



**SCOTT RIVER**  
WATERSHED COUNCIL

# ***A Year in Review***

## ***2021***





## *Scott River Watershed Council Team - 2021*

### **Board of Directors**

Betsy Stapleton, Chair  
Craig Thompson  
Jen Bray  
Judd Hanna  
Kory Hayden  
Larry Alexander  
Matt Thomas, Treasurer  
Michael Stapleton  
Shirley Johnson  
Vinnie McNeil

### **Staff**

Charnna Gilmore, Director  
Erich Yokel, Monitoring Supervisor  
Amanda Schmalenberger, Administrative  
Darrell Mitchell, Lead Technician  
Alexis Robertson, Upland Project Coordinator  
Jenn Rogge, YESS Coordinator and Admin  
Linda Bailey, Fisheries Technician  
Mike Journey, Fuels Specialist  
Sam Commarto, Forestry Specialist  
Monica Tonty & Miles Munding-Becker, Graduate Students



### **Youth Environmental Summer Studies (YESS) Crew, Interns & Crew Lead**

Jenn Rogge, SRWC YESS Crew Lead and Admin Assistant, Elizabeth Yokel, Garrett Pindell, Geneva Boudro, Frank Brownell, Leena Racataian, Tiller Eaton and Diego and Lorenzo Blanco

The entire SRWC Team wants to extend the sincerest gratitude to Betsy Stapleton and her service as the SRWC Board Chair since 2014. Betsy has provided invaluable leadership and an infectious passion for finding solutions to complex issues that face our region. Her tireless efforts have made change both near and far. We look forward to her continued service to our watershed as SRWC's Project Development and Permitting Specialist. ❤️





## Monumental Challenges, Outstanding Leadership, and Partnerships

Watching a video of two returning coho swimming upstream past a French Creek beaver mending its dam reminds me of what an amazing place Scott Valley is. The salmon continue to return to their spawning grounds aided by their genetic compass and the best dam habitat and water storage architects on earth. Beaver aid in salmon recovery efforts as they increase both habitat complexity and water storage.

In 2020 and 2021, in California alone, 7.3 million acres burned with over 18,000 fire events. Siskiyou County has been in severe drought the past two years limiting water for fish and wildlife, ranchers and forest landowners. Drought has impacted forest health, degraded habitat, and increased wildfire and smoke impacts on communities. These climate change related challenges are intensifying and becoming more complex. Despite the dire trends, I am optimistic that Scott Valley is positioned to navigate these monumental challenges, in no small part because of outstanding leadership provided by the Scott River Watershed Council (SRWC) and the partnerships they've helped establish...including a partnership with beaver.

I'd bet the farm that addressing the challenges of this decade and beyond will require leadership and strong partnerships. Dozens of "famous" quotes about addressing complex problems are split about 50/50 on the efficacy of complex solutions and simple solutions. While both cadres of quoters make valid points, a quote attributed to Vince Lombardi really captured the most important aspect of taking on monumental challenges - - "People who work together will win. Whether it be against complex defenses or the problems of modern society." Getting people to work together usually requires outstanding leadership, something Vince and Packers' quarterback Bart Star had in spades.

I didn't know that Lombardi's philosophy extended beyond football, but I do know that the SRWC shares his mantra of working with others to tackle complex challenges even when it requires Sisyphus-esque pushing against embedded, long held positions. As one of the largest private forest landowners in Scott Valley, EFM has been a committed partner with SRWC and a beneficiary of their strong and sustained leadership on efforts to improve habitat, address natural resource problems, and explore approaches that benefit forest health, water quality and quantity, and Scott Valley communities.

SRWC contributions have ranged from annual trash clean ups, working with youth groups, and stream and meadow restoration to cutting edge carbonator biochar and beaver dam analogue efforts. They've helped bring private landowners, agencies, elected officials, tribes, local associations, wildlife and conservation organizations, university researchers, and youth groups together to help understand natural resource challenges and to assess, plan for, fund, implement and monitor projects that provide ecological uplift and more, cleaner water to Scott Valley.

While some people will continue arguing about climate change and the monumental challenges that follow it around like an imprinted duckling, I'll focus on partnering with the SRWC and others interested in improving the sustainability of Scott Valley's natural and human communities. It's a prescription for stemming drought dreams.

*Dave Powers*

David Powers | Advisor Conservation Programs | [EFM](#)



EFM



## *Our Passion, Our Purpose & Our Partners*

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. Our leadership in addressing these complex issues works to bring effective solutions to our local community and beyond.

Our office is located at 514 North Hwy. 3, Etna, California and is the home of the Etna Farmers Market, the Etna Community Garden and the future Scott Valley Community Composting Program.

*We would like to give thanks to all our valued partners and extra thanks to the landowners of Scott Valley. Without your commitment to our watershed, none of our work would be possible.*

**Bella Vista  
FOUNDATION**



*Restoration*



*Response*



*Recovery*



*Resiliency*





# The Beaver of Beaver Valley

Like all things, the past several years of extreme drought conditions have been difficult for the Valley's beaver, so we were extremely excited and relieved to see them back in action at some of our sites once the flows returned. Check out [www.scottriver.org/scott-river-beaver](http://www.scottriver.org/scott-river-beaver) for a great video of beaver and Coho Salmon.



Pair of Coho Salmon and Beaver

33 F

TRAILCAM01

11/26/2021 09:55:46AM



27 F 12/13/2021 02:38AM SUGAR BDA3

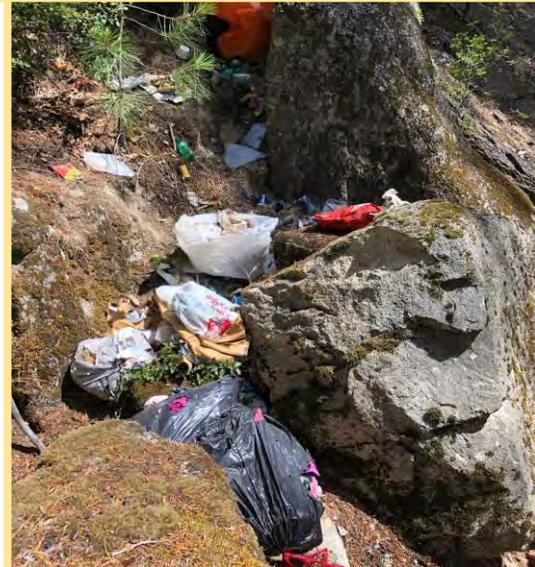
Community



# Annual Salmon Mountain Clean Up Day



A huge thank you to the community for coming out and working to clean up our beautiful watershed!



# Economic Contributions to Our Community



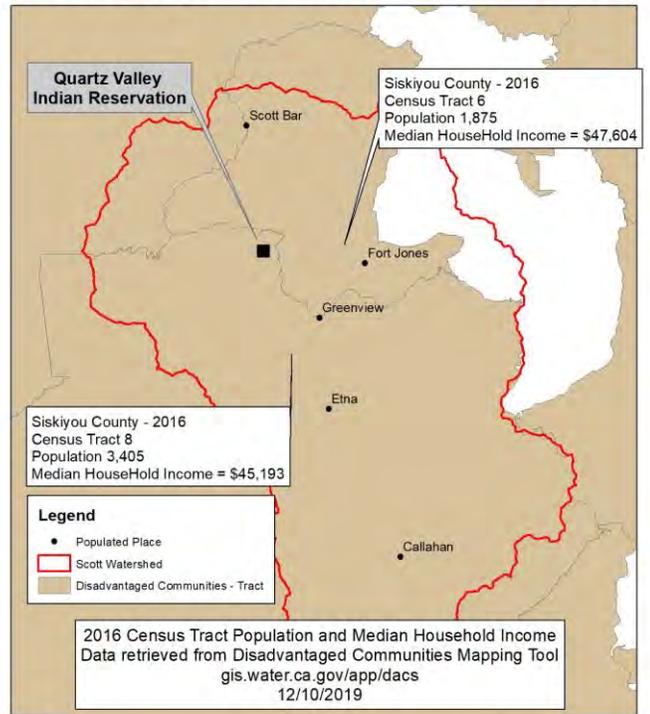
YESS Crew summer program

**Total money brought into our community in 2021**  
**\$1,029,122**

A huge thank you to our funding sources

- Bigfoot Trail Alliance/SH Cowell Foundation
- Bureau of Reclamation
- California Climate Investments
- California Department of Fish and Wildlife
- California Department of Transportation
- California State Coastal Conservancy
- Coho Enhancement Fund
- Community Foundation of the North State
- Etna Police Activities League
- National Fish & Wildlife Foundation
- Natural Resource Conservation Service
- North Coast Resource Partnership
- Pacific States Marine Fisheries Commission
- Rocky Mountain Elk Foundation
- Scott Valley Rotary
- United States Fish and Wildlife
- United States Forest Service
- Wildlife Conservation Society

