

Restoring Trinity Bristle Snail Habitat

Since 2016, Trinity County RCD's Revegetation Program has been in agreement with the California Department of Transportation to reestablish native vegetation for the Collins Bar Curve Improvement Project near Burnt Ranch, CA.

This project is within the known range of the rare and threatened Trinity bristle snail, *Monadenia infumata setosa*. This terrestrial snail is named for the tiny bristles on its shell, which endearingly give it a fuzzy, dirty appearance as it gathers bits of moss and soil. It is endemic to Northwest Trinity County, meaning it is only found in this region, mostly inhabiting riparian corridors with dense deciduous forests. Trinity bristle snail prefers to eat soft vegetation such as the stems of violets and lichens that grow on leaf litter and organic detritus. This little gastropod, the class of animals including snails and slugs, is nocturnal and goes dormant in summer and winter. The Trinity bristle snail has a life span of 15-20 years, reaching maturity at 10 years of age! ¹ When the Collins Bar project area was disturbed due to road safety improvements and slide repair, the Trinity bristle snail became the most critical species impacted. Restoring the deciduous forest to this area will provide critical habitat for the Trinity bristle snail, that relies on the accumulation of leaves on the forest floor.

Our revegetation staff have worked tirelessly to revegetate the completely denuded project area with native deciduous trees. In some areas of this project, trees are spaced 6 feet apart, as compared to the standard spacing of 10 feet or



The Trinity bristle snail eats soft vegetation and lichens
Photo credit: Len Mazur

more, to create the dense deciduous forest habitat these snails prefer. Species planted for this project include: big leaf maple (*Acer macrophyllum*), deer brush (*Ceanothus integerrimus*), mountain mahogany (*Cercocarpus betuloides*), Douglas fir (*Pseudotsuga menziesii*), Oregon ash (*Fraxinus latifolia*), choke cherry (*Prunus virginiana*), canyon live oak (*Quercus chrysolepis*), black oak (*Quercus kelloggii*), and red-flowering currant (*Ribes sanguineum*). Now in its fourth year of implementation, some trees such as the fast-growing big leaf maple are over 6 feet tall!



The Trinity bristle snail prefers cool, wet, shaded areas, specifically in the leaf litter of dense deciduous forests
Photo credit: Daniel Palmer



A healthy big leaf maple growing on the project site

Restoring Trinity Bristle Snail Habitat, Cont.

The Trinity County RCD's Revegetation Program is also very proud to announce that we are now planting Pacific madrone (*Arbutus menziesii*) at this site, which was part of the dominant vegetation present prior to disturbance. In the past, nursery stock of this species was not easy to obtain due to the overall difficulty with its propagation and transplanting. However, Caltrans has generously funded in-house propagation efforts for the Trinity County RCD, and for the first time on record, we have been able to transplant gallon-sized nursery stock of Pacific madrone.

In November of 2020, twelve Pacific madrone trees, grown from seed and approximately two years old, were placed at

our Collins Bar project site. Existing rip-shredded madrone mulch piles were chosen as preferred planting sites. The organic matter content of mulch promotes the growth of microorganisms beneficial to plant growth and some research shows that madrone may be highly dependent on these fungal relationships for survival.³

As conservationists, it is always a thrill and a privilege to work towards ecological restoration, especially projects which help improve critical habitat for endemic and threatened species. Our technicians and program leaders are extremely motivated to achieve success for the revegetation goals of this project.



The revegetation crew planting native trees at the Collins Bar project site

References

1. "California Gastropods: Trinity Bristle Snail." *Date With the Dodo*, 4 Dec. 2012, datewithadodo.wordpress.com/2012/12/04/california-gastropods-trinity-bristle-snail/.
2. Roth, B and Pressley, P. 1986. Observations on the range and natural history of *Monadenia setosa* (Gastropoda: Pulmonata) in the Klamath Mountains, California, and the taxonomy of some related species. *The Veliger* 29(2): 169-182.
3. Trudell, Steven A. Cline, Erica T. Elliott, Marianne. Edmonds. Robert L. Possible Role of Mycorrhizas in Resistance to Decline in *Arbutus menziesii*. Washington University Horticulture Library. Chapter 16. 127-134. http://depts.washington.edu/hortlib/collections/madrone/ch16_tr.pdf

Accepting Applications for Natural Resources Scholarship

This year, two scholarships for \$750 each are available to local students who are interested in natural resources or conservation! The Trinity County RCD offers scholarships to support high school seniors, graduates, and continuing education students who are pursuing higher education in a natural resource field. To apply for the 2021 scholarship or

donate to the scholarship fund, please visit the Trinity County RCD website at www.tcrd.net and look under the "Projects" tab for the Scholarship Fund. Applications are due May 2, 2021!

