foriver

WINTER 2020 TRUCKEE RIVER CURRENTS

25th Annual Truckee River Day Celebration

We volunteered like it was 2020!

The first Truckee River Day in 1996 was a rallying cry for our commitment to wetter meadows, cleaner streams, and healthier forests and habitats for native species. Since then, thousands of volunteers have come out to do their part and have made the last 25 years of restoration success possible.

Truckee River Day was different this year. We were not able to bring volunteers out to work on restoration sites with us, so we invited everyone to celebrate the work done by Truckee River Day volunteers and showcase 25 years of restoration work across 10 different project sites!

From some of our earliest projects in Coldstream Canyon, to work that wrapped up a few weeks ago in Bear Creek Meadow, participants explored vibrant, healthy ecosystems and volunteered by sharing their adventures on social media.



Discovering rainbow trout in the pools of Prosser Creek!

Thank you to all of our volunteers who participated in the celebration. Even though we couldn't work side-by-side with you this year, we value everything that you bring to Truckee River Day, the Watershed Council, and our community. By raising awareness of the value of restoration, among locals, visitors, and nature-lovers alike, we all can give back to the watershed.



restoring Bear Creek Lower Meadow foriver 🇱 🦏 🛪 🕻 Michele Prestowitz 530-550-8760 x4



Volunteers sharing their adventures at Glenshire Pond!

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We believe a more sustainable tomorrow starts with the watershed. Our goal is to restore the resiliency of our environment—so nature and humanity can thrive together for generations.

Volunteer to Connect the Watershed and Your Community

Everyone can get involved to shape the future

How Can I Help?

Introduce us to your friends

Hosting a Virtual River Talk is the best way to volunteer while in-person events are on hold. Being an Ambassador is easy all you need to do is invite your friends.

Call Sue at 530.550.8760 x5# to get started.

Join us for a Virtual River Talk. The Truckee River watershed is a place full of beautiful meadows, streams, and forests that we all experience and appreciate. Join us for a 30-minute virtual presentation about how human impact has damaged the Truckee River watershed, what we are doing to reverse the damage, and what you can do to help keep our shared home resilient for the future

- Hear about restoration projects and get updates on our work
- Meet and connect with fellow nature-lovers

Call Sue at 530.550.8760 5#

Volunteer by Becoming an Ambassador.

Share your interest in our work with your friends and family and introduce them to us. Host your own Virtual River Talk and connect others to help address the problems facing our watershed. All you need to do is invite your guests, and we handle the rest! Call Sue at 530.550.8760 5#

Spread Watershed Awareness. Share our posts on Facebook and Instagram to help raise awareness of our work! Then, share your own adventures around the watershed, from First 4 Miles to Perazzo Meadows. Help bring the community together to support healthy streams, vibrant meadows, and critical habitats. Use the hashtag **#meadowsforever.** Find all of our projects at meadowsforever.org.

Adopt-A-Stream. Participate in important biology and chemistry monitoring through our Adopt-A-Stream program. There are several ways to practice watershed science. We train and equip you.

*In-person volunteer events are not currently scheduled. Contact us and subscribe to our e-newsletter to get updates.

- Be a chemist:
- Monitor water temperature
- Measure conductivity
- Assess chemical pH readings
- Evaluate dissolved oxygen
- Measure turbidity
- Collect nutrient samples

Call Eben at 530.550.8760 7#



Sharing social media posts helps expand our audience and involve more people in our work.

We Missed You This Year

To protect the health of our community, it wasn't possible to host volunteer events like macroinvertebrate collection and lab nights, or even Truckee River Day as we usually know it. We exist to bring people together to help our watershed, and we can't wait to have you all back next year.

While some programs can take a year off without consequence, our 18-year record of water quality data depends on continuity. We relied on just a few of our veteran volunteers with their families to collect data and samples, monitor streams and habitat, and to complete some critical improvements and revegetation work.

Thank you to these volunteers, whose efforts preserved our critical datasets and ensured that restorations will continue to flourish.



Revegetation is critical to any restoration project.

How Does My Gift Make a Difference?

Every donation to the Truckee River Watershed Council is important. Did you know when you donate to TRWC, your gift does much more than just help us keep on lights on—your donation is leveraged in grant funding for our projects. Each project first requires building a partnership, planning, permitting, fundraising, and restoration design well before dirt can be moved or vegetation can be planted. Your \$100 donation grows to \$10,000 through grants! Interested in giving?

Visit our website at: www.truckeeriverwc.org

THANK YOU, 2020 VOLUNTEERS

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Building mock beaver dams is a family affair!

Reviving Bear Creek Lower Meadow

Reconnecting a meadow and re-establishing habitat

Bear Creek Lower Meadow used to be a vibrant, wet meadow with multiple channels crisscrossing its surface. Unfortunately, a long history of past land use and development degraded the meadow and left Bear Creek confined to a single, eroding channel. With no supply of surface or groundwater, the meadow was drying out. We set out to fix it. Here's what we did.



Logs and boulders embedded in the streambank will protect against erosion and provide aquatic habitat.

Re-created riffles and pools in the creek

Formerly, Bear Creek featured many rock step-pools and riffles. Past land use caused them to wash out, and the channel became degraded as a result.

Rock riffles, logs, and boulders will create more habitat and a healthier stream.



To recreate natural conditions, we built riffles and rills in the streambed, using rocks sized from cobbles up to 2-ton boulders. These slow down the flow of water and create a varied channel, reducing erosion. The more natural flows will also raise the water table and increase soil moisture, keeping the lower meadow wet and vibrant.

Placed in-stream wood structures

We placed logs in the stream channel, and embedded trees into the stream banks. The logs stabilize the banks, reducing erosion and increasing channel variation. Additionally, the root wads provide great habitat for fish and macroinvertebrates!

