717	403	24
French - Control Pools		829	327	246
French - FRGP SC		148	120	10
French - Pretreatment Upstream Stilling Well		166	60	41
French - SC BDA 1 Pond		529	180	16
Scott River - At Sugar/Scott Confluence				141
Scott River - Upstream of Sugar/Scott Confluence		239	132	288
Sugar - Above OCP Outlet		134	55	60
Sugar - BDA 1 Pond		657	404	571
Sugar - Beaver Dam Pond		242	88	19
Sugar - Below Natural Beaver Dam		218	95	76
Sugar - Beneath Hwy 3 Bridge		93	29	29
Sugar - Control Pools		181	103	96
Sugar - Flow Station Pool		373	167	7
Sugar - OCP		27	21	23
Total	2	4,704	2,293	1,723

SUGAR CREEK BEAVER DAM ANALOGS







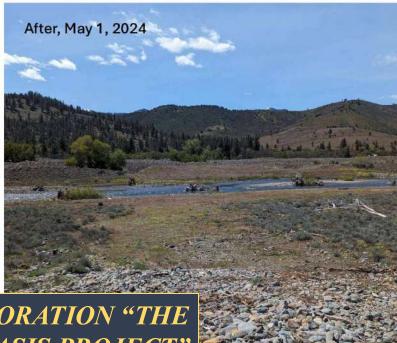
Sugar Creek Sampling Locations August 2023 - March 2024



Funding for this work has been provided by the United States Fish and Wildlife Service, Bipartisan Infrastructure Bill (BIL). For SRWC's full report, click

SRWC's Juvenile Fish Sampling Report 2023/2024.





SCOTT RIVER TAILINGS RESTORATION "THE OASIS PROJECT" 2020 – 2024

In the fall of 2020, the first of several phases of work were completed at this location in the Scott River tailings to help bring some diversity and life back to this significantly altered landscape. Commonly referred to as the Scott River Tailings "Oasis" Restoration Project, SRWC has partnered with Cascade Stream Solutions, North Rivers Construction, and the Northern California Resource Center. Funding from the California Department of Fish and Wildlife and the United States Fish and Wildlife Service (USFWS) has supported this work with another phase of large wood structures and riparian planting scheduled for the fall of 2025. To see some of the change over time, please see the three series of photo points.

Scott River Tailings Restoration "Oasis"

Photo Point 3d









SCOTT RIVER TAILINGS RESTORATION "THE OASIS PROJECT" 2020 – 2024

Photo Point 3e



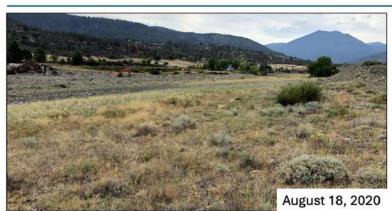






Scott River Tailings Restoration "Oasis"

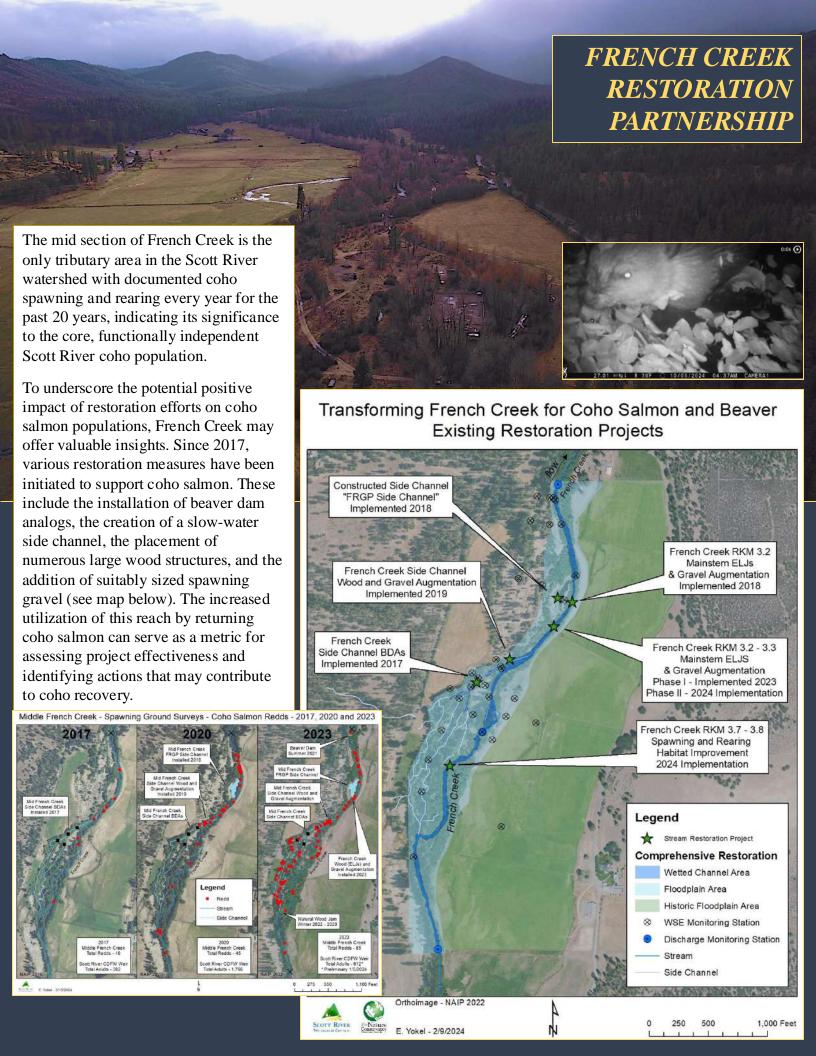
Photo Point 5b











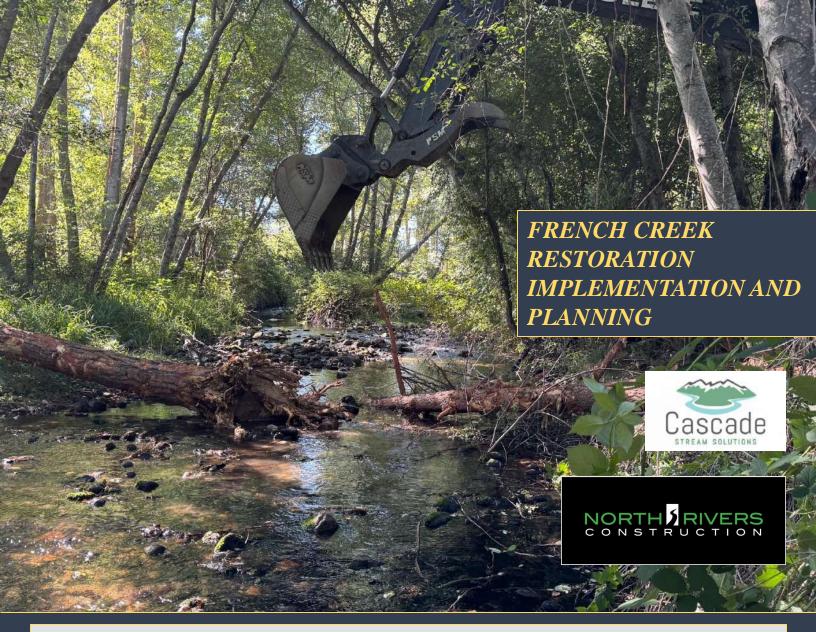


Building on previous successes, the SRWC partnered with the Quartz Valley Indian Reservation (QVIR) and The Nature Conservancy (TNC), which acquired the 380-acre Miners Creek Ranch in 2023, to secure funding from the Bureau of Reclamation and the California Department of Fish and Wildlife. This effort focuses on the mid-to-upper French Creek watershed, delivering restoration designs for two one-mile stream reaches, conceptual plans for 3.5 additional miles, and a plan to convert 80 acres of irrigated pasture into dryland pasture and native vegetation. The project also includes forest condition assessments and plans to reduce fire risk and improve forest health.

In addition to SRWC, QVIR and TNC, project partners for this exciting project will include many agencies and two engineering firms, both <u>Prunkuske Chatham, Inc. (PCI)</u> and <u>cbec</u>. As a place-based organization, SRWC values the strong relationships with landowners that make this work possible, and we are grateful for the opportunity to continue expanding our efforts in French Creek.

