

District Managers Corner

Wildfire is again affecting the communities of Trinity County. The safety of our families, friends, and homes is of utmost concern. We all need to heed the warnings and evacuation notices issued by the Office of Emergency Services, and educate ourselves about current situations with information from official sources. Websites such as the CalFire Current Incidents:

http://www.fire.ca.gov/current_incidents

The National Fire Situational Awareness:

<https://maps.nwccg.gov>

Or InciWeb:

<https://inciweb.nwccg.gov>

These sites generally have information and maps of wildfires as they are happening. Each of these sites have interactive maps with spatial data such as: active fire perimeters, fire

progression, and satellite fire detections. The Trinity Journal's website has also been a good source of current events related to fires affecting the county, such as the Carr Fire.

In an effort to help our communities stay safe and informed during times of emergency, the District has added links on the homepage of our website (<http://www.tcrd.net>) to track these incidents as they unfold. The District also continuously performs fuels reduction projects throughout Trinity County. Most recently our fuels crew has completed strenuous work on Oregon Street, areas west of Weaverville, Carville Loop, roadside shaded fuel breaks in the Trinity Knolls neighborhood of Trinity Center, and an EQIP fuels reduction project in close proximity to Weaverville. The crew's next focus is the Timber Ridge neighborhood in Weaverville.

Always remember to stay calm, stay informed, and stay safe.

2018 TCRCD Scholarship Winner



The District would like to congratulate this year's Natural Resources Scholarship recipient, Hanali (Dara) Gaeuman. Dara has lived in Trinity County since she was six years old. She loves to spend her free afternoons or weekends out on the river with her dad, on the lake with her friends, or walking with her dog Willow. She enjoys adventure, and how readily accessible this is in Trinity County.

This year at Trinity High School she was the Associated Student Body (ASB) President. This was her third year in ASB. She has previously served as Junior and Sophomore Class President. Throughout her time with Trinity High School she has been an athlete with focus on soccer, basketball, and track. She takes pride in having been named captain in all three sports.

She graduated Trinity High School in June of 2018, and was deemed salutatorian at graduation. She will be attending UC Berkeley in the fall of 2018.

Congratulations Dara. We wish you the best!



Trails Update

Trails are a vital component of recreation in Trinity County. Did you know that Trinity County RCD manages and works on trails in the Weaver Basin Trails System, and other trails throughout the county? The District's trail crew is limited to just two people, but we work in partnership with the US Forest Service, Watershed Research and Training Center, Trinity Trail Alliance, Weaver Basin Trail Committee, and the Weaverville Community Forest to see that these trails are maintained and improved.

We have been awarded a new grant this year to perform trail work on the Weaver Basin Trail System, and to connect Trinity Alps Wilderness trails in and around the Weaverville Community Forest. This contract comes from the Watershed Research and Training Center, with funds from the National Wilderness Stewardship Alliance, and supported by the US Forest Service and Trinity Trail Alliance.

The District is working on the Browns Phase II Rehabilitation project which funds maintenance on the Weaver Basin Trail

System, through an agreement with the US Forest Service. In April, the trail crew assisted with a hazard tree removal and other issues on the Musser Hill Trail. In mid-May and June, the crew performed trail improvements along the Garden Gulch Spur, East Garden Gulch, and Jackass Ridge including hazardous tree removal.



Trail maintenance on Jackass Ridge

Bowerman Barn

This May, the US Forest Service constructed a brand new interpretive trail at the Bowerman Barn on Guy Covington Road near Trinity Lake. This new trail offers a fun and active way to learn about the history of this area.

Originally hand-constructed by Jacob Bowerman in 1878, this barn has historical roots to Trinity County's pioneer days. The meadow was also a seasonal home for the Wintu tribe before settlement by the Bowermans.

The District created an interactive interpretive map to accompany you on your adventure through this piece of living history.

Please visit bowermanbarn.org or scan the QR code with your mobile device to view the story map, history, directions to the barn, and more. The QR code will work with any mobile device (you may need to install a QR code reader app depending on your phone), and is simple and fun to use. Give it a shot!