### Disadvantaged Communities - Census Tract



SCOTT RIVER  
Watershed Council  
E. Yokel - 11/17/2021



A fully loaded burn trailer for community use

A huge thank you to Dwayne Drager for doing the fabrication and tool organization



# Etna Creek Flow Station

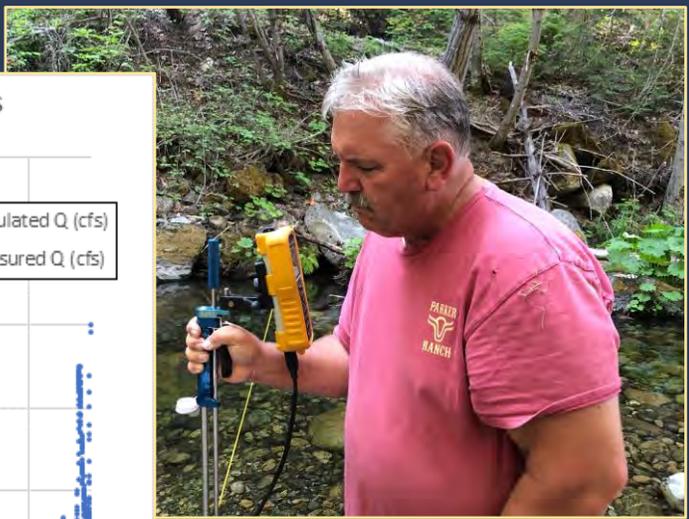
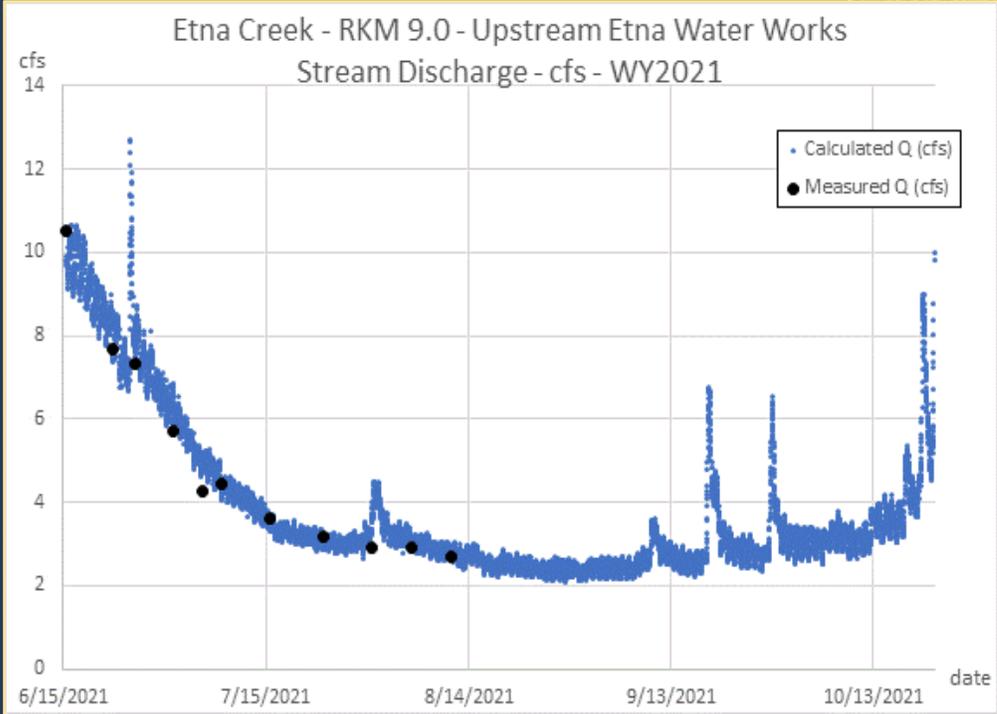


Etna Creek stream flow is a critical stream system to the Scott River watershed and the sole water supply for the City of Etna. As snowpacks decline, it is becoming increasingly important to have data that allows for effective water use management.

The City's water source comes from Etna Creek in the form of a right to divert 2.4 cubic feet per second (cfs) or 1077 gallons per minute (gpm). The City maintains a surface water diversion located at approximately Etna Creek 9.0 river mile (RKM).

SRWC has helped the City of Etna with the monitoring of the stream flow during the past two drought years, hoping to provide the data needed to promote water conservation within the City.

We were grateful to have City Council Member, Cliff Munson, join us on taking a flow measurement on July 5, 2021.





## *Scott Valley Community Compost Program*



Scott Valley Community Compost Program is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment — particularly in disadvantaged communities.

The goal is to divert 39,020 pounds of organic matter from the landfill and produce 15 yards of compost over the next 12 months. The soil produced in this project will feed into the Etna Community Garden, also located at the SRWC site.

# ETNA

SATURDAYS • 10AM-12PM  
FARMERS MARKET



WWW.ETNAFARMERSMARKET.COM

JUNE • JULY • AUGUST • SEPTEMBER

514 NORTH HWY 3



The Etna Farmers Market exists to create an opportunity for Siskiyou County producers/growers and other qualified businesses to sell their local products and fresh produce directly to consumers. The Etna Farmers Market is a Certified Farmers Market operating under the regulations of the California administrative code, Title 3, Group 4, Article 4.5.

Photo credit: Shirley Johnson of Owen's magic from Heart Felt Farms



**Season 2021 supported 21 different vendors and grossed \$45,388.90.**



[Click here to visit our sweet garden in 2021](#)



Photo credit: Jay and Terri Thesken



Photo credit: Jay and Terri Thesken



Photo credit: Jay and Terri Thesken



Community



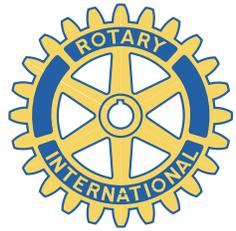
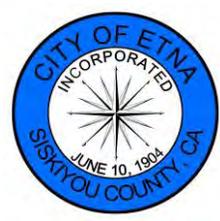
# Etna Clean Up Event



  
**Mattress  
Recycling  
Council®**



A big shout out for all those who made this important event happen. On April 22<sup>nd</sup> through the 24<sup>th</sup>, SRWC and its community partners held a clean up event at the SRWC office for the City of Etna and surrounding area. These types of projects require a group effort and as always, this community came together to make it happen.



Education

# SRWC's Youth Environmental Summer Studies (YESS)

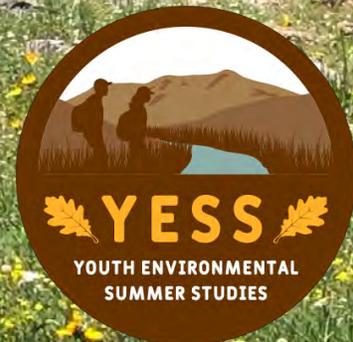


Youth Environmental Summer Studies (YESS) program was established in 2017 as a collaborative partnership between the Klamath National Forest (KNF), Scott River Watershed Council (SRWC), Quartz Valley Indian Reservation (QVIR), Salmon River Restoration Council (SRR), and the Etna Police Activities League (PAL). Funds from Coastal Conservancy were secured in 2021 as part of work to get students experience in the Scott River Tailings, along with funding from the Bureau of Reclamation to get the students on the Patterson Creek Wood Loading Project.

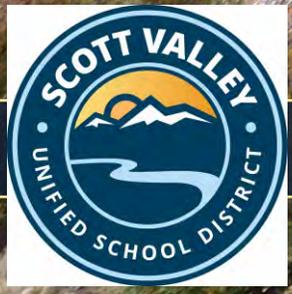
The main objective of the program is to give Siskiyou County youth the opportunity to gain field experience in natural resource and environmental science work, and to increase their understanding of the importance of creating a stewardship culture within rural landscapes.

Work performed varied throughout the six-week summer season and included trail work, fisheries restoration, data collection, invasive weed management, water quality testing, fuel reduction and oakwood release projects and participated in the annual Spring Chinook/Summer Steelhead River Fish Dives. The myriad of experiences has given these students a summary view of what opportunities are available.

This year's crew also had the pleasure to share a week of the season with two interns from Southern California who were sponsored by The Wildland's Conservancy.



# Bigfoot Youth Stewardship Program



With assistance from the Bigfoot Stewardship Project, the Scott River Watershed Council and its project partners have created and compiled curriculum for youth environmental education programming. There are eight curricular resources with excellent lesson plans for students. Topics include advocacy & water protection in native California, beaver ecology and engineering, iNaturalist species identification, nature journaling, phenology, salmon bio sampling, serpentine soil science, and introduction to wildlife biology.