<https://www.tcrd.net/index.php/2014-02-05-08-30-03/scholarship-fund>

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TRINITY COUNTY RESOURCE CONSERVATION DISTRICT SCHOLARSHIP FUND

Name: _____
 Address: _____
 Phone: _____
 Email: _____
 Amount: \$ _____

Make a tax-deductible donation today! We will mail you a receipt or you are welcome to stop by the office.

Please return to:

TCRCD Scholarship Fund,
 PO Box 1450, Weaverville, CA 96093
 530 623-6004



www.TCRCD.net

Young Family Ranch

Community Land Trust



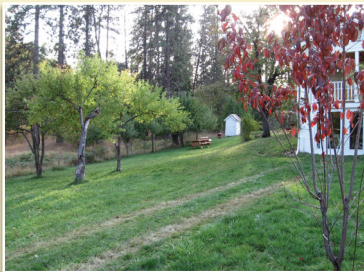
The historic 3-acre Young Family Ranch homestead is located at

260 Oregon Street in Weaverville CA.

The property contains the Young ranch house surrounded by sprawling grounds with a barn, fruit trees, berry patches, gardens, a wetland, forest and stream.

The Young Family Ranch was placed in trust by brothers, Robert and Allen Young, to be an agricultural property that benefits the community of Weaverville.

The Young Family Ranch hosts educational community events including: Weaverville Summer Day Camp, community plant & seed exchanges, community supported agriculture, as well as free workshops on topics related to agriculture and nutrition.



HOW TO GET INVOLVED

Host your event on the property

Participate in annual events, free community workshops and educational programs
Suggest new ideas for uses and programs that will benefit the community

VOLUNTEER

Maintain youth garden * Help with annual events * Maintain the ranch grounds
Assist with the native plant nursery * Host a workshop or demonstration

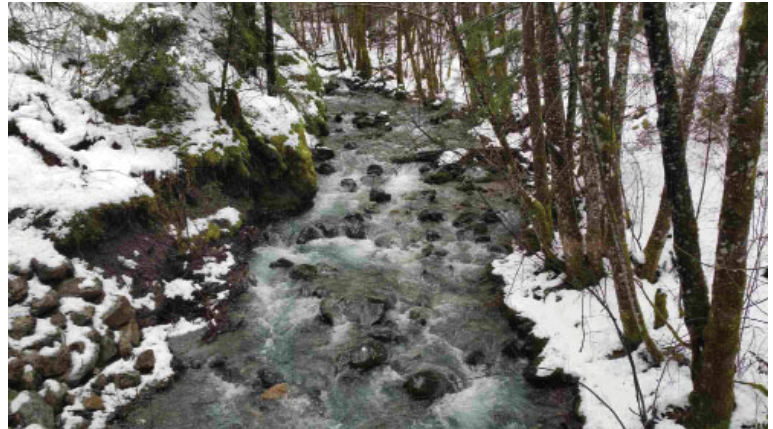
For more information contact Elizabeth from Trinity County RCD:
Phone: (530) 623-6004 Email: youngfamilyranch@tcrd.net



Trinity River Spotlight - Snowmelt in Streams

Long after the snow melts from roadways and river banks, the mountain peaks of the Trinity Alps stay white with winter snowpack. Not only does this make for lovely mountain views, it is also an essential factor in maintaining healthy streams and rivers throughout the dry season. In the hot, arid summers of Trinity County, snowmelt helps keep stream flows higher and colder than they would be otherwise. This is critical for many riverine species that need sufficient water levels and cold temperatures to survive.

Juvenile salmon are of particular concern, as water temperature can play a major role in their growth, physiology, and behavior. Studies have shown the optimal temperature range for juvenile coho is between 50 and 60 degrees Fahrenheit. Coho start to experience slower feeding and growth rates in temperatures between 60 and 69 degrees Fahrenheit. In temperatures above 69 degrees Fahrenheit, coho halt all growth, stop feeding, and may eventually die, especially with increased time spent in these detrimental conditions. When larger river systems begin to warm, fish will often seek out the cold water refugia of smaller tributaries sourced from the mountains, that remain colder longer. Streamflow is also an important factor for salmon, as higher flows create more habitat for juveniles to hide from predators, as well as easier conditions for migrating downriver and out to the ocean.