Check out the Bowerman Interactive Interpretive Map

In This Issue

District Managers Corner.....	1
2018 Scholarship Winner.....	1
Trails Update.....	2
Bowerman Barn.....	2
Young Family Ranch.....	3
Education and Outreach.....	4-5
Rekindling Fire Wisdom.....	6-7
TRRP - Salmon Habitat.....	8-9
Trinity County Water Use - Ideas for Conservation.....	10-11

Young Family Ranch

Frontier Day

2018 was the first Frontier Day festival in Weaverville! On May 12, 2018 the streets were lined with people who came back in time to the 1850's. The day was warm, sunny, and full of smiles and laughter.

That old time ranch feeling was found at the Young Family Ranch. The Back Country Horsemen came with a corral of horses. Julia Dixon brought sheep, goats, and chickens that the kids were able to pet and chase back into the pen. Dennis Rourke demonstrated water witching which left people in awe. Donna Rupp led a hand cranked ice cream demonstration with delicious home-made strawberry syrup. People flocked from downtown to get some of that sugary treat. Children had gold fever as they searched for gold nuggets awaiting discovery around the Ranch.



of a straw bale gardening demonstration, and led a scavenger hunt for the kids. Other children's activities included a seed inspection and identification game, and garden rock painting.

Live music by Leia Anneliese, Justin Grace, and Steven James was enjoyed by all in the Young Family Ranch's amphitheater.

A delicious meal of falafel gyros and cookies were served by Jacquelyn Waggoner, owner of U-Rok Bakery.

Additional informational and educational booths included: the UC Master Gardeners, Children's Garden, Farmers Market, Health and Human Services (Public Health), and 4-H Club. The District's crew had a booth with information about native Showy Milkweed (*Asclepias speciosa*) and Toyon (*Heteromeles arbutifolia*). They also led tours of the District's native plant nursery.

Annual Plant and Seed Exchange

This year we celebrated the 10th anniversary of the free annual Plant and Seed Exchange hosted at the Young Family Ranch. Filled with live music and happy plant enthusiasts, this event was a huge success.

The Plant and Seed Exchange provides a family friendly event for people to share their plant starts, seeds, plant cuttings, and divisions. Approximately 80 people came to join in the festivities. Plants were donated by community members, Ace Hardware, and the University of California (UC) Master Gardener's Program. Holiday Market donated supplies for the bike blender which made smoothies as a fundraiser for the Junction City Elementary School garden. The UC Master Gardener's provided support throughout the event, led tours



Education and Outreach

There was a lot of excitement and activity for the Trinity County RCD's (District) Education and Outreach department this spring. The new Education and Outreach Coordinator was hired in February and got to work planning and organizing the upcoming projects and events.

The Art of River Science

April began with the Art of River Science event at the April Art Cruise. Staff from the Trinity River Restoration Program (TRRP) and the District organized a "pop-up" art venue at the former 5 Windows Art Gallery. This art and science exhibit was comprised of a portion of the Stream Salmonid Simulator (S3) mapping software developed by the US Fish and Wildlife Service to measure habitat capacity; 360 degree/ spherical photography of the Trinity River; a timeline about the Sawmill (Cemetery Hole) Rehabilitation site in Lewiston; photography by Ken DeCamp; the famous metal steelhead artwork by Kelly Corrigan; hand drawn artwork by Derek Rupert; "Name that Fish" game and prizes; a kids area with the new Beaver coloring book developed by TRRP, and more.

Links to the 360 photography can be found on the TRRP homepage at www.trrp.net.

More Kids in the Woods

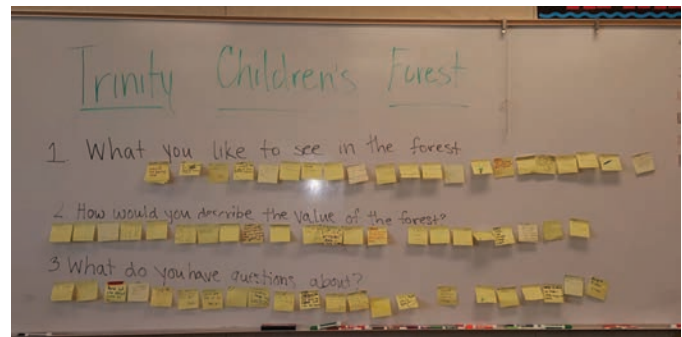
Funded by a grant through the US Forest Service (USFS) called "More Kids in the Woods", the District and USFS staff led a field trip with approximately thirty fourth-grade students, as well as teachers and parents, to the recently designated Trinity Children's Forest on Weaver Bally Road. Children were able to enjoy this outdoor classroom while learning about forest ecosystems and observing the natural world around them.