Reconnected a floodplain

With the channel now repaired, we reconnected Bear Creek to the lower meadow. By supplementing the natural rock, we raise the water surface, allowing the creek to access its floodplain again. Now, instead of eroding the channel, high flows can fill the meadow's surface channels and water the meadow like it did for hundreds of years.

It takes a dedicated team to do what we do. Thank you to our partners: The US Forest Service, Tahoe National Forest, Placer County.

Thank you to the funders who are making this work possible: The Donors of the Truckee River Watershed Council, The Martis Fund, CA Department of Fish and Wildlife via Prop 68.

Channel incision: When a stream bed becomes deeper over time, disconnecting the stream from its floodplain

Headcut: When erosion results in an abrupt vertical drop in a stream bed **Overbank flow:** When flows leave the stream channel and water the meadow **Floodplain:** Low-lying area adjacent to a stream that receives flow during high flow seasons

Repairing Coldstream Canyon

Reducing erosion and creating habitat

Coldstream Canyon has been a site of heavy human disturbance over the past 150 years. Logging, road building, and gravel mining have all taken their tolls on the landscape, leaving behind eroding slopes and degraded habitats. But we can fix them. We've been tackling projects in Coldstream Canyon since our founding, and this summer we took some major steps towards repairing the damage. **Here's what we did this year.**

Improved dirt roads and small stream channels

Roadwork might not seem like part of watershed restoration, but dirt roads are by far the largest source of sediment in Coldstream Canyon. Runoff and snowmelt flow down the roads, carving channels and gullies and picking up sediment that ultimately ends up in the Truckee River. Solving this problem has immediate benefits for water quality.

This summer, we decommissioned unneeded roads, improved crossings, and built better drainage features on 13 miles of dirt roads in Coldstream. Watercourses that can withstand



& AFTER: A more gradual slope and large boulders slow runoff and reduce erosion in this improved watercourse.

high flows without washing out like the improved Emigrant Creek crossing—significantly reduce the amount of sediment that ends up in the river.

Created new wetlands

Gravel mining in the 1960s severely degraded the area around lower Coldstream's ponds. The activity left behind highly compacted soils that repelled water and prevented native vegetation from taking root, leading to increased runoff and erosion. We took advantage of a unique opportunity to expand critical habitat by building new wetlands here!

We removed the impermeable surface left behind by gravel mining. This immediately helped raise the water table and made it possible for sedges, rushes, and willows to grow. Look for this area to grow into a vibrant new wetland, filtering runoff and providing a habitat for herons, mergansers, and more as the grasses and wet soils return.

After replacing barren soil, look for this new wetland to spring to life next year! Erosion control fabric helps hold the new soil in place while the vegetation grows.



It takes a dedicated team to do what we do. Thank you to our partners: California State Parks, Sierra Pacific Industries.

Thank you to the funders who are making this work possible: The Donors of the Truckee River Watershed Council, The Martis Fund, US Environmental Protection Agency with CA State Water Resources Control Board.

Giving with Greater Impact

There are many ways you can become a supporter of the Truckee River Watershed Council's work:

1. You can support critical restoration efforts and may be able to enjoy tax benefits when you make a gift of stock. By making a gift of appreciated securities, you may be able to deduct the current value of the gifted security while avoiding the taxation of capital gains.

2. The IRS Charitable Rollover allows individuals 70½ and older to make charitable gifts directly from a traditional IRA account without incurring federal income tax on the withdrawal.

3. Giving "In memory of" honors a friend or loved one's passion for restoring and protecting our rivers, streams, meadows and forests.

4. Create a birthday fundraiser on Facebook and ask friends to share in your support of our projects.

We thank the following donors who have contributed since November 2018. Together, they provide the resources to fund solutions to protect, enhance, and restore the Truckee River Watershed.

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Thank you members of the Together for the

Truckee Society. Your multi-year generosity has shaped the Truckee River Watershed Council's work and inspires meaningful changes in our community and watershed. Thank you for your support.

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How Do Meadows Mitigate Climate Change?

Healthy meadows provide critical habitat for all kinds of wildlife, support native vegetation, and improve water quality—but they also play an important role in mitigating the effects of climate change. This role will only become more important in the future, highlighting the importance of restoration.

Defend from drought and floods

Meadows are nature's sponge—they absorb rainwater and snowmelt, and release it slowly throughout the summer and fall. This function helps to both prevent flooding downstream during wet years, and sustains flows year-round in droughts.

Protect against wildfire

A healthy meadow has a high water table, wet soils year round, and lush grasses. These conditions protect against wildfire, slowing progress and acting as natural firebreaks. On the other hand, degraded meadows can worsen the danger, with dried-out soils and flammable brush instead.

Carbon sequestration

In addition to all their other benefits, meadows are carbon sinks, capturing carbon dioxide from the atmosphere. Plants capture CO2 from the air and sequester it in healthy meadow soil. As meadows degrade, however, they release their stored CO2 and become a carbon source. Restoration can reverse this process, helping mitigate climate change.



Degraded meadow soils resemble the carbondepleted soil on the left, while healthy ones look like the carbonrich soil on the right.



Even in October, the ground in Dry Creek Meadow is still wet. Restored meadows can resist fire all year long, until the snows arrive.



See Us on OpenRoad!

Check out our episode of OpenRoad with Doug McConnell on NBC Bay Area. Beth Christman, Director of Restoration Programs, spoke with Doug about our work in Perazzo Meadows, upcoming work in Sardine Meadow, and the importance of meadow restoration in the Sierra Nevada.



Point your phone camera at the code to watch!