Snowmelt into streams help keep water temperatures down

Snowier winters mean more snowmelt in the spring and summer, helping to create healthy stream conditions for fish and other wildlife when they need it most! Snowpack can vary dramatically year to year and so far, 2021 is well below average for snowpack. Flow releases from the Trinity Dam can help augment snowmelt in the Trinity River. Starting in April each year, water is released from the dam to emulate variable flows and historic snowmelt. These releases, executed throughout the summer, refresh the river with cold water and flush out fine sediments and algae that build up. However, snowpack and snowmelt are still vitally important in keeping water levels in streams, lakes and the ground adequate throughout the dry season. Whether you love the snow or think it is a nuisance, we should all be hoping for more snowy mountains!

Juvenile coho salmon seek out cooler water temperatures in tributaries of the Trinity River



Hayfork Transition Community Project and Volunteer Opportunity

Hayfork Transition has been working to repurpose a nine-acre property in Hayfork for the benefit of the community. Historically, the property, located at 541 Riverview Rd, was used as a pig farm but once the farm closed, the property was left abandoned for many years. During that time, vagrants moved in, defaced the remaining structures, abandoned vehicles, and deposited waste. Hayfork Transition, a 501c3 organization, is working to develop a community center on the property that will include buildings, structures and gardens to be used by the community to promote sustainable agriculture, education, and wellness.

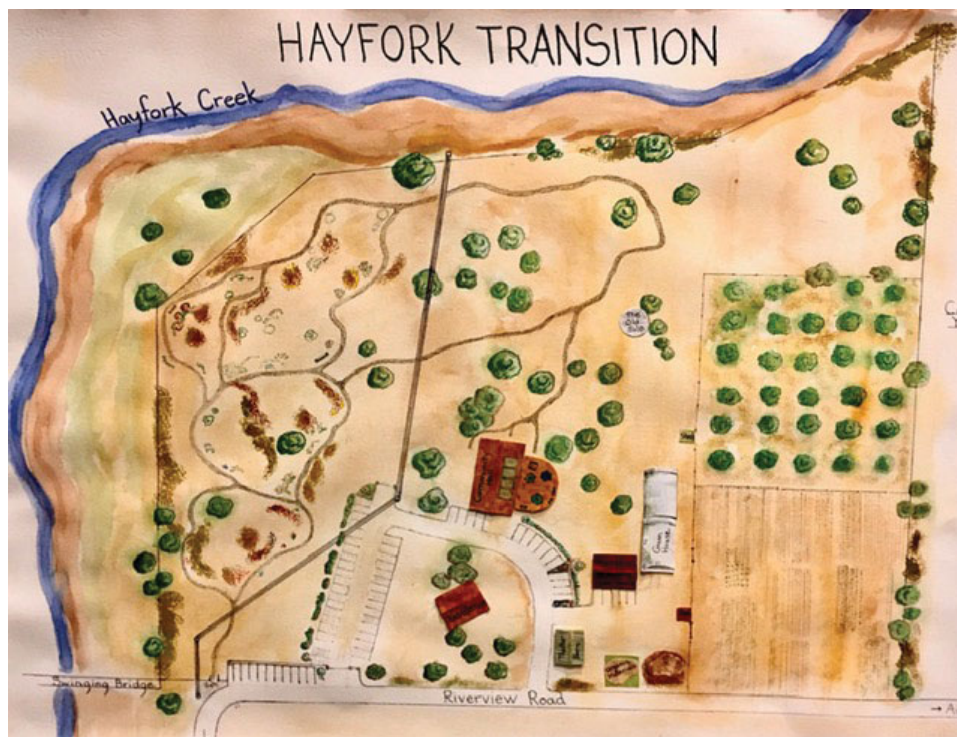
The Trinity County RCD is spearheading the clean-up and removal of remnant buildings, vehicles, and trash dumps on the property with funding from Cal-Recycle: Farm and Ranch Clean-up. A Volunteer Clean-Up Day is being held on March 6th, 2021 from 11AM – 3PM to gather some of the outlying trash scattered throughout the property into a few centralized areas. Our waste removal contractor will then dispose of the trash piles, along with the remnant buildings and vehicles. The Cal-Recycle funding will also be used towards the purchase and installation of fencing around the property to prevent future dumping and vandalism of the property.

This removal and prevention of future vandalism will allow Hayfork Transition to move forward on their agricultural, education, and wellness plans. The Watershed Research and Training Center has partnered with the Trinity County RCD to install a pollinator hedgerow, native plant garden, and upland restoration planting on the property. When finished, the property will become a space for community gatherings, workshops, and events.

In consideration of weather, the volunteer clean-up event will be moved to March 13th from 11AM – 3PM if needed. You can follow the event on Facebook or sign-up for our email list to receive notifications for date changes.