Hiking in the Trinity Children's Forest

The following day, District staff conducted a class field trip where students were able to express their individual experiences of the hike. After the classroom discussion, students created artwork that will be displayed on the kiosk sign at the Trinity Children's Forest for the students to take their families to see.

In 2018 the More Kids in the Woods grant will allow us to conduct six day-hikes for the Summer Day Camp campers in partnership with Ascend Wilderness Experience, install interpretive signs at the Trinity Children's Forest, sponsor one student to attend the Ascend Wilderness Experience backpacking trip, and more.



Students share their individual experiences and opinions of what the forest means to them

Fire Ecology event at Junction City Elementary School

In fall of 2017 the Helena Fire made a huge impact on the Junction City community. In late April, the District coordinated a fire ecology event for the students of Junction City Elementary School in partnership with Junction City Elementary School staff, Junction City Fire Department and engine, USFS staff, and two USFS fire engines. The children rotated through fun and interactive activities and games to learn about fire ecology. At the end of the event all of the fire trucks sprayed water into the air while the children ran underneath, got soaked, and had a blast. This event was sponsored by TRRP.



Fire trucks staging for the Fire Ecology event

Education and Outreach, cont.

Spring Wildflower Hike

The last big event in April was a free wildflower hike on the Day Ranch Trail near East Weaver Campground. The hike was led by Pat Frost, Natural History instructor at Shasta College, and Lusetta Sims, Botanist at the USFS. Although it was a rainy Saturday, approximately 50 people came and learned about native wildflowers and plants. A free lunch, sponsored by the Shasta College Foundation and catered by Jacquelyn Waggoner, owner of U-Rok Bakery and Far Out Dinners, followed the hike.

This hike would not have been possible without the help and support from the Trinity River Restoration Program, US Forest Service, Shasta College Foundation, Trinity County RCD, Friends of the TCRCD, Weaverville Community Forest Steering Committee, Weaver Basin Trail Committee, and Trinity Trail Alliance.



Community gathers to learn about wildflowers on a rainy Saturday



Purdy's fritillary (*fritillaria purdyi*)

The Day at the Wetlands

Each year, fourth grade students from Weaverville Elementary School attend "Day at the Wetlands" at the Weaver Basin Wetlands. The students are divided into multiple groups, and rotate through each educational "station". The stations this year were: wetland scavenger hunt, junior ranger training and handbook, bird migration game, all about mammals, learning about wetland soils, macroinvertebrates, and environmental engineering and surveying.

The students had a great time observing wildlife, learning about nature, and getting their hands dirty.

This event would not have been possible without the support of Trinity River Restoration Program, Weaverville Elementary School, US Forest Service, Watershed Research and Training Center, and community volunteers.



Environmental engineering and surveying with Oliver Rogers

Rekindling Fire Wisdom – Recovering Burning Traditions

Submitted by
David Jaramillo
Fire, Fuels, & Forestry Program Director
The Watershed Research & Training Center

Have you ever wondered how our local forest lands provided sustenance and support for large populations of native people and how they can sustain us in the future? From time immemorial, large populations of local and regional tribes flourished on these lands. From the production of tightly woven and beautiful baskets, to bows and other tools necessary to live in this complex environment, this land was rich and bountiful. Intentional human interactions resulted in this abundance. This richness was greatly increased by prescribed burning, which was used for many reasons including coppicing, hunting, and increasing growth and yield of desirable plants.

At one time these forests were brimming with activity. The forest ecosystem, particularly the understory, was robust and thriving through intentional human interaction. Besides supporting the highest conifer diversity in North America, Trinity County also supports once abundant oak woodlands and hundreds of terrestrial species. These rich ecosystems sustained a smorgasborg of plants and animals which equated to tools, food, and other materials. The vast oak groves produced abundant acorn crops which were a staple food item for humans.

So what's changed?