Etna Elementary School's 5<sup>th</sup> grade class participated in the "Intro to iNaturalist" curriculum where students learned how to be citizen scientists who can contribute to the iNaturalist community and predict/identify species in their environment. 5<sup>th</sup> grade students also participated in a second day of outdoor education programming. Students visited their school garden and participated in "iNaturalist field day" and "adopt-a-site nature journal" curriculum. This combination of curriculum taught students to slow down enough to strengthen their ability to observe nature while being empowered to contribute to species identification citizen science projects. They also developed art and scientific drawing skills while sketching plant species they identified in the garden.

Etna Elementary School's 1<sup>st</sup> grade class also participated in "iNaturalist field day" and "adopt-a-site nature journal" curriculum. The class visited their school garden to observe and sketch animals, plants, and fungi in the garden. While concepts were simplified for 1<sup>st</sup> grade, curriculum offered students an opportunity to connect with nature, strengthen their sense of self and interconnectivity with nature, and taught students to be citizen scientists contributing to species identification projects in their community.

SRWC partners on the Bigfoot Stewardship Project are the Mid Klamath Watershed Council, Salmon River Restoration Council, Ascend Wilderness Experience, Watershed Research and Training Center and the Bigfoot Trail Alliance.





# Sugar Creek Beaver Dam Analogue (BDA) Project



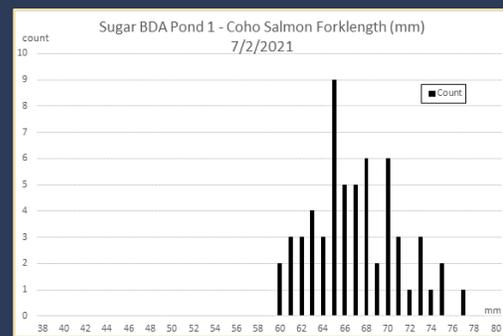
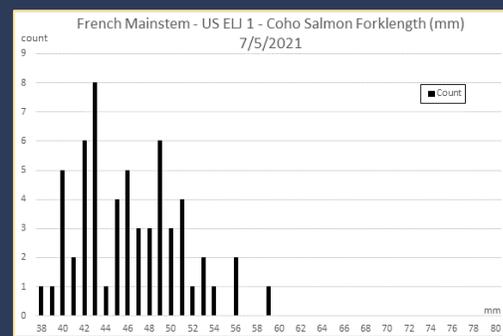
Check out this awesome video from the BDA workshop  
[Sugar Creek BDA Workshop 2021](#)



This project installed a new series of Beaver Dam Analogues (BDAs) in Sugar Creek, building on the success of the SRWC BDA project in the reach, which installed a total of 4 BDAs in 2014 and 2017. This slow water habitat provides idea habitat for thousands of juvenile Coho Salmon, allowing them to thrive in comparison to other comparison sites.

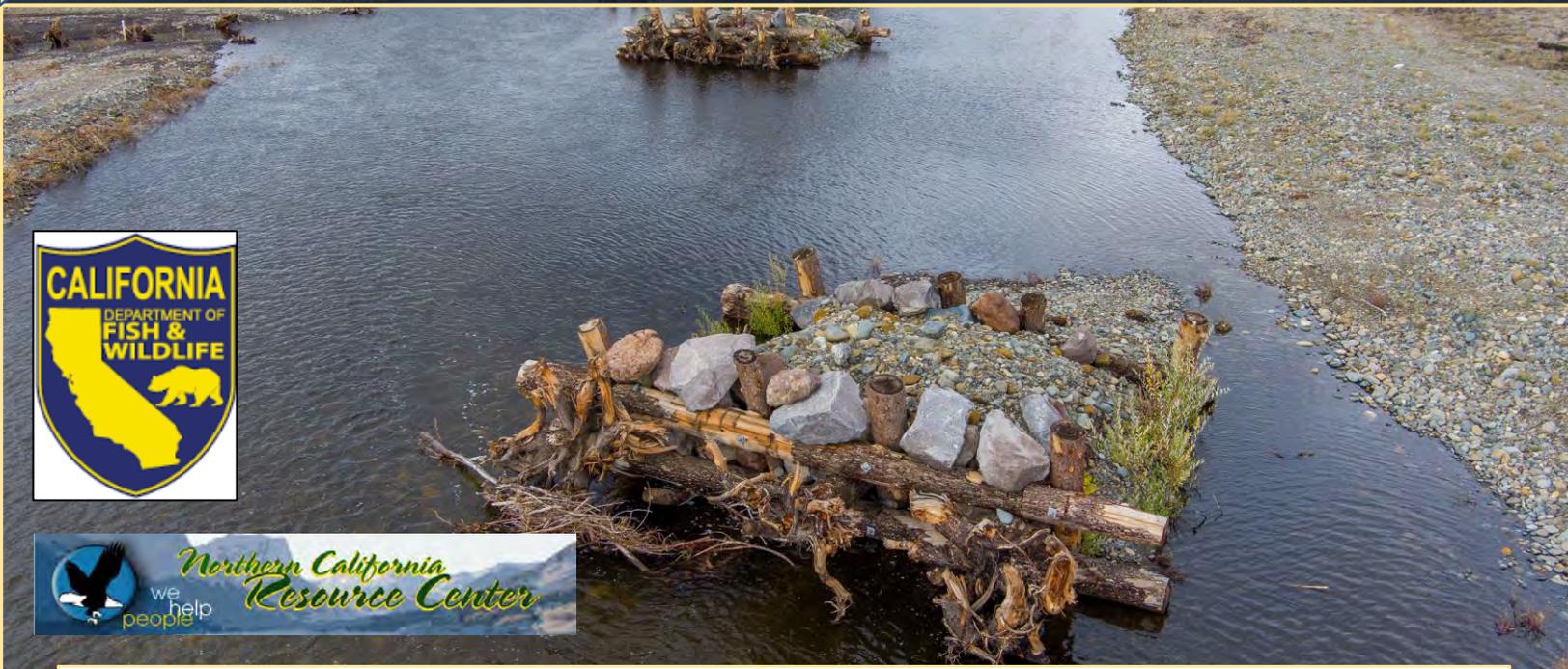
[View video of juveniles on June 23, 2021](#)

SRWC monitors groundwater, surface water, water quality and fisheries utilization and viability. Below is some data from a sample of juvenile fish from the Sugar Creek BDA site to a control site within French Creek. The Sugar Creek fish are significantly larger, demonstrating the optimum conditions which BDA habitats can provide.



	French Creek Mainstem	Sugar Creek BDA Habitat
Date	July 5, 2021	July 2, 2021
Average Length (mm)	47	67
Stand Deviation (mm)	4.7	4
Minimum (mm)	38	60
Maximum (mm)	59	77
Count	59	59

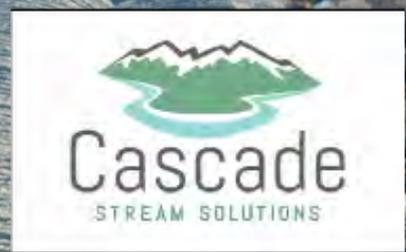
# Scott River Habitat Enhancement & Restoration "Oasis" Project



In the fall of 2020, instream habitat restoration activities within the Tailings included the placement of large woody debris in the form of root wads, called engineered log jams (ELJs), riparian planting in the channel and created off-channel alcove to create slow water habitat. Once completed the reach experienced a loss of flow due to the extreme porosity of the newly exposed cobble, resulting some of the streamflow being re-routed from the Scott River stream channel towards the west. Working in collaboration with the project engineer, contractor and funder, construction to regrade and seal the floodplain, along with adding additional woody material and riparian plants was completed in the fall of 2021. Streamflow measurements taken post construction indicate there is no longer a loss of flow due the project elements in the reach. Like all SRWC projects, ongoing monitoring to understand the effects to the system including instream flows, groundwater and surface water, temperature and utilization of fisheries are part of the project. This project is located on private land and funded by California Department of Fish and Wildlife's Fisheries Restoration Grant Program (FRGP).



The Yuba Dredge was left abandoned near Callahan, California. Gold dredgers were introduced around the beginning of the 20th century. The Yuba Dredger Company built this one at the mouth of Sugar Creek. It plowed up to one mile of Callahan's Ranch, then turned downstream until it was stopped at the Wolford Ranch in the early 1940s, where the Wolford brothers refused to sell out. In all, it traveled little more than four miles.