Existing waste on the property



A watercolor depiction of the site plan, completed by Virginia Allen, one of the founding board members of Hayfork Transition

Fuel Reduction Along Trinity County Roadways

The landscape of Trinity County is both reliant on and adapted for frequent wildfire. However, years of fire suppression and poor forest management have increased the risk of catastrophic wildfire. The record-breaking fire season of 2020, as well as many recent years of severe wildfire, have shown how fuel reduction projects are more integral than ever in our current climate.

For over 20 years, Trinity County RCD has been bringing funding into the county to implement much-needed fuel reduction work on both private and federal lands. Crews have thinned thousands of acres of forest and created hundreds of miles of roadside shaded fuel breaks. These projects play a significant role in mitigating the risk of catastrophic wildfire and its impact on communities. By strategically removing vegetation, the amount of available fuels is reduced, preventing more severe wildfire. This type of work can protect homes and properties, reduce environmental damage caused by severe fire, and assist firefighters in future fire suppression efforts. Clearing out vegetation also promotes healthier forests by ultimately leaving more space for regrowth and reducing competition among surviving trees.

For several years, Trinity County RCD has been working on the Trinity River Watershed Roadside Fuel Reduction Project, funded by the State Water Resources Control Board. The goal is to reduce the likelihood of catastrophic fires by creating shaded fuel breaks along Trinity County roads. Focusing fuel reduction on roadsides improves ingress/egress and reduces the potential for increased erosion of fine sediments that end up in the Trinity River and its tributaries. An influx of

fine sediments in streams can degrade water quality and fish habitat, particularly impacting juvenile salmonids. So far, 8 miles of roadside fuel reduction have been completed for the project, mostly in Junction City and Lewiston, with an additional 8 miles being planned for the upcoming season.

In 2020, fuel reduction crews also worked in Weaverville, Upper Covington Mill, Hawkins Bar, Douglas City, Junction City and the Ruth Lake area using funds from various grantors including CalFire, California Fire Safe Council, PG&E, Trinity PUD, and the US Forest Service. In addition, crews offered community chipping throughout the county, and completed multiple fee-for-service projects for private landowners. Projects are currently being planned for 2021 in areas of Indian Creek, Douglas City, Lewiston, Weaverville, and Covington Mill.

There are many ways for landowners to get involved in building more fire safe communities! To learn more, follow Trinity County Fire Safe Council and Trinity County RCD on Facebook for up-to-date information on wildfire preparedness events, information, and resources. You can also reach out to Trinity County RCD directly to discuss fire safety and future projects.

To learn more about Trinity County Fire Safe Council, contact Amelia:

afleitz@tcrd.net or 530-623-6004 x 208

To learn more or inquire about fuel reduction projects, contact Azalie:

awelsh@tcrd.net or 530-623-6004 x 219



Before



Roadside shaded fuel break on Deadwood Rd. in Lewiston

After



Before



Roadside shaded fuel break on Deadwood Rd. in Lewiston

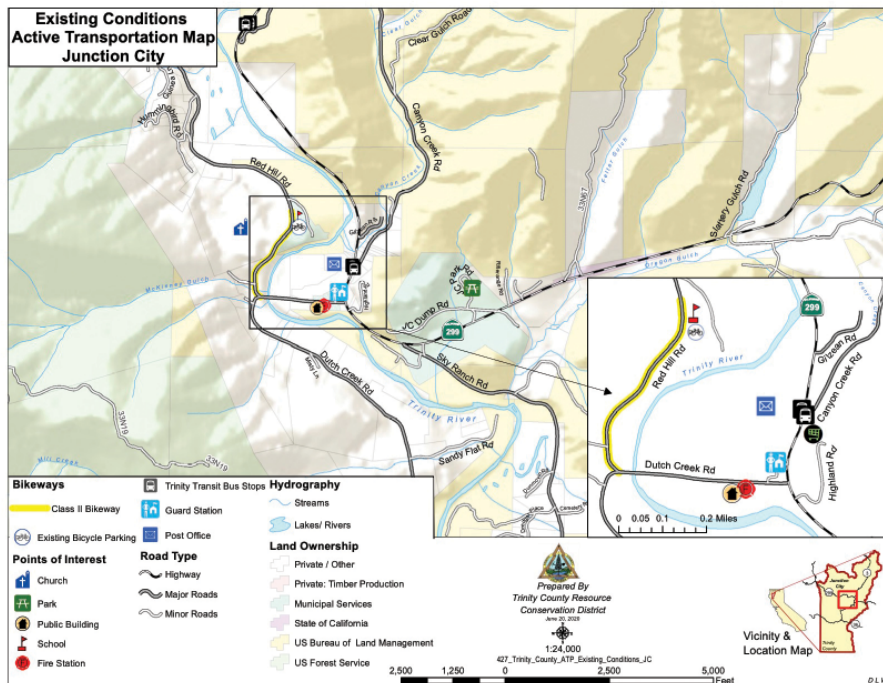
After

Supporting Trinity County's Active Transportation

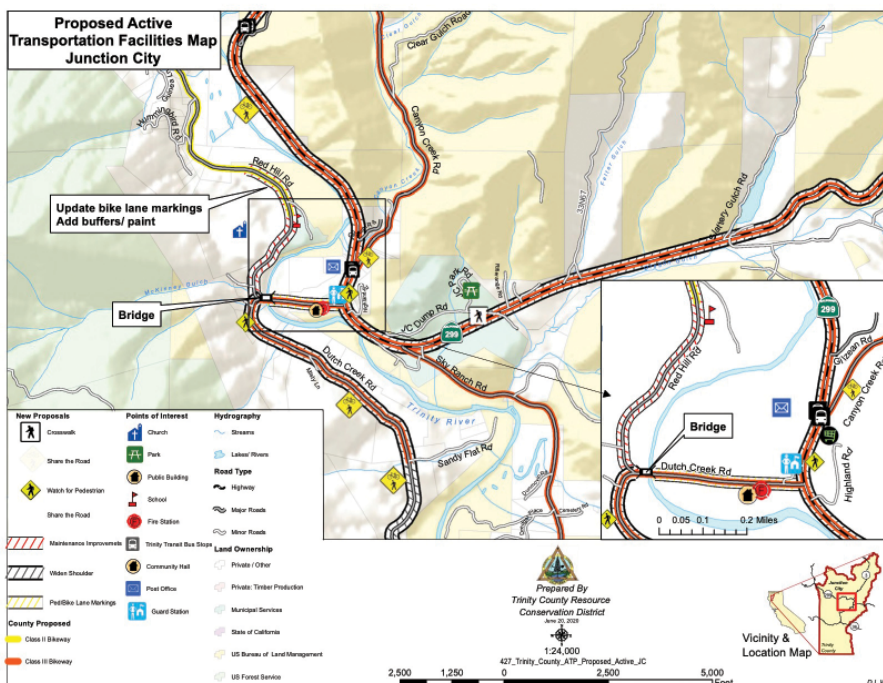
In June 2020, the Trinity County RCD presented the Trinity County Active Transportation Plan (ATP) to the Board of Supervisors and the Rotary Club. The ATP is a guiding document for Trinity County Transportation Department and other local planners to prioritize projects that promote healthy lifestyles as well as development and improvement of trails and other outdoor resources. In developing the ATP, assessments for all communities in Trinity County were completed identifying their interest in projects and proposing

specific projects the community would like to see.

Public comments and proposed projects were incorporated into the draft. The Board of Supervisors then ratified a resolution to accept the Final Draft of the Active Transportation Plan as a guiding document for prioritizing funding for planning and implementation of local projects. The Trinity County Active Transportation Plan can be found on the Trinity County Department of Transportation website.



Map showing existing conditions in Junction City



Map showing the proposed active transportation projects in Junction City

Weaverville Community Forest Committee Meetings: Lessons Learned

The Weaverville Community Forest (WCF) is an award-winning partnership started in 2005 between the Bureau of Land Management and the Trinity County RCD, with the US Forest Service joining later to manage 14,963 acres of federal land surrounding Weaverville. This model allows for local involvement in federal forest management by matching federal resource needs with local skills of the Trinity County RCD. The WCF supports the Weaver Basin Trail System, community firewood sales, fuels reduction projects, and more to achieve fire resiliency, a healthy forest, and scenic landscapes around Weaverville.

The WCF is guided by a Steering Committee of local volunteers that anyone can join at any time for any length. Currently, the Steering Committee is hard at work drafting the 2021-2028 WCF Strategic Plan update. So far there have been four Committee meetings, all open to the public, discussing topics and concerns regarding forest management and educational objectives. There will be additional meetings on March 5th and April 2nd covering recreation and financial plans, respectively. Both meetings will be at 12:30 pm via Zoom. Please join us! See tcrd.net/wcf for login and call-in info.