Mining, logging, and development are a few key factors that have led to major changes in our environment. However, the main factor in reducing the abundance and carrying capacity of our ecosystems is fire exclusion. The fact that we as a country outlawed burning in the early 1900's has degraded our ability to live here in a safe and sustainable way. This, coupled with the fact that we can now easily hunt and gather at the local grocery store has dissolved our obligation to tend the land where we live, and has contributed to the environmental crisis that we face. The plants and animals that

once provided for generations of people, are now becoming relics. Walking these lands today, it is hard to fathom how one might find essential plant and grass selections for making a decent meal, or weaving baskets, or making a bow and arrow for hunting. Quite frankly, we would likely starve today.

Imagine the time when the forest lands of Trinity County were described as "The most heavily refined agricultural system on earth." So refined that the early Europeans did not recognize that they were actually walking through a

tended garden. It was a garden tended by people who had an intimate relationship and understanding of the landscape. In particular, it was a garden tended by fire. When I first heard this term by a dear

'Imagine the time when the forest lands of Trinity County were described as "The most heavily refined agricultural system on earth." So refined that the early Europeans did not recognize that they were actually walking through a tended garden'

friend and mentor, I recall thinking about my own vegetable garden and how different it was from the tended landscape that this agricultural system implies. For starters, my garden is filled with plastic drip tube that has negative impacts to the environment. In contrast, tending the lands as the native people did produced no waste products nor did it require the toiling of tractors or use of petrochemicals. Tending this forgotten garden has been a major theme in my life ever since.

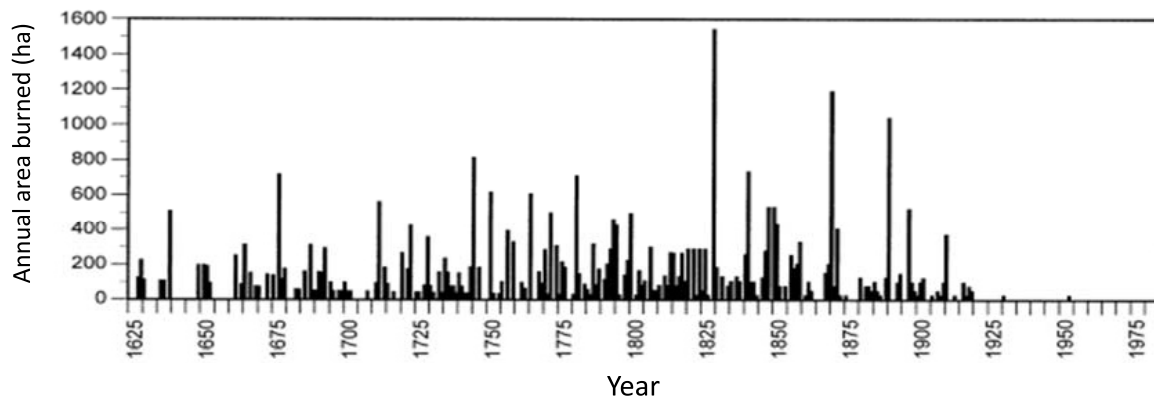
Perhaps part of the solution comes from some of our regional tribes and partners who are working to recover the lost art of burning with good fires. This recovery stems from a desire to restore and maintain cultural roots with fire as well as to protect communities from the wildfires that now ravage through our 21st century establishments. Tribes and other interested parties are working together in Humboldt and Trinity Counties to put ancient burning practices into action. The results have been stunning. Where we are bringing good fire back to the landscape many plants, which have been covered by layers of vegetative litter, begin to spring back to life as the layers are burned away. Almost immediately animals return following the new life brought to the forest by good fire.

Locally we're engaged in burning restoration projects throughout much of Trinity County. Through these restoration projects, we are engaging local and national partners to bring

Rekindling Fire Wisdom, cont.

good fire back to the ecosystem. Some of these partners include local volunteer fire departments, US Forest Service, CAL FIRE, Trinity County RCD, and the Nature Conservancy. Much of this work is being conducted on private properties, however, the USFS is also bringing fire back to many of their

project areas. Throughout the county we need more good fire on the landscape. Our goal is to burn on every possible burn day. Even this will be a drop in the bucket of how much fire is needed on our landscape in order to sustain the abundance that is possible.



Annual area burned between 1628 and 1995 in the Hayfork study area.