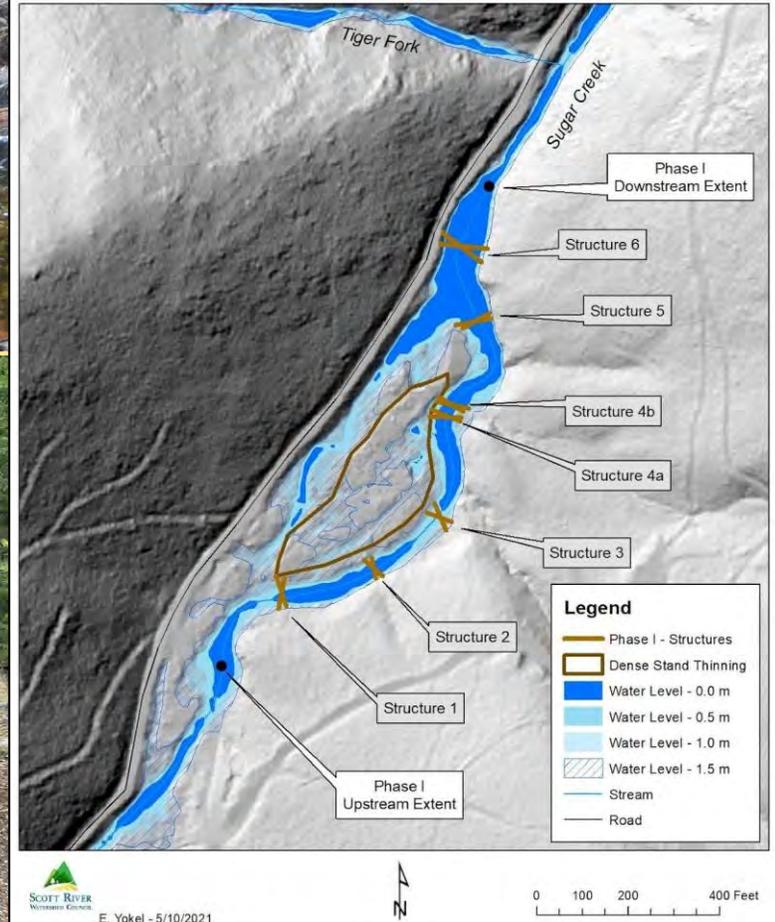




## Upper Sugar Creek Wood Loading & Riparian Enhancement Project



### Upper Sugar Creek Large Wood Augmentation Project Phase I



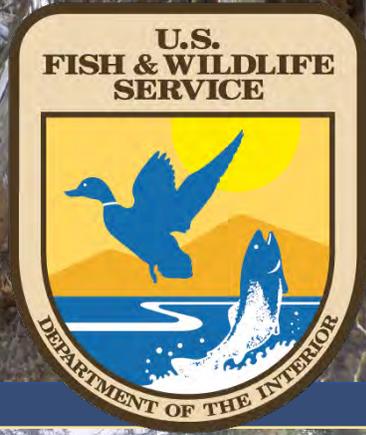
This project is designed to introduce large wood into the upper one mile of Sugar Creek anadromy to improve spawning and rearing habitat for Coho Salmon as well as improving geofluvial function for all riparian dependent species. In the last few years, Sugar Creek was a watershed of focus for the Klamath National Forest and has had extensive upland work to reduce sediment contributions to the stream. Downstream of this project lies an extensive natural beaver complex and the Sugar Creek BDA project lies at the confluence of Sugar Creek and the Scott River. Working in the upper Sugar Creek reach will enhance and support the existing restoration benefits and investments. This is located on private land owned by EFM and funding the United States Fish and Wildlife Service.

Project implementation was started on November 5, 2021. Andy Dean (Professional Sawyer - MAD Fallers) directionally felled the identified trees in the locations of the structures under the direction of SRWC project coordinators. Trees were felled in stages (different days) with the initial felled trees moved into desired placement with hand labor (grip hoists, blocks and cable) before the next stage of trees were dropped. Selected trees were greater than 1.5 times the length of the bank full channel width. The combined anchoring techniques were utilized to minimize the possibility of log mobilization from rotational forces (horizontal movement) and buoyancy (vertical movement). After two to three iterations of falling trees and then moving trees the wood structures were complete.



EFM

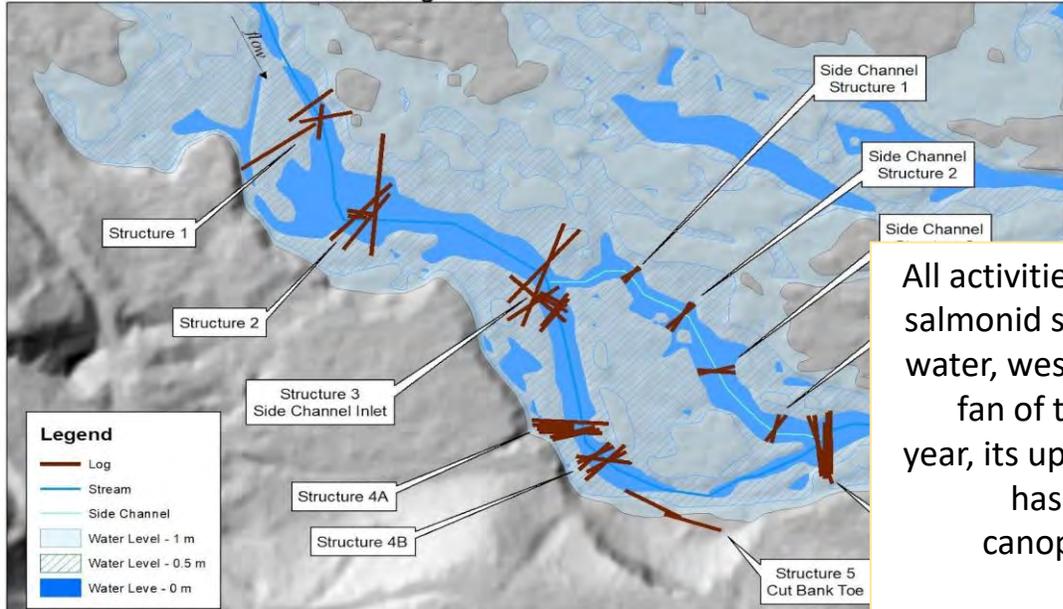
# Patterson Creek Accelerated Wood Loading Project Phase III



The **Patterson Creek, Scott Valley, CA Accelerated Wood Recruitment Project Phase III** placed 47 trees (27 Douglas-fir, 17 Ponderosa pine, 2 Big-leaf maple, and 1 Red alder), ranging from 10 inches to 28 inches in diameter, on a 1300 ft reach of Patterson Creek, a Scott River westside, perennial cold-water tributary.



Patterson Creek Accelerated Wood Recruitment Project As Built Log Structure Locations - 2021



All activities for this project aim to promote salmonid spawning and rearing in this cold-water, westside tributary. While the alluvial fan of the stream goes subsurface every year, its upper valley reach remains wetted, has cold water, an extensive riparian canopy, and is known to support Coho Salmon and steelhead rearing.



# Forests



## Forest & Fuels

SRWC has been working closely with a newly formed coalition of Siskiyou County leaders to establish a Siskiyou Prescribed Burn Association (SPBA). SRWC is a founding member of the SPBA which is a coalition with the Shasta Valley Resource Conservation District, the Mid Klamath Watershed Council, Quartz Valley Indian Reservation, Torchbearr, Mt. Shasta bioregional Ecology Center, landowners, local fire departments, folks from the Klamath National Forest and CALFIRE.

The SPBA supports the use of fire as a land management tool within the Klamath Mountains of Northern California. Returning normalized fire intensity and frequency to the landscape can significantly shift forest conditions towards a more resilient status by reducing stand density and increasing fire adapted species.

In 2021, SPBA hosted a two-day training led by The Watershed Research & Training Center, conducted five prescribed burns on private lands and supported a burn on the Quartz Valley Indian Reservation. In total, approximately 110 acres were burned.



[www.calpba.org/siskiyou-pba](http://www.calpba.org/siskiyou-pba)

## Check out two great videos of Scott Valley burns 2021 French Creek and Marybill Lane



# Big Meadows Aspen & Meadow Restoration



EFM



Big Meadows from January 1, 2021 to June 28, 2021

[www.scottriver.org/big-meadows](http://www.scottriver.org/big-meadows)



This project is designed to enhance 63 acres of aspen and mountain meadow habitats at Big Meadows, a property that is privately owned by EFM and contiguous to the Marble Mountain Wilderness. Aspen and montane meadow vegetation communities provide important ecological services throughout the western United States. Aspen have been identified as a keystone species because they have a disproportionate and significant impact on biological diversity and ecological function. Invasive weed management, conifer removal from the aspen stands and a seasonally fenced to exclude cattle are all management activities aimed at resiliency of this important habitat.

SRWC's Youth Environmental Summer Studies (YESS) crew collected data on the six aspen transects that were established in 2017. Additionally, the Klamath Bird Observatory (KBO) has been monitoring birds in the areas since 2019 and plans to return to the site in 2022. Birds are used as excellent ecological indicators to evaluate project outcomes and inform future restoration efforts.