The strategic process has certainly been a learning experience for the Steering Committee and Trinity County RCD, who is facilitating meetings and leading the charge on the draft. Each meeting brings enthusiastic discussions over issues big and small, disagreements, and insightful feedback. The most difficult challenge has been reconciling different stakeholders' expectations of what a revamped Strategic Plan should look like, including level of detail, document structure, and desired actions. Some noteworthy learning lessons have been defining vocabulary, communicating clearly, absorbing and adapting to feedback, and, most importantly, strong community relationships and conversations. Working through these challenges will develop a Plan inclusive of the community as a whole.

While the Steering Committee is the most active way to contribute, you may also reach out to Kathleen at the Trinity County RCD [kmccully@tcrd.net; (530) 623-6004 ext. 220] or use the Community Feedback form at tcrd.net/wcf to provide your input or ask questions about the WCF.



A student field trip to collect macroinvertebrates at Weaver creek in the Weaverville Community Forest

Trinity Children's Forest

In 2017, The Trinity Children's Forest was incorporated into the Weaverville Community Forest to promote youth connection to nature, healthy lifestyles, and environmental education. The Weaverville Community Forest is a perfect home for the Trinity Children's Forest as it is easily accessible from town and offers many recreational opportunities. An abundance of different natural ecosystems within the WCF sets the stage for place based environmental education opportunities.

Through an agreement with the Shasta-Trinity National Forest, 3 main goals were identified for the initiation of the Trinity Children's Forest: 1) Provide outdoor experience to 4th grade students, 2) increase awareness of forest functions, and 3) Increase healthy outdoor activity and connection to nature.

Since the inception of the Trinity Children's Forest, the Trinity County RCD has led field trips in the community forest with 4th grade students from Weaverville and campers from the Weaverville Summer Day Camp; donated mountain bikes to 4th grade students from disadvantaged communities; sponsored two local youth to attend Ascend Wilderness



Experiences backpacking trips; created interpretive signs that were installed on the McKenzie Gulch loop on the Weaver Basin Trails System with content from students; and designed and disseminated a brochure to raise awareness about the Trinity Children's Forest. This was all made possible with

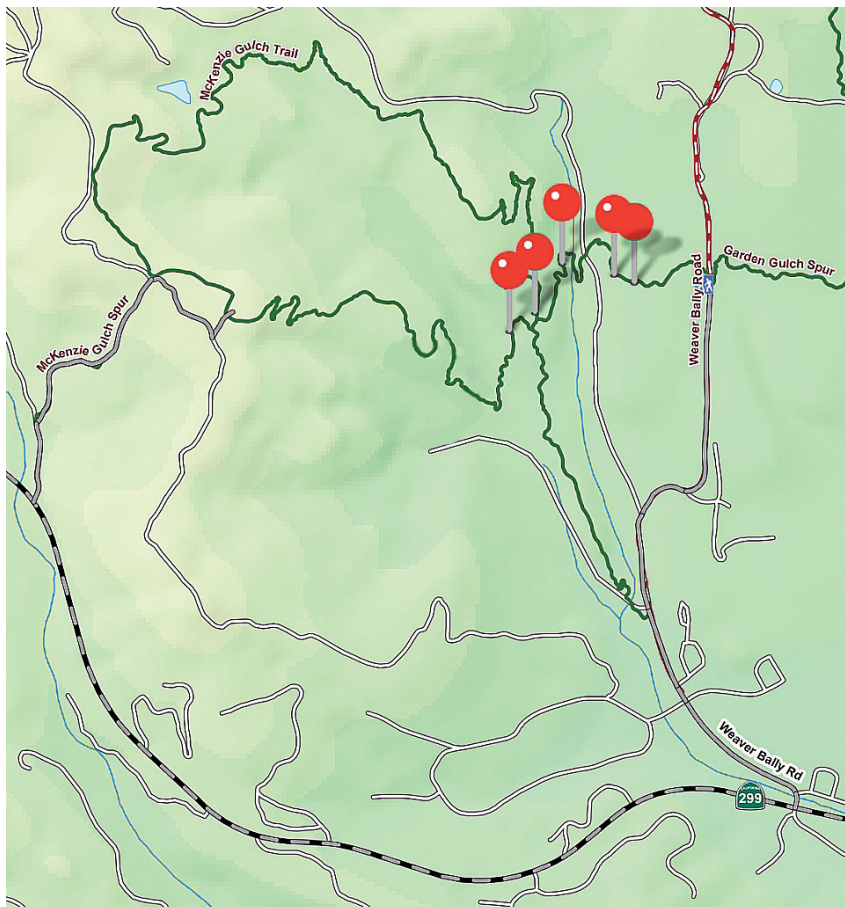
generous support from the US Forest Service, Rotary Club, Lions Club, and E Clampus Vitus.

By promoting more youth to explore nature and all that it has to offer, we are inspiring future land stewards for generations to come!