This figure, shows annual area burned in a study location in Hayfork, CA. Note the frequency of fires observed. Note also the dramatic halt in fires beginning in the early 1900's. This halt is a result of aggressive fire exclusion policies. ** CITATION - Taylor, A.H and Skinner, C.N (2003) "Spatial Patterns and Controls on Historical Fire Regimes and Forest Structure in the Klamath Mountains" Ecological Applications, 13(3), 2003, pp. 704-719



Rare photo captured of a wild *David jaramillo* in his native environment

Salmon Habitat

What do salmon need to survive?

Water, of course! But river water isn't the only important part of salmon habitat. Another home to the salmon is the ocean. The ocean has plenty of water, but if it doesn't have the right food, or is filled with predators, then salmon will not do well. The same is true for river habitat.

Good in-river habitat contains food of the right size and type, escape from predators, along with clean and cool water moving at the right speed. Here are just a handful of factors that are critical to salmon throughout their life in the river:

Food - salmon eat and prey differently throughout their life stages. Young salmon eat insects, invertebrates, and plankton. Adult salmon often feed on small fish.

Escape and shelter from predators – young salmon in particular need plenty of wood and vegetation so they can blend in with the background to avoid predators.

High Water Quality – salmon need cool water free of fine particles, such as sand, with appropriate flows to maintain dissolved oxygen levels.

Diversity – Adult salmon often hold in large, deep cold water pools that are near spawning riffles. Young salmon prefer shallower and cool water with plenty of food and ability to hide in natural debris.

What contributes to good salmon habitat?

Connectivity

Salmon benefit in many ways when a river is connected to its floodplain. It helps bring bugs into the river where young salmon can reach them. Healthy native vegetation, which may eventually end up in the river and provide cover for young salmon, grows better on connected floodplains.

In many places on the Trinity River, historic dredge mining eliminated floodplain connectivity with tailings piles that tower above the natural floodplain, in some places by as much as 70 feet.

To better connect the river to its floodplains, the Trinity River Restoration Program (TRRP) completes channel rehabilitation projects and provides guidance for fluctuating restoration flow releases from the dam.

Flows and Spawning Gravels

The gravel in riffles on the river are free of sand and help maintain dissolved oxygen levels and high water quality.



Juvenile Chinook salmon develop vertical marks on their bodies, called parr marks, which help camouflage them against sticks and natural debris.

Salmon often spawn near these riffles because the gravel and flow conditions are exactly what is required to support and protect the growth of salmon eggs.

Complexity

When a river is connected to its floodplain and contains variable flows, gravel, and large wood, the river channel is able to migrate naturally and create more complex habitats that are used by salmon at different life stages.

A century of mining and decades of water diversion turned the Trinity River, below Lewiston Dam, into a narrow channel with limited habitat availability for salmon of different life stages. Restoration flows, channel rehabilitation projects,



An existing riffle at the 2017 channel rehabilitation site was preserved and incorporated into the project

Salmon Habitat , cont.

and adding gravel to the river are all intended to help recover more complex habitats so that salmon thrive in the Trinity River.