Bella Vista FOUNDATION



# *Klamath Meadow Partnership*

SRWC is a founding member of the Klamath Meadows Partnership (KMP) which was born out of a unified interest to and since its inception the KMP has expanded to include many other partners throughout the region:

- Communicate the importance of conservation and restoration of meadows in the Klamath-North Coast province
- Foster collaborations to increase the pace and scale of meadow conservation and restoration using the best available science
- Coordinate efforts to inventory meadows and prioritize restoration needs across the province
- Advocate for the expansion of funding opportunities to include our geographic area
- Build off existing knowledge and resources to identify and/or develop assessment protocols, restoration methods, and monitoring strategies that are appropriate for the unique and diverse meadows throughout the Klamath-North Coast province
- Provide a venue for soliciting real-time technical support and advice on meadow conservation and restoration projects



**Monitoring**

# **Monitoring the Klamath Basin Coho Salmon**



The Klamath River Basin PIT Tag (KRBPIT) Database Collaborative is making progress towards integrating all PIT (Passive Integrated Transponder) Tag Data in the Klamath River system into a functional and accessible database in order to understand how salmonids (Steelhead, Chinook and Coho), and other fish, use the entire Klamath basin. PIT Tags are transmitters about the size of a grain of rice which function similarly to microchips for dogs. They are surgically implanted into juvenile fish and can be used to track their movement throughout their entire life span.

KRBPIT Tagging Database was developed by the United States Geological Survey (USGS) Klamath Falls Field Office in 2006 when the Karuk and Yurok tribes initiated the Klamath River Coho Ecology study through Bureau of Reclamation funding. A primary focus of the Klamath River Coho Ecology study is to track juvenile Coho Salmon movement through the mainstem Klamath River corridor with the use of PIT tag technology.

The KRBPIT Collaborative consists of approximately 50 individuals representing 19 different data collecting entities and regulatory or academic institutions. The Yurok and Karuk Tribes, USGS, and SRWC are building on the volunteer collaborative initiative to achieve a basin-wide database to collect, manage and integrate PIT Tag data from all data collecting entities across the Klamath Basin. Data standards, data management guidelines, desired database functionality and access permission guidelines have been developed by the workgroup.

In addition to the Database, the collaboration has led to the installation of new PIT Tag detection equipment in the Mid-Klamath region by the Karuk and Yurok tribal fisheries departments and SRWC's collaboration with the California Department of Fish and Wildlife (CDFW) to install and maintain detection equipment at CDFW's adult spawning weirs. The spawning weir PIT Tag detection equipment has led to the exciting detection of adult fish that were tagged as juveniles returning home to the Scott Watershed to spawn and produce the next generation of fish.

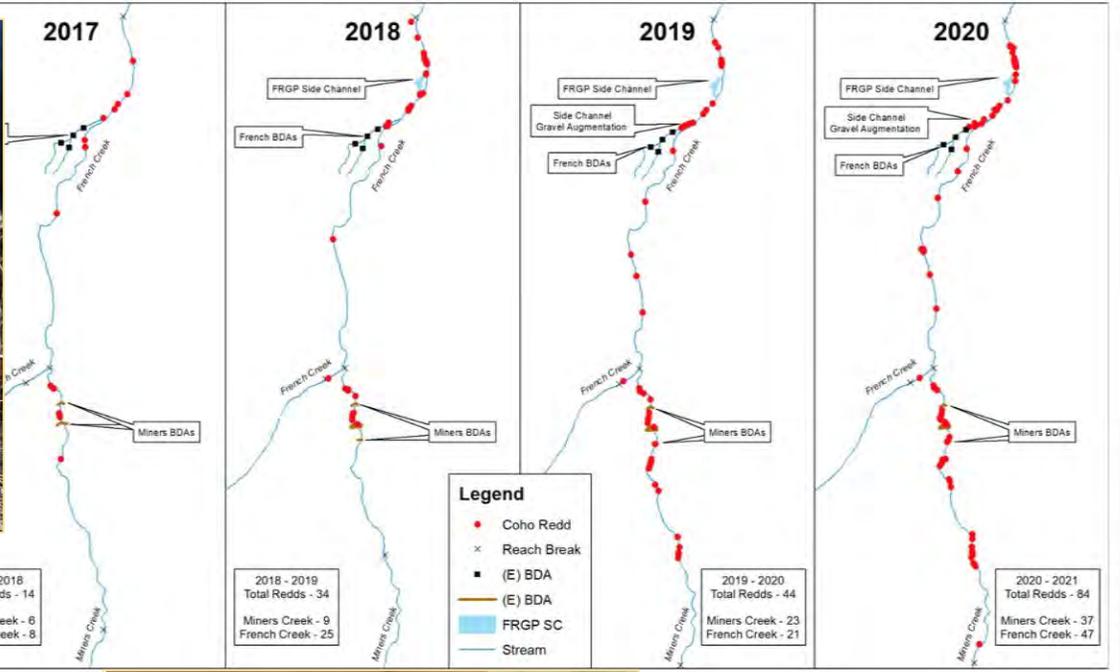
KRBPIT Tagging Database was identified as a priority project by the Coalition of the Willing and is supported by funding from the United States Fish and Wildlife Service, Bureau of Reclamation, and the California Department of Transportation. The Collaborative looks forward to a productive year in 2022, with plans to get the Database fully on-line, hold a Collaborative meeting, and further support the development of integrated monitoring efforts.



# Monitoring

## Seeking Solutions Through Science

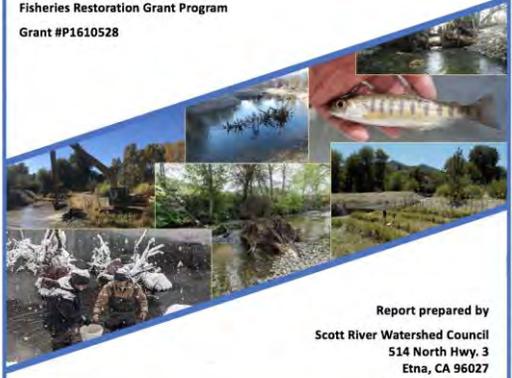
Mid French Creek and Lower Miners Creek - Coho Salmon Redds - Brood Year 2017 to Brood Year 2020



### French Creek Instream & Off Channel Enhancement Project



Report prepared for  
California Department of Fish & Wildlife  
Fisheries Restoration Grant Program  
Grant #P1610528



Report prepared by  
Scott River Watershed Council  
514 North Hwy. 3  
Etna, CA 96027  
February 28, 2021

Visit [www.scottriver.org/reports](http://www.scottriver.org/reports) for SRWC's report on this project implemented in 2018 and the robust monitoring that followed.





**Monitoring**

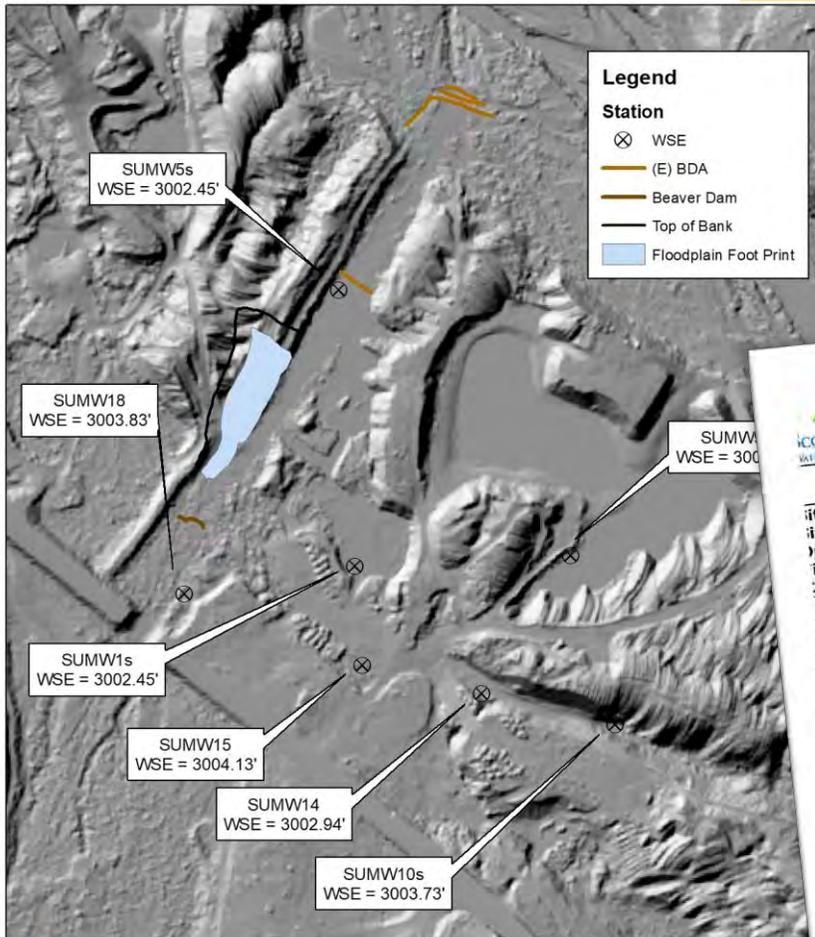
## Seeking Solutions Through Science

The water supply within the Scott River watershed is used by both human and wildlife alike. The uses range from economic to ecological. Both are essential for the vitality of our community. SRWC continues to seek ways to integrate science into policy.