SRWC continues to monitor the stream, conducting snorkel surveys for juvenile and adult fish, using Passive Integrated Transponder (PIT) tags to track individual fish growth in restored vs. unrestored habitats, and employing game cameras to observe wildlife. These efforts deepen our understanding of how restoration impacts the ecosystem.

Funders for 2024 instream work was provided by the United States Fish and Wildlife Service, Bureau of Reclamation (BOR) administered by the National Fish and Wildlife Foundation, and the upcoming comprehensive planning project is funded by BOR and California Department of Fish and Wildlife.



In October, SRWC, through its French Creek Habitat Improvement project, implemented 6 large wood jams along a 590 ft reach of the stream associated with spawning gravel augmentation and the removal of 1-acre of invasive blackberries. A second project, located on The Nature Conservancy's Miners Creek Ranch, installed an additional 3 engineered log jams, augmented spawning gravels, and planted 1200 stems of native cottonwood and willow. When high flows occurred in December, the log jams went into action spreading water widely across adjacent floodplain surfaces that hadn't been underwater for years due to degradation of the stream system. The native plantings will supply food and building materials for beavers who inhabit the stream. Game camera photos show numerous animals - beavers, minks, bears, foxes, ringtails, deer, skunk, possums, coyotes and bobcats - exploring and utilizing the newly created habitats.







The project installed Engineered Log Jams (ELJs) consisting of 12 single rootwad structures, 3 double rootwad structures and 1 apex jam, aimed to enhance rearing habitat for over-wintering and over-summering coho salmon. This is the fourth and final phase of adding wood to this reach of Patterson Creek. The instream structures will improve floodplain connectivity which will improve groundwater recharge and primary food production for coho.

This project not only supports the health of Patterson Creek but also provides invaluable educational opportunities for our YESS crew and also students from the Southern Oregon University's Environmental Science and Policy Program. Equipping young people with skills in environmental science and conservation techniques is a core mission for the SRWC. By contributing to real-world restoration projects, the students play a vital role in fostering sustainable practices and gaining practical experience in environmental stewardship.

A special thanks to the private landowner, EFM Investments & Advisory, and the various funders through the years who made this project possible. Thank you to Cascade Stream Solution and North Rivers Construction for the implementation elements.

SOUTH FORK SCOTT RIVER COMPREHENSIVE MANAGEMENT PLANNING & DESIGN PROJECT



This is a planning project that will deliver a long-term, comprehensive land management plan for 1,600 acres of forest and approximately 5.67 miles of the South Fork Scott River, Boulder Creek and Fox Creek. The project will take inventory of existing conditions, develop plans for instream recovery actions that support process-based restoration, and evaluate water rights and associated irrigation practices. The project will produce 'shovel ready' instream design plans for process-based restoration at one identified site. Here are some fun facts about this project:

South Fork: 2.57 milesFox Creek: 1.40 miles

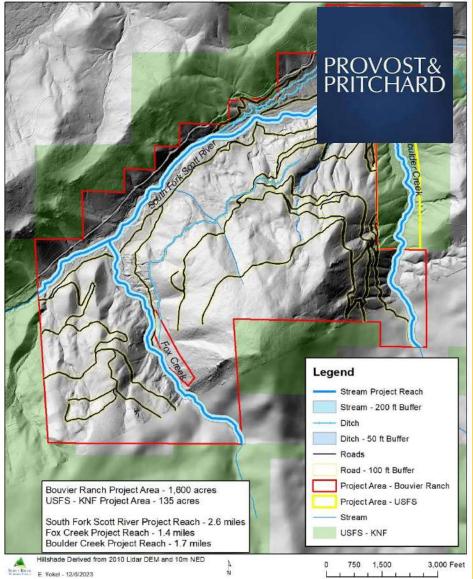
 Boulder Creek: 1.70 miles (Majority of Boulder Creek is USFS ownership)

 150+ acres of legacy mining tailings and hydraulic mining scars

• 20 miles of roads

• 1,600 acres of private forest.