If you would like to embark on our treasure hunt to find the interpretive signs, use this map or contact Elizabeth at the Trinity County RCD to receive a brochure!

Email: esandoval@tcrccd.net

Phone: 530-623-6004 x 209



Locations of educational signs focused on forest ecology, hydrology, and the historical Syke's Mine located on the McKenzie Gulch Loop.

Informed, Structured Decision Making

Six work groups within the Trinity River Restoration Program (TRRP) join together across disciplines to support the adaptive management efforts necessary to meet restoration objectives on the Trinity River. Each work group has an area of emphasis related to river restoration, ranging from physical processes in the river to aquatic and riparian ecology. Partners in the TRRP are represented on each work group by individuals with a background in the relevant disciplines, including fish biology, aquatic ecology, physical science and engineering.

TRRP work groups meet throughout the year to monitor progress and refine restoration practices. Each work group meeting is open to the public, with meeting dates and agendas posted in advance on the TRRP calendar page:

<https://www.trrp.net/calendar/>

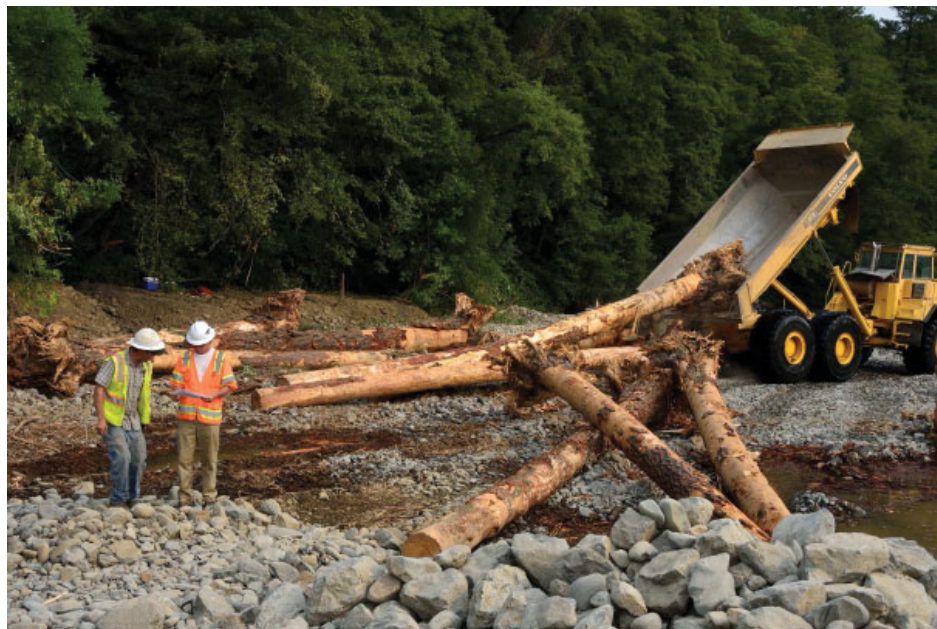
During this time, TRRP technical work groups, the Trinity Management Council and all other public meetings will be held virtually. Meeting details and login information can be found on the agenda document for each meeting.

The *Interdisciplinary Team (IDT)* coordinates the activities of TRRP technical work groups and integrates multi-disciplinary assessments into management recommendations to the Trinity Management Council. An on-going priority for the IDT is an initiative to identify hypotheses and research questions related to adaptively managing restoration flows.

<https://www.trrp.net/inter-disciplinary-team-idt/>

The *Design Work Group (a.k.a Design Team)* provides feasible channel rehabilitation designs for the mainstem Trinity River sites identified within the 40-mile focal reach. This stretch of river, from Lewiston to the confluence of the North Fork Trinity River, is the focus of TRRP's restoration efforts. Within the work group are individual teams represented by various entities from the TRRP partner agencies. In 2021, the work group will continue evaluating proposed projects at Oregon Gulch and Sky Ranch. They will also be evaluating existing conditions and ideas for upcoming projects with other stakeholders.

<https://www.trrp.net/design-team/>



The Design Team works collaboratively to design projects from the initial concept through to the implementation phase.

Trinity River Restoration Program, cont.



The Fish Work Group provides technical support and guidance to the TRRP concerning fish population and fish habitat monitoring. Assessments performed by the Fish Work Group inform decision-making and management to help successfully fulfill the goals of the program. Recently, the work group developed a list of changes to management that will inform the development of a refined adaptive management plan. See figure 1.

<https://www.trrp.net/calendar/fish-workgroup/>

The Flow Work Group focuses on all technical aspects of restoration flow releases from Lewiston Dam into the Trinity River. This includes flow release scheduling and evaluation of these releases in meeting restoration goals and objectives on an annual and multi-annual basis. The Flow Work Group also makes management recommendations to ensure water temperatures in the Trinity River are sufficient to meet the needs of native aquatic species. The work group uses an ecosystem and multi-disciplinary-based approach in undertaking its activities. Current priorities for the Flow Work Group are developing proposals and hydraulic modeling for the 2021 water year based on early water year projections.

<https://www.trrp.net/flow-temperature-workgroup/>

The Physical Work Group provides recommendations on the amount of sediment, specifically spawning gravels, to add to the river based on the amount of water available for restoration flows. The work group also guides data collection

and analysis to track how sediment (gravel, cobble, and finer sediment) move through the river over time. The information collected by the physical work group is used to inform channel rehabilitation designs, flow scheduling, and gravel augmentation to achieve a more complex river channel. The Physical Work Group recently completed several summary reports on a variety of topics including coarse sediment, fine sediment, and channel complexity. These summary reports will support development of broad objectives and targets to refine management actions.

<https://www.trrp.net/gravel-physical-workgroups/>

The Watershed Work Group identifies and implements restoration activities as described in the Trinity River ROD. The group pursues high-priority watershed restoration activities in coordination with other organizations in the basin.

<https://www.trrp.net/watershed-workgroup/>

The Riparian and Aquatic Ecology Work Group focuses on how management actions will influence aquatic and riparian ecology. The work group emphasizes riparian and aquatic species when evaluating channel rehabilitation designs and restoration flow schedules. Recently, the work group focused on refining their associated objectives and targets, developed the riparian encroachment synthesis report, and assisted with revegetation design and planning for the Chapman Ranch Phase B project.

<https://www.trrp.net/riparian-aquatic-ecology-workgroup/>

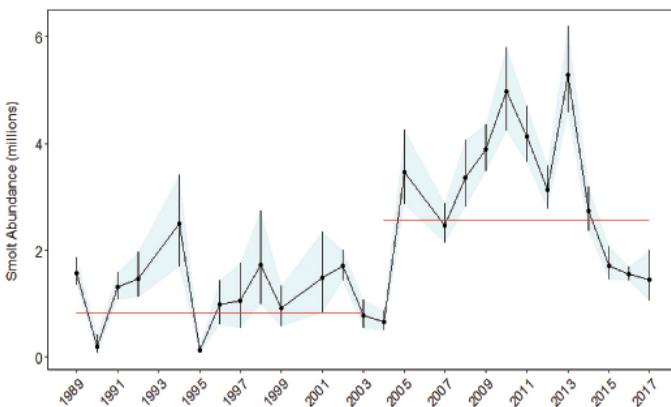


Figure 1. In addition to evaluating annual fish populations and habitat changes, the Fish Work Group provides information on long-term fish population trends to inform management actions. The Change Analyses graph above, plots naturally produced juvenile chinook salmon from the Willow Creek Trap site from 1989 to 2017.



One focus of the Riparian and Aquatic Ecology Work Group is to evaluate how management action will influence native riparian vegetation, a critical component to a healthy river ecosystem.

Trinity County RCD
P.O. Box 1450
Weaverville, CA 96093



Resource Conservation District

Your Local Conservation District

Established 1956

District Board Meetings

Third Wednesday
5:30 PM
Open to the Public

District Office

30 Horseshoe Lane
PO Box 1450
Weaverville, CA 96093

Telephone

(530) 623-6004
FAX 623-6006

E-mail: info@tcrd.net

Internet: www.tcrd.net

The Trinity County Resource Conservation District (District) is a special district set up under state law to carry out conservation work and education. It is a not-for-profit, self-governing district whose board of directors volunteer their time.

The District Vision

The District envisions a balance between utilization and conservation of our natural resources. Through economic diversity and ecosystem management our communities will achieve and sustain a quality environment and healthy economy.

The District Mission

To assist in protecting, managing, conserving and restoring the natural resources of Trinity County through information, education, technical assistance and project implementation programs.

The District Board of Directors are :

Mike Rourke, Morgan Rourke, Patrick Truman, Colleen O'Sullivan, and Greg Lowden.

The District is landowners assisting landowners with conservation work. The RCD can guide the private landowner in dealings with state and federal agencies. The RCD provides information on the following topics:

- Forest Land Productivity
- Watershed Improvement
- Water Supply and Storage
- Educational Programs
- Erosion/Sediment Control
- Wildlife Habitat
- Soil and Plant Types
- Fuels Reduction

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