We promote that knowledge of our changing conditions is the only way to avoid catastrophic impacts to all that rely on the Scott and its tributaries for subsistence. With growing concerns about water scarcity and climate predictions showing a drying trend, collected data will prove vital to landowners going forward.



Water Surface Elevation - 1/5/2021



SRWC maintains multiple flow stations which measure discharge (streamflow). Additionally, through an extensive surface water network, SRWC measures both groundwater and surface water at numerous locations within the watershed.

Discharge Measurement Summary		
Site name	Sugar RKM1.0	
Site number	DM	
Operator(s)	Sugar RKM1_0_20210630.ft	
File name	Gauge Height start 1.17ft /end 1.16ft	
Comment		
Start time	6/30/2021 11:42 AM	Top Setting
End time	6/30/2021 12:33 PM	FT2H2034003
Start location latitude	41.32829	Probe serial number
Start location longitude	-122.82204	FT2P2034026
Calculations engine	FlowTracker2	Probe firmware
		Handheld software
# Stations	Avg interval (s)	Total discharge (ft <sup>3</sup> /s)
32	40	0.78
Total width (ft)	Total area (ft <sup>2</sup> )	Wetted Perimeter (ft)
16.30	9.42	16.54
Mean SNR (dB)	Mean depth (ft)	Mean velocity (ft/s)
15	0.58	0.08
Mean temp (°C)	Max depth (ft)	Max velocity (ft/s)
20.33	0.80	0.17

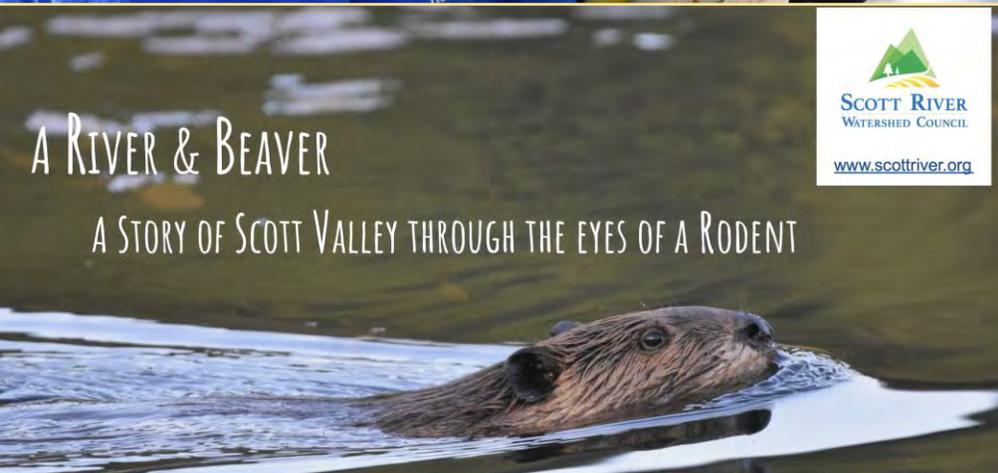
# SRWC Outreach & Training Events in 2021

Unique visitors to our site [www.ScottRiver.org](http://www.ScottRiver.org)  
**2,714**

Volunteer hours contributing to SRWC's work  
**2,215**

Community donations to SRWC's work  
**\$9,400**

Outreach Events in 2021	# of Events	# of Participants
Scott Valley Field Tour & Events	8	105
Trainings and workshops	2	60
Webinars or in person educational events	6	550



**A RIVER & BEAVER**  
A STORY OF SCOTT VALLEY THROUGH THE EYES OF A RODENT

January 19, 2021  
Betsy Stapleton, Board of Director Chairperson  
Charna Gilmore, Director



SCOTT RIVER  
WATERSHED COUNCIL  
[www.scottriver.org](http://www.scottriver.org)





## ***Scott Watershed Informational Forum (SWIF) February 16<sup>th</sup>, 17<sup>th</sup> & 18<sup>th</sup> 2022***

**February 16, 2022 – Scott River Watershed Field Tour** – Tour will include looking at restoration efforts in the Scott River Tailings and the South Fork of the Scott River, prescribed burn site from 2021 and a fuel reduction, shaded fuel break in the Etna area. The day will be capped with a showing of the film Anchor Point, a documentary about women in fire.

**February 17, 2022 – Scott Watershed Information Forum (SWIF)** – This day will consist of presentation on broad range of topics including prescribed burning, forest health, fire, water quality, beaver, the Klamath Dam removal and a comprehensive look of the Scott River fisheries. This will be a full day of excellent information on issues that face the Scott River and larger Klamath River Basin.

**February 18, 2022 – Legacy Mining Impacts and Restoration Summit** - A deep dive into the complex issues surrounding tailing restoration. As efforts continue to address the lingering and often catastrophic impacts of the Gold Rush, this summit is designed to allow and exchange of ideas, to share lessons learned and to collectively seek solutions for tomorrow.

This is a no cost, in person event that will be held in Etna, California. Due to COVID, vaccinations, masks and social distancing will be required. To RSVP, please visit [www.scottriver.org/swif](http://www.scottriver.org/swif)

**\*\*There may be the possibility to live stream both the SWIF and Mining Summit.\*\***



# Long Pond Habitat Enhancement Design Project

The Long Pond Habitat Enhancement Design Project is located within the existing and former mainstem Scott River floodplain where SRWC has focused their habitat restoration efforts since 2014 along lower Sugar Creek. The Long Pond project will establish connection to Sugar Creek and further enhance the complex mosaic of existing and restored aquatic and riparian habitat in the area. Stillwater Sciences is supporting SRWC with science-based engineering analysis and design development as part of the Project. This project is located on provide property and funded by the Bureau of Reclamation and the Coastal Conservancy.

## LONG POND HABITAT ENHANCEMENT PROJECT 100% DESIGN SISKIYOU COUNTY, CA

LONG POND HABITAT  
ENHANCEMENT PROJECT -  
100% DESIGN

SISKIYOU COUNTY, CA

**Stillwater Sciences**  
1811 SHERBURN WAY # 100  
MERCER, CA 95358

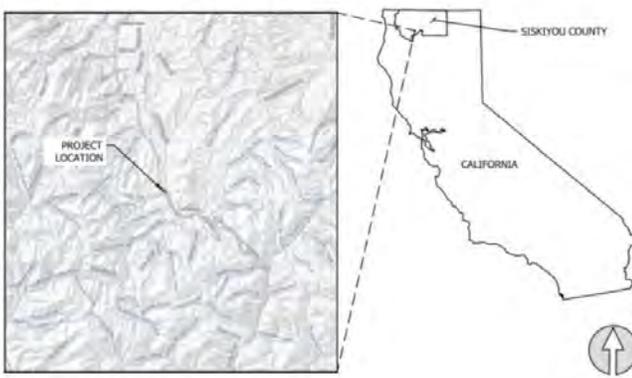


**PROJECT GOAL:** DEVELOP AND ENHANCE HABITAT FEATURES IN THE SCOTT RIVER FLOODPLAIN IN THE VICINITY OF THE SUGAR CREEK CONFLUENCE THAT REMEDIATE LIMITING FACTORS FOR C/ESA LISTED SOUTHERN OREGON/NORTHERN CALIFORNIA COAST COHO SALMON.

- PRIMARY RESTORATION DESIGN ELEMENT INTENT:**
- ACCESS TO COLD WATER REFUGIA SITES FOR COVER-SUMMERING HABITAT WITH GOOD WATER QUALITY, HIGH PRIMARY PRODUCTIVITY AND SUFFICIENT DEPTH/COVER FOR PROTECTION FROM PREDATION;
  - ACCESS TO WINTER SLOW WATER HABITAT TO OFFER REFUGIA FROM HIGH FLOW EVENTS; AND
  - SUFFICIENT FLOW AND CHANGES IN GEOMORPHOLOGY TO IMPROVE BOTH THE LONG POND CONNECTION TO SUGAR CREEK AND THE SUGAR CREEK CONNECTION TO SCOTT RIVER.