South Fork Scott River Comprehensive Management Planning and Design Project
Project Extent





Project partners

US Forest Service (Boulder Creek landowner)

Private Landowner (~90% of project area)

Cascade Stream Solutions (Instream Restoration Design Engineering)

Provost and Pritchard (Irrigation efficiency engineering)

Gary Black Industries (Expert/Design Consultant)

Jefferson Resource Company (Forestry and Road Management Planning)

North California Resource Center (CEQA Permitting Support)

Siskiyou Bio Sciences (CEQA Botany survey crew)

Funder: California Department of Fish and Wildlife

SOUTH FORK SCOTT RIVER COMPREHENSIVE MANAGEMENT PLANNING AND DESIGN PROJECT

Project Objectives by area

<u>Uplands</u>: This project will support the completion of a Non-Industrial Timber Management Plan that will include both a Habitat Restoration Plan and Road Management Plan. This guidance document will provide the landowner, partners and funders with a 20-year fuel management plan analyzing existing fuel conditions over the property, proposed treatment options, treatment priority, estimated cost and CEQA permitting considerations for riparian, oak upland, and mixed conifer forest areas.

Road Management plan will include a complete road inventory and analysis along the 19.6 miles of the road system to provide a prioritized list of corrective actions of approximately 75 watercourse crossing and 20 cross drains/ditch relief culverts to address negative hydrologic or sediment inputs.

<u>Instream</u>: Complete a comprehensive existing conditions assessment and action plan identifying the potential restoration of approximately 3 miles of instream habitat, including 150 acres of legacy mining tailing. This plan will enumerate an overall enhancement strategy to prioritize sites with a chronological approach toward implementation. The primary objective of the instream design component is to benefit all life stages of coho salmon.

On Farm: Complete an analysis of irrigation infrastructure including alternative methods to irrigate the existing pastures that would result in minimizing ditch delivery loss. On-farm irrigation efficiency will also be analyzed, which would reduce the diversion rate and minimize risk of tail-water back to the stream. In addition, a full water right assessment will be conducted on 3.6 cfs with the objective of establishing the pathway for an instream water dedication which complements the conservation easement that already exists on the private land.



Project description for activities in 2024

- Established two new streamflow/discharge monitoring stations on South Fork: South Fork below Boulder Creek, and South Fork below Fox Creek.
- Stream Temperature Monitoring: bracketing Boulder Creek, Fox Creek, and two points of diversion to investigate baseline conditions, and assess opportunities to divert water from warmer areas.
- Habitat Typing (IV) of South Fork, Boulder Creek, and Fox Creek to evaluate pool frequency and fish habitat quality.
- Juvenile Coho Snorkel Dive Surveys which identified abundance and upper extent of coho utilization in South Fork, Boulder Creek, and Fox Creek - Juvenile rearing in Boulder Creek was a first-time discovery in our watershed! See the next page for these exciting details.
- LiDAR and Orthophoto Drone Flight Survey, to create surface models for instream and on farm design work.
- Gully Surveys to identify sediment inputs to waterways and evaluate hydrology in upland areas, especially legacy mining scars.
- Transmission loss study on Lower Ditch
- Design Tours: Instream, Irrigation Infrastructure and pasture and realtime streamflow gaging

On July 18, July 30 and August 1-2, 2024, 27 pools were surveyed in the South Fork Scott River, starting at approximately river kilometer (RKM) 3.7 and moving upstream. Water temperatures ranged from 13.8-16.8 °C during the survey periods. 357 coho salmon were observed in this reach, and the upstream extent of distribution appeared to be at approximately RKM 7.6.

On July 18 and July 29-August 2, 2024, 47 pools were surveyed in Boulder Creek. Water temperatures ranged from 13.3-18.0 °C during the survey periods. 204 coho salmon were observed in this reach, and the upstream extent of distribution was not able to be estimated due to limited access.

On August 1 and 2, 2024, 17 pools were surveyed in Fox Creek. Water temperatures ranged from 13.3-14.0 °C during the survey periods. Nine coho salmon were observed, and the upstream extent of distribution appeared to be at approximately RKM 0.34. To read the full report, please visit Scott River Direct Observation Survey Summary Report.