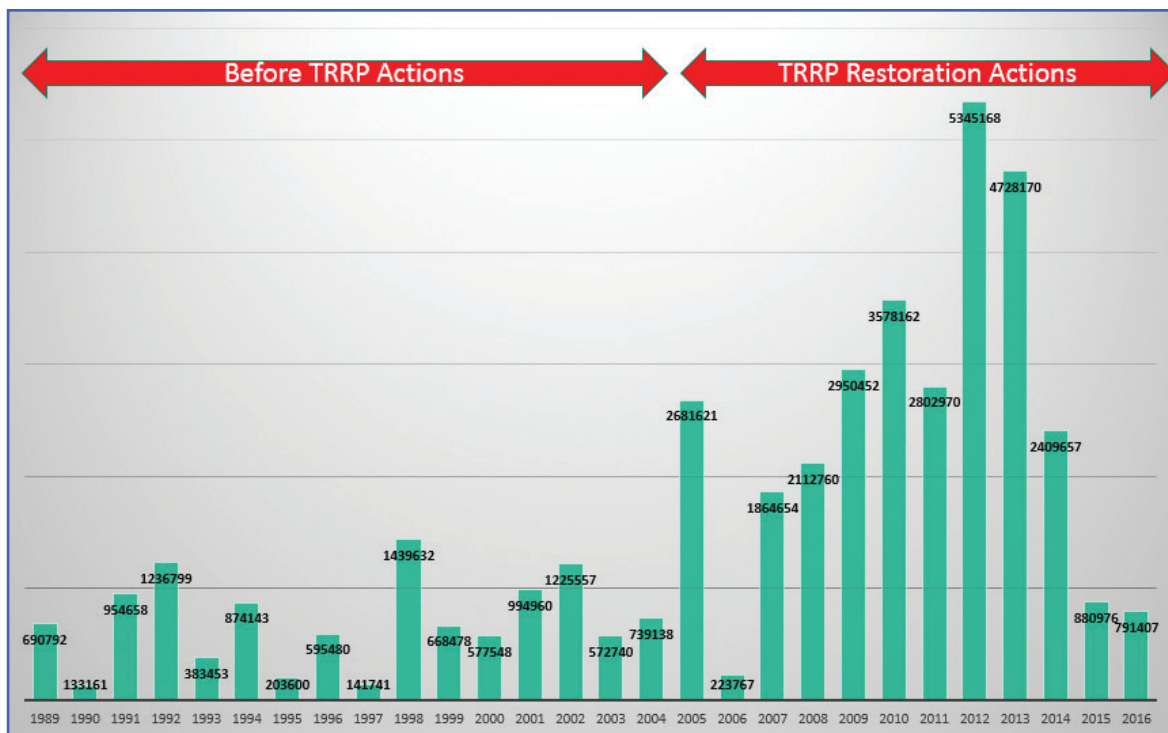
Efforts toward this goal are monitored through an Adaptive Management process that is used to inform future restoration actions. As in-river juvenile habitat improves, the numbers of young fish able to survive and migrate to the ocean will also improve. Since the program began implementing restoration actions in 2005 the number of young fish leaving the restoration reach, as measured at juvenile fish traps, has

increased noticeably. Before TRRP restoration actions, the highest estimations of young fish leaving the river was 1.4 million, dropping below 150,000 in some years.

Since TRRP began restoration in 2005, more juvenile fish have survived in the Trinity than before. Over 2 million out-migrating fish have consistently been estimated leaving the Trinity on their way to the Pacific. Even with all the fish going out of the Trinity, they still have to survive difficult Klamath River, estuary and ocean conditions before they can return to their spawning grounds to complete their life cycle.



The photo on the left shows a section of the Trinity River with physical complexity and likely contains more habitat types for fish. The right photo shows a narrow, simple reach of river



Juvenile salmon outmigration population estimates from the Willow Creek trap site

Trinity County Water Use - New Ideas for Conservation

If you haven't heard ANYTHING about water conservation in the last decade, you have been making a conscious effort to avoid the topic (or lived in a cave). While the drought of 2014-2016 was of historic proportions, and last year was a soaker, it can take several years for watersheds to recover. Here are some ideas for all of us to consider (even cave dwellers).

1. Practice Old Standards

First and foremost, practice old standards: fix leaky faucets, pipes and tanks; turn off the water when brushing your teeth; and don't water the sidewalk/driveway/road.

2. Replace Old Toilets

Replace old toilets with new "Water Sense" certified toilets. The Environmental Protection Agency reports that toilets manufactured before 1980 use an average of five gallons per flush, sometimes more. Water Sense toilets use 1.28 gallons per flush or less. A family of four, with toilets made before 1980, would SAVE 27,000 gallons of water PER YEAR by switching! That's enough to fill a large swimming pool! If your toilets were made between 1980 and 1994 (when the average gallon per flush is estimated at 3.5 gallons) that annual savings would be 16,000 gallons. Low volume toilets have come a long way from when they were first introduced to the market. Consider a dual flush model if you're concerned about not enough clearing power.

3. Consider Your Vegetable Garden Size

Re-consider the extent of your home vegetable garden. When you plant six watermelon plants and water them all summer long in anticipation of that first juicy bite of sweet crispy goodness, consider how many melons you and your family can actually eat and share. Ask yourself: 'Do you really need eight varieties of tomatoes? Are you going to put up and store everything that can't be eaten fresh?' Give yourself honest answers and see if you can't SCALE BACK YOUR GARDEN to some extent. A wasted harvest equals wasted water.

4. Mulch

Mulch everything you water outside. MULCH benefits all plants. Try it – you'll be amazed.