- PRIMARY RESTORATION DESIGN ELEMENTS:**
- MULTIPLE CONNECTIONS BETWEEN SUGAR CREEK AND OFF-CHANNEL REFUGIA AND REARING HABITATS FOR INCREASED COMPLEXITY AND VOLITIONAL OPPORTUNITY
  - ROUGHENED CHANNEL SEGMENTS USING ENGINEERED STRIPBARRED MATERIAL
  - VARIABLE BENCHED GRADING TO SUPPORT NATIVE PLANT ESTABLISHMENT AND HABITAT DIVERSITY
  - VARIABLE GRADING SLOPES AND ASPECTS
  - LARGE WOOD HABITAT FEATURES
  - HEALTHY SOIL DEVELOPMENT PROCESS INVIGORATION
  - EXISTING VEGETATION PROTECTION AND NATIVE PLANT REVEGETATION
  - WATERWAY CROSSING STRUCTURE

**PROJECT VICINITY AND LOCATION**



SHEET LIST TABLE	
Sheet Number	Sheet Title
1	TITLE SHEET
2	GENERAL NOTES AND LEGEND
3	EROSION AND SEDIMENT CONTROL PLAN
4	EXISTING CONDITIONS AND SURVEY CONTROL PLAN
5	CONSTRUCTION ACCESS AND STAGING PLAN
6	SITE GRADING AND KEY PLAN
7	LONG POND REST. STA 51+00 TO 58+00 PLAN
8	LONG POND REST. STA 51+00 TO 58+00 PROFILES AND SECTIONS - 1
9	LONG POND REST. STA 51+00 TO 58+00 PROFILES AND SECTIONS - 2
10	LONG POND REST. STA 43+50 TO 53+00 PLAN
11	LONG POND REST. STA 43+50 TO 53+00 PROFILES AND SECTIONS
12	LONG POND REST. STA 33+00 TO 44+50 PLAN
13	LONG POND REST. STA 33+00 TO 44+50 PROFILES AND SECTIONS - 1
14	WATERWAY CROSSING PLAN
15	WATERWAY CROSSING PROFILE AND SECTION
16	LARGE WOOD HABITAT FEATURES DETAILS
17	NURSE LOG AND BRUSH TRENCH DETAILS
18	ROUGHENED CHANNEL DETAILS
19	PLANTING PLAN
20	PLANTING PALETTE AND DETAILS

**PROJECT AREA**



**Stillwater Sciences**

PROJECT NUMBER: 904.00  
SCALE: AS NOTED  
DATE: 12/3/21

DESIGN: JS/RWK  
DRAWN: HLG/RWK  
CHECKED: JS/JM  
APPROVED: JS/JM

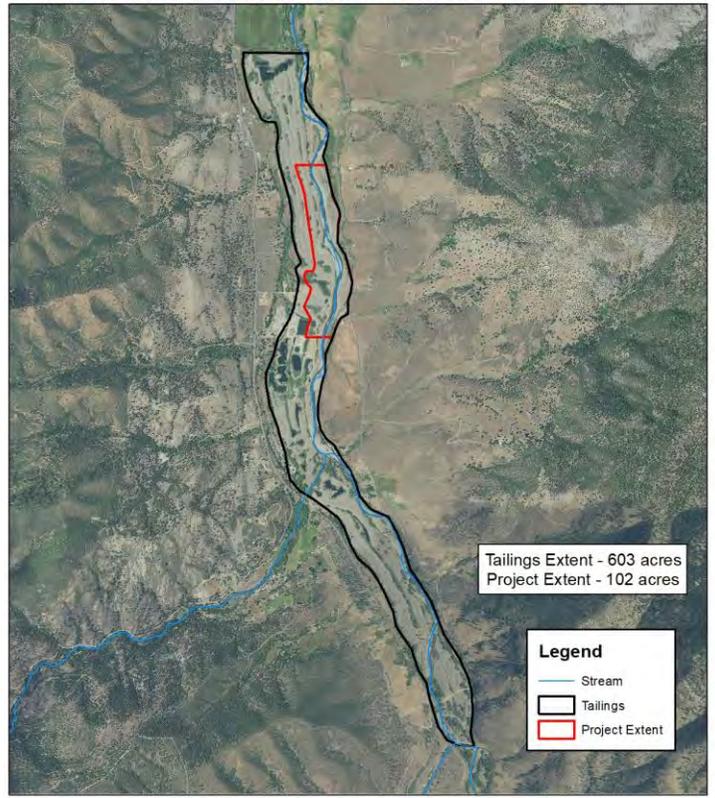


TITLE SHEET

# Scott River Tailing Restoration Design Project



Scott River, Siskiyou County, Tailings Restoration Design, River Mile 52.8 - 53.7



The goals of this project are to complete a 100% restoration design for a 1.1-mile reach of the Scott River Tailings, and 45 acres of adjacent floodplain and provide a foundation for future analysis of the entire tailings. The objectives are to create restoration designs to:

- 1) Improve connectivity through 1.1 miles for migrating anadromous fish.
- 2) Offer slow, cold-water refugia for over-wintering and over-summering juvenile Coho Salmon by connecting off-channel habitat.
- 3) Decrease downstream transport of sediment, thereby addressing the Scott River's Sediment TMDL listing and to retain sediment in this sediment starved reach of the Scott River.
- 4) Connect adjacent floodplains, creating seasonal wetland habitat and increasing groundwater recharge.
- 5) Model the stream temperature effects of the restoration interventions and engage the Thomas Harter Groundwater model in understanding the groundwater effects of restoration projects in the reach.
- 6) Include the Youth Environmental Summer Studies (YESS) interns participate in the environmental planning and monitoring activities, increasing community awareness and support for restoration projects.



*Click here for a visual journey through time –  
The Scott River Tailings 1944-2020*

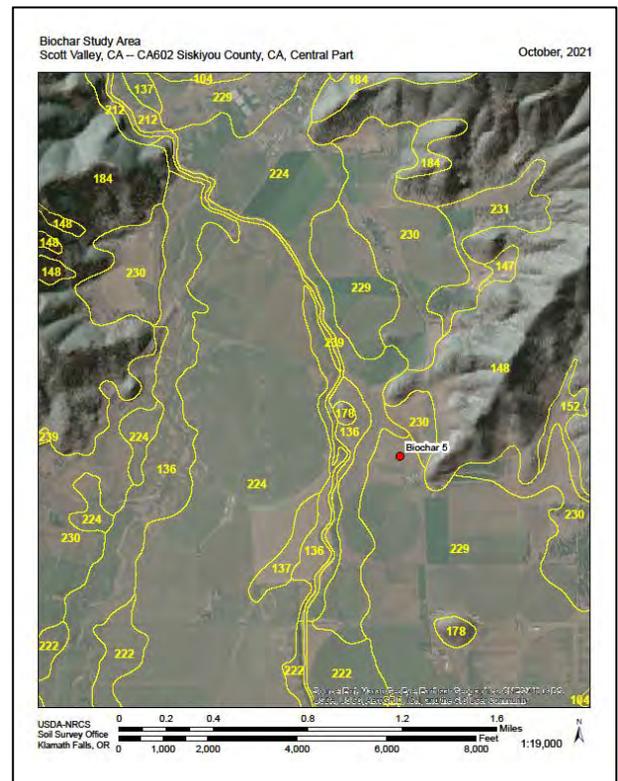


## *Innovative Soil Carbon Amendment Demonstration Using Locally Produced Biochar in Hay, Pasture, and Rangeland Production Systems*

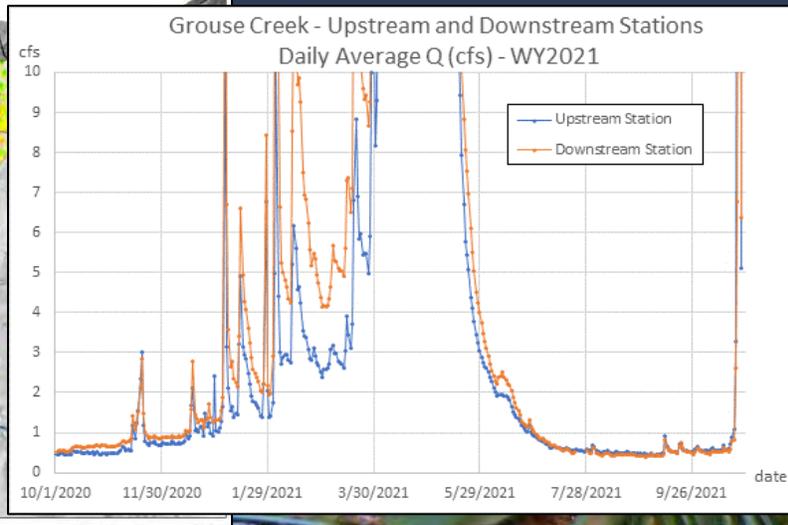
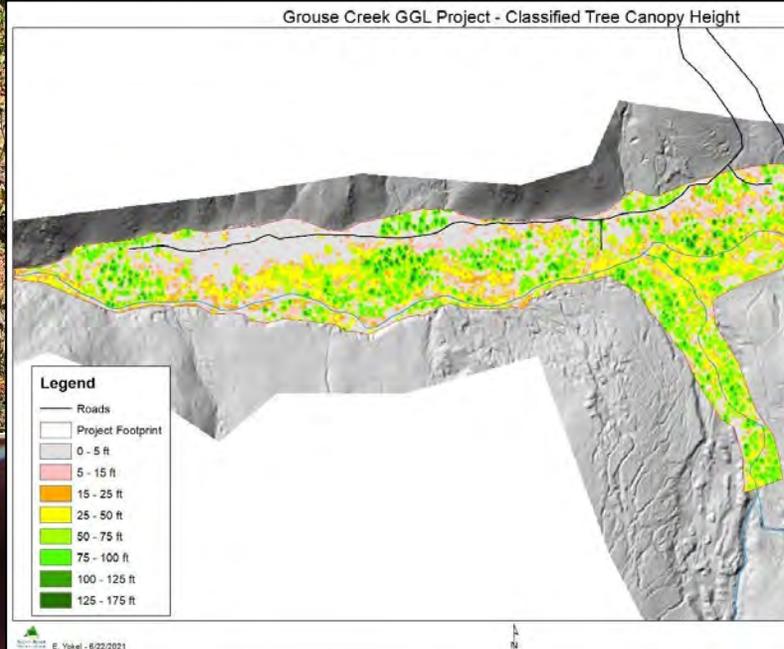
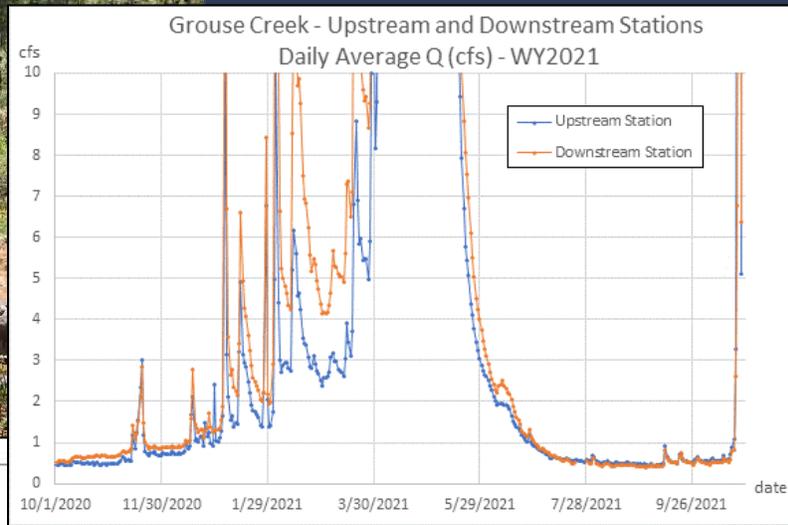
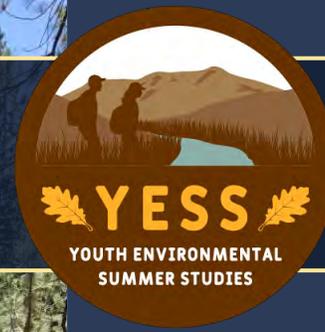
The project is building on the new Natural Resource Conservation Service (NRCS) Conservation Practice Soil Carbon Amendment 808 and will evaluate the effectiveness of locally produced biochar and compost as soil amendments and testing composted biochar as practice enhancement. In December 2020, SRWC 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, 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.

The Project will innovate by scientifically quantifying the increased soil moisture retention and carbon sequestration effects into a whole watershed process to apply excess forest biomass as a locally produced composted biochar to agriculture fields. The data will be used to inform greenhouse gas calculations for the biochar as a whole and model how this project could scale to apply for the off-set carbon market.

The first phase of this project was funded by the North Coast Regional Partnership. The North Coast Resource Partnership is an innovative, stakeholder-driven collaboration among local governments, Tribes, watershed groups, and other interested partners focused on integrated resource planning and local project implementation in California's North Coast region. The funding for this phase of the project is from NRCS and the Conservation Innovation Grant Program.



# Grouse Creek Floodplain Restoration Design Project



The project objective is to restore approximately 1.1 miles of Grouse Creek, a tributary to the East Fork of the Scott River, Siskiyou County, California. Restoration of the reach is aimed at addressing extensive placer mining that was done from 1880 to 1940 throughout the project area, virtually eliminating 40 acres of critical floodplain wetlands. Channelization and extreme changes to the geomorphology of both the stream channel and the floodplain terraces have significantly altered the hydrology and stream's sediment transport capacity. The deeply incised and eroding channel, along with the large piles of cobble along the stream banks have created water quality problems, lack of access to the floodplain, and an overall degraded system.

SRWC, utilizing the YESS crew, continued collecting monitoring data throughout 2021 regarding pre-project stream flow, stream temperature and water surface elevation in nearby groundwater well transects. A digital elevation model (DEM) of the project area before restoration will be created to identify individual larger trees and calculate tree height. Tree inventory surveys were completed in the summer of 2021 to ground truth the remote sensing analysis.

Weeds



# Marlahan Mustard Month of May

Before



After



Etna Elementary School and Mrs. Ricky's Weed Warriors tackled a huge patch of Marlahan Mustard (Dyer's woad) in Etna. They were fierce in their attack, working hard to make our community a better place and a herd of local goats very happy!





# Water for Wildlife

Climate change is the single largest threat to our watershed as it exacerbates a century of fire suppression and other legacy land use impacts including an extreme increase in forest fuels and biomass in most of the uplands within the basin. California and the entire West Coast are experiencing an unprecedented drought which is having a catastrophic impact on wildlife due to water scarcity, stress on native vegetation, extreme heat and loss of habitat due to large, devastating wildfires.

Scott Valley, along with the rest of the Western United States, is experiencing drought conditions and low levels of precipitation. According to historic accumulated precipitation at Fort Jones, California from Water Year 1938- Water Year 2020, a significant cumulative departure in the Scott River stream flow has occurred over the last twenty years.

The Water for Wildlife Project ensures water sources for wildlife during seasonal dry periods, extended drought, and climate change driven water scarcity, by implementing water catchment systems called Guzzlers. Guzzlers are simple gravity fed systems that collect rain, snow and dew water which is then stored in the reservoir tank and releases water into a trough providing access to water to large and small wildlife, native and migratory birds and an array of insects including critical pollinators species. At least five guzzlers will be reestablished in 2022 to immediately provide a reliable water source.

The funding for this important project comes from the Community Foundation of the North State. Partners include Scott Valley community members and the Klamath National Forest. Game photos credited to Bob Gilmore of Etna, CA.



**Community**  
FOUNDATION  
OF THE NORTH STATE





## *People*



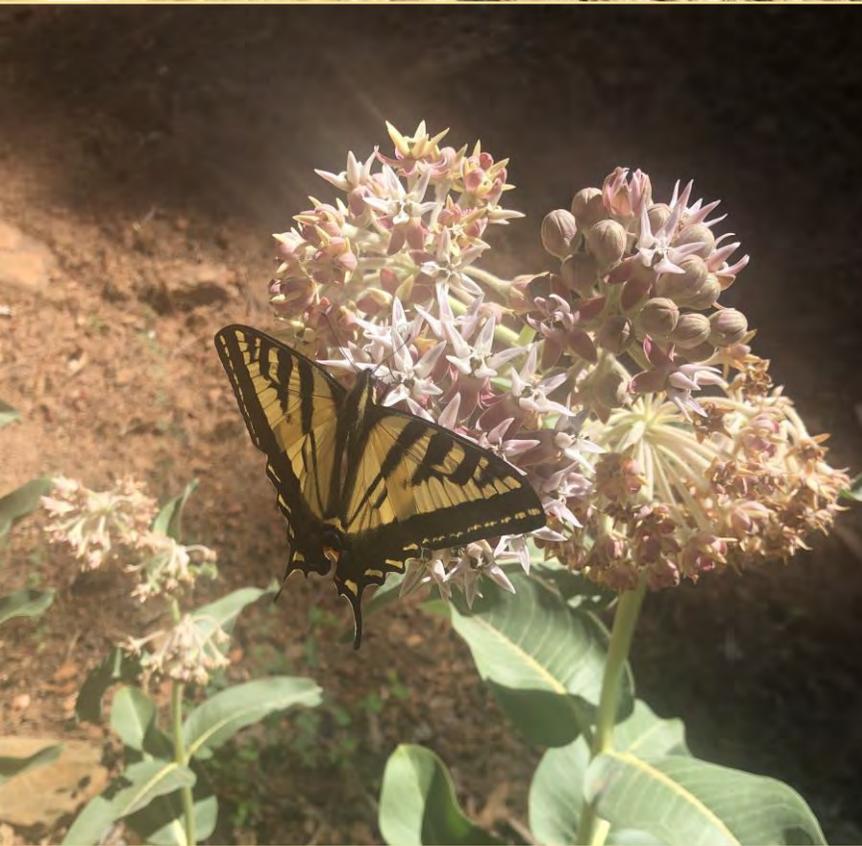
## *Working*



## *Together*

Photo credit: Jay and Terri Thesken





Thank you to those who invested in our work  
and in our watershed.

Thank you to the landowners who  
value our partnership.

Thank you for all those who volunteered  
their time to make our little place on  
this Earth better for all that live here.

Cheers to 2022



To donate to our work, please visit our site at [www.scottriver.org/donate](http://www.scottriver.org/donate)