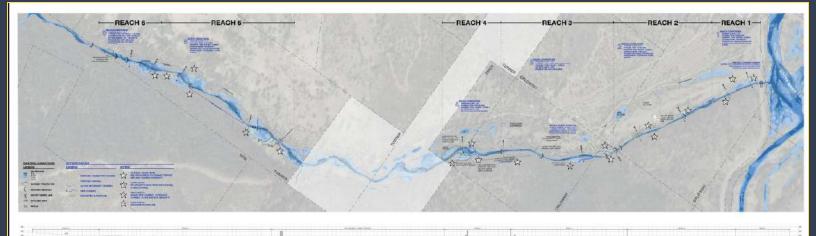
Summary Report. Juvenile coho salmon observed in South Fork Scott River on 7/18/2024 Legend Coho Count 0 0 1-7 8-15 16-30 31-70 Stream South Fork Scott River 2024 Direct Observation Surveys Coastal giant salamander observed

SOUTH FORK SCOTT

& DESIGN PROJECT

RIVER COMPREHENSIVE

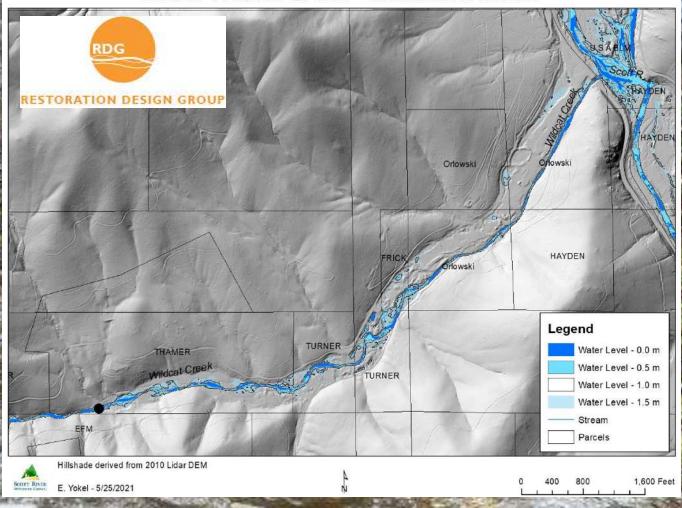
MANAGEMENT PLANNING



PLANNING TO ENHANCE COHO REARING HABITAT IN WILDCAT CREEK

The Project is restoration-planning effort for the benefit of coho salmon spawning and rearing, with the development of "shovel ready" restoration designs for at least one discrete site, and will take place on a low-gradient, cold-water Scott River coho rearing tributary stream which was recently identified as a coho rearing location, and has a currently simplified streamform. Additionally, a reach scale treatment matrix will be developed that will prioritize future actions. The objective is to restore and enhance in-stream and off-channel habitat, floodplain connectivity, and geofluvial function on the stream extending from its confluence with the Scott River 9,235 ft upstream to a hard rock cascade at its upper extent of anadromy, including 100% engineered plans for rehabilitating a currently sub-optimal diversion infrastructure and fish screen with evaluation for possible water conveyance improvements.

Lower Wildcat Creek - Inundation Model

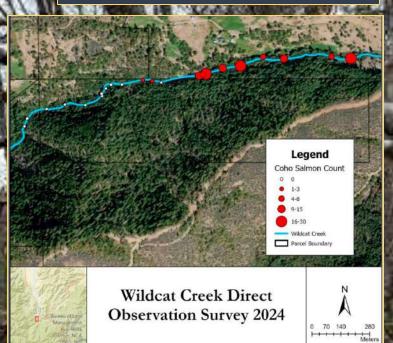


2023 Coho Spawning Ground Surveys - Wildcat Creek 12/11/2023, 1/3/2024 and 1/8/2024



To help inform the design team, SRWC monitored the project area throughout 2024, starting with adult coho spawning ground surveys (see map above, left), followed by juvenile coho snorkel dives to assess distribution, abundance, and habitat extent (see map above, right). We installed a 12-station water surface elevation (WSE) network, adding stations at points of diversion and fish screens to inform diversion improvement designs. Stream flow and discharge are monitored at two sites, with an upgraded downstream flow station featuring a real-time stream gauge. Efforts also include a diversion and irrigation infrastructure design tour, and securing additional funding to plan and design fish passage improvements in the downstream project area.

PLANNING TO ENHANCE COHO REARING HABITAT IN WILDCAT CREEK



On August 9, 2024, 22 pools were surveyed in Wildcat Creek, starting at approximately RKM 2.1 and moving upstream. Water temperatures ranged from 15.7-17.7 °C during the survey periods. 157 coho salmon were observed in this reach, and the upstream extent of distribution appeared to be at approximately RKM 2.9.



The project is a collaborative effort involving private landowners (Orlowski, Frick, and Thamer), River Design Group (instream design engineers), consultant Gary Black (fish screen and instream design) and Joe Pedro (metal fabricator, seen in photo to the left with SRWC staff). It is funded by the National Fish and Wildlife Foundation.







While this is a relatively small project, the SRWC is proud to be part of a larger effort to increase wildfire resiliency in the Scott Valley. Many other landowners have contacted us asking to be included. To us, the fuel build ups are as much an emergency as the wildfires themselves. Money spent in preparation is well spent. Hopefully more funds will be made available soon.

In 2023 Funds were made available to the Scott River Watershed Council through CalFire's California Climate Initiative to create defensible space around homes and access routes in portions of the Scott Valley. The year 2023 was marked for securing the environmental documents, county permits, landowner agreements, and contracts to complete the work.

The objectives of this project are to remove excess dead, dying, and diseased trees; snags, decadent brush, and overstocked stands in the wildland/urban interface. Other benefits include oak and healthy conifer "release" and reduced early transpiration of water to the atmosphere. We want resident's to be able to escape and provide access to fire prevention crews when (not if) a wildfire rolls through these communities.

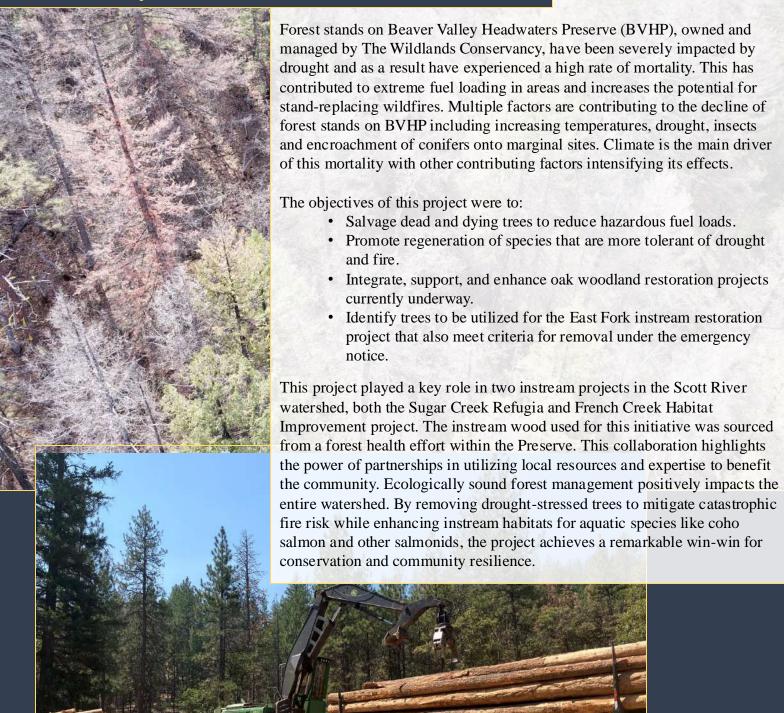
Taking a look at our start in 2024 was revealing. Through our partnerships with CalFire, Silvertop Tree Service, and local residents we completed approximately 153 acres of fuel reduction work. In the scale of things, this is just a modest start, but it represented the start of helping small landowners build good habits with fuel reduction. The treatments started in Mill Creek near Mugginsville, and on Kidder Creek road near Greenview. Operations occurred from February to mid-June. We decided to back out for the summer to reduce the risk of noise, dust, fire starts, and wildlife nest/den destruction.

Recall what happened on July 3, 2024? The "Shelly Fire" sparked up on the back side of the headwaters of the Kidder Creek Watershed. In a few days it burned west, over the top, and down the Kidder Creek and eventually the Patterson Creek watersheds. The Shelly Fire threatened local communities from Quartz Valley to Etna, and occupied dwellings in between. CalFire was able to make a strategic defense using our modest progress, other dispersed fuel reduction projects in the area, and considerable fuel reduction work completed on adjacent industrial timberlands.

Feedback from residents range from moderate and understandable visual shock, to genuine excitement and gratitude. The changes come quick at the rate of about 3 acres per day. Some people aren't ready for this even after a pre-work pep talk. Others have expressed gratitude ahead of and in retrospect of the Shelly Fire. Tina and Ben wrote us - "We are so grateful to have been included in the fuel reduction project. They did an amazing job cleaning up our property. We now have a beautiful and defensible space".

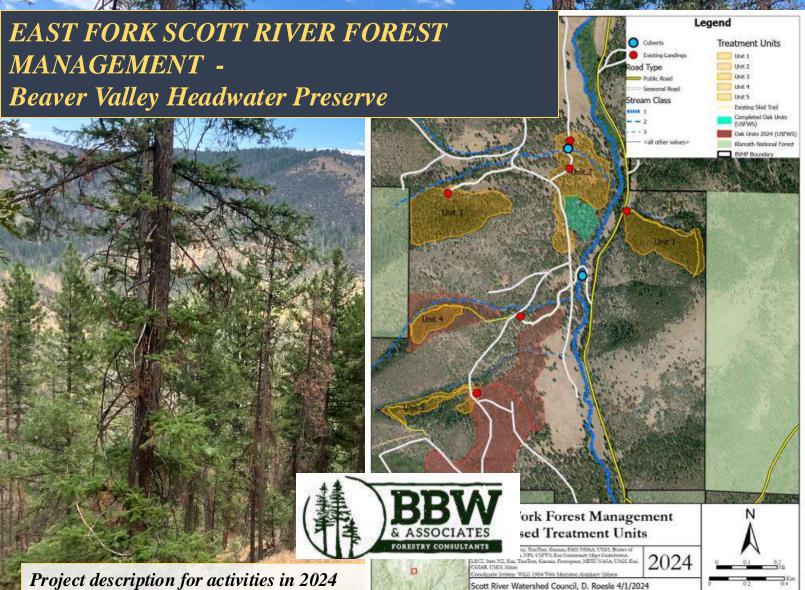
EAST FORK SCOTT RIVER FOREST MANAGEMENT -Beaver Valley Headwater Preserve

Project objective



Project partners

On this project we partnered with the landowner, The Wildlands Conservancy, who allowed the project to take place on their property. Dysert and Smith Logging worked with SRWC to implement the project. BBW and Associates provided technical assistance in planning and implementing the project. Cull logs were utilized by the Siskiyou County Veterans Program to provide firewood to local veterans. Trees used in instream restoration projects were harvested by North Rivers Construction.



All planning and permitting to implement the project was completed between April and June 2024. Priority areas were identified, treatment units were flagged and trees to be removed were marked. BB&W and Associates was essential in the planning and permitting of the project. Dysert and Smith Logging began operations in late July and finished in early August of 2024. Trees removed were hauled to Timber Products in Yreka to be made into veneer products.

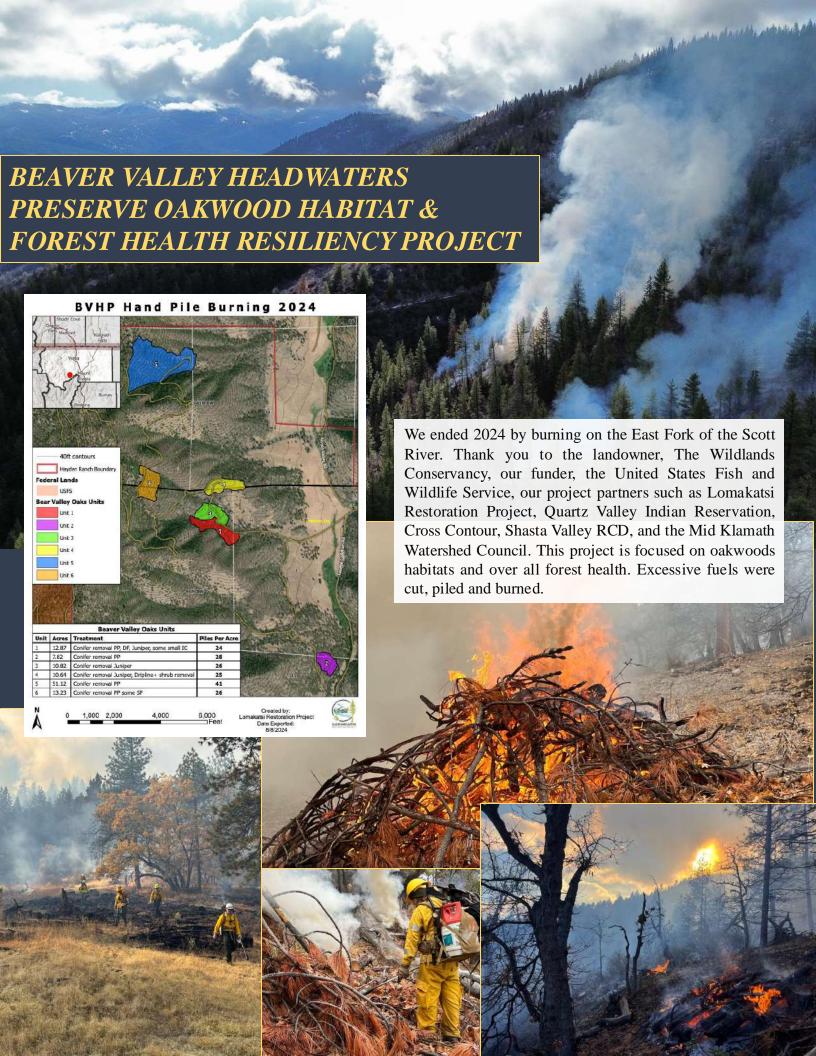
In total, 89 acres were treated in the East Fork Forest Management Project in 2024. SRWC is committed to continuing to assist TWC to manage the forests on BVHP and has successfully applied for funds to implement additional forest health treatments on the Preserve.

Going forward, the East Fork Scott River Forest Health Implementation Project includes 263 acres of proposed treatments along Hayden Ridge, in Noyes Valley, and adjacent to Hwy 3. These treatments aim to connect areas treated on Forest Service owned lands with areas that have been treated on BVHP to promote landscape scale restoration across ownership boundaries.



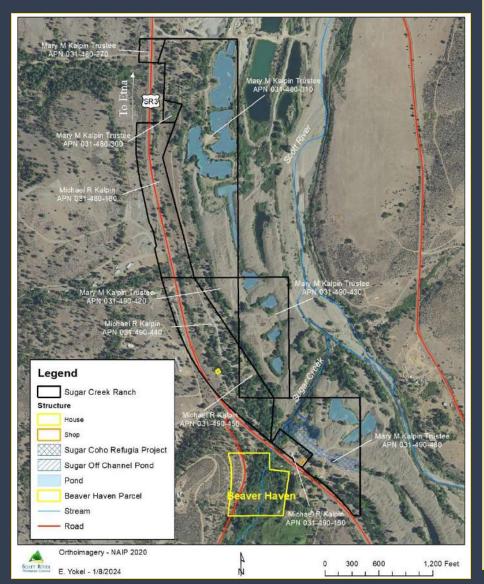
Siskiyou County Veterans Program utilized the dead tops and was able to provide firewood to veterans in need. Thanks to North Rivers Construction for bringing the wood to Etna for easier access.







SUGAR CREEK RANCH ACQUISTITION



2024 stands as a landmark year for the Klamath Basin, highlighted by the successful completion of the world's largest dam removal project. Similarly, for the Scott River watershed, SRWC added to this historic moment with the acquisition of the Sugar Creek Ranch.

Over the past decade, SRWC, in collaboration with private landowners, partners, researchers and funders, has invested tremendous effort into the recovery of Scott River fisheries, with Sugar Creek Ranch playing a pivotal role in this endeavor. May this milestone inspire a unified community commitment to fully restore the Scott River fisheries. Congratulations to everyone who contributed to this incredible achievement!

A heartfelt thanks to the Kalpin Family, your love for the fish will forever be remembered as we place this critical area into conservation in perpetuity. Our deep gratitude to the California Department of Fish and Wildlife; your support made this critical investment in the future of our watershed possible. Finally, we would like to thank, Dr. Michael Pollock's vision and inspiration over the years in truly understanding the treasure trove of restoration opportunities at this special location.



The Sugar Creek Ranch encompasses 12 acres of cold-water ponds that can be hydraulically connected to the Scott River, offering significant rearing habitat for juvenile coho salmon.

In addition to the ponds, the property includes 0.25 miles of Sugar Creek, providing further valuable habitat for aquatic species and enhancing overall ecological connectivity in the region. It is also now home to the successful Sugar Creek Refugia project implemented in 2024 (see photo to the left).