5. Drought Resistant Plants

Consider replacing all or part of your lawn with native and drought resistant plants. The state of California has a TURF REPLACEMENT rebate program for up to \$2,000 for customers

of both Weaverville CSD and Trinity County Waterworks District (Hayfork). More details on their website:

<http://www.saveourwaterrebates.com/turf-replacement-rebates.html>

6. CSD Water

If you are fortunate enough to have riparian rights to a creek or river AND have water supplied to your house by a Community Service District – consider always using the CSD water. They are regulated, they know how to draw water legally and judiciously, and they won't accidentally suck the creek dry. Fish and wildlife have no back up water supply.

7. Talk To Your Neighbors

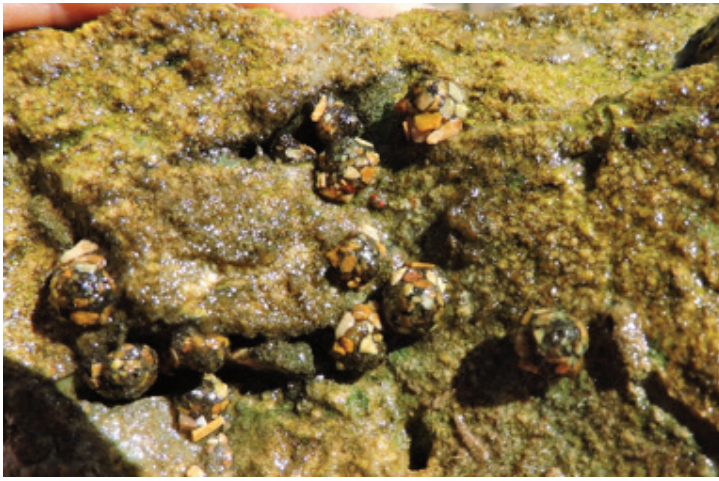
If you've made it this far, you are very interested. Here's your informational golden nugget: talk to your neighbors. What??? Share your knowledge of water conservation. Even for those who receive water from a CSD – that water comes from a creek too! This is especially important for neighbors who only use surface water for their domestic use. If you coordinate your usage with your watershed neighbors, everyone benefits and you may have a much longer water season.

8. Time Of Day

Time of use, use of timing. The time of day you use water impacts your watershed. There is more water available while the sun is down because trees and plants aren't using as much, resulting in increased flow in creeks and rivers. When you water outside, less will be lost to evaporation when done during the cooler parts of the day. The worst thing you can do is turn on an overhead sprinkler at 3 pm on a hot July afternoon. The best thing you can do is to use drip irrigation, with lines running under mulch, and on a timer set for 5 am.

The Trinity County RCD currently has a program funded by the Wildlife Conservation Board for people who use water from West Weaver Creek and Little Browns Creek. This program has the goal of keeping more water in the creeks. Because it is a state funded program, there are no cannabis restrictions as there are with federal grants. The RCD is a non-regulatory special district of the state – we are here to assist people in protecting, managing, conserving, and restoring the natural resources of Trinity County through information, education, technical assistance, and project implementation programs. If you would like to know more about this program, contact Donna at 623-6004.

Time of Use: Keeping water in the creek for our neighbors.



Mobile vs. non-mobile: Some water bugs can't leave when the water dries up.



Juvenile salmon need cool water with dissolved oxygen. They stay in our creeks through the driest part of the year.



Amphibian young (tadpoles) can get stranded in small disconnected pools and die if the creek is overdrawn.

Trinity County



Resource Conservation District

Established 1956

Trinity County Resource Conservation District
P.O. Box 1450
Weaverville, CA 96093



District Board Meetings

Third Wednesday
5:30 PM
Open to the Public

TCRCD 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 (TCRCD) 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 TCRCD Vision

TCRCD 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 TCRCD Mission

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

TCRCD Board of Directors are
Mike Rourke, Morgan Rourke, Patrick Truman,
Colleen O'Sullivan, and Greg Lowden.

The RCD 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

This issue of the *Conservation Almanac* is funded in part by grants from the Trinity River Restoration Program, Young Family Ranch Trust, California Fire Safe Council, and the US Forest Service.

Printed on Recycled Paper with Vegetable Inks



This institution is an equal opportunity provider in accordance with Federal Law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability.