

2019: A Summer of Meadows



See inside to learn about other meadows TRWC is restoring this summer.

This summer the Truckee River Watershed Council (TRWC) is restoring four meadows, making the Truckee watershed greener, wetter, and wilder—fixing forever.

Martis Wildlife Area Meadow

Two miles east of downtown Truckee on CA Highway 267

Meadows provide a stark contrast to the forest and mountains that surround them. Meadows are open. Alive. Abuzz with birds, bees and wildlife. A backdrop of big sky above a field of flora.

Martis Wildlife Area here in Truckee-Tahoe could be a perfect example of the ideal meadow. Except it's not.

Here's the truth. The meadow is starting to do what deserts do—repel water, instead of what meadows do—hold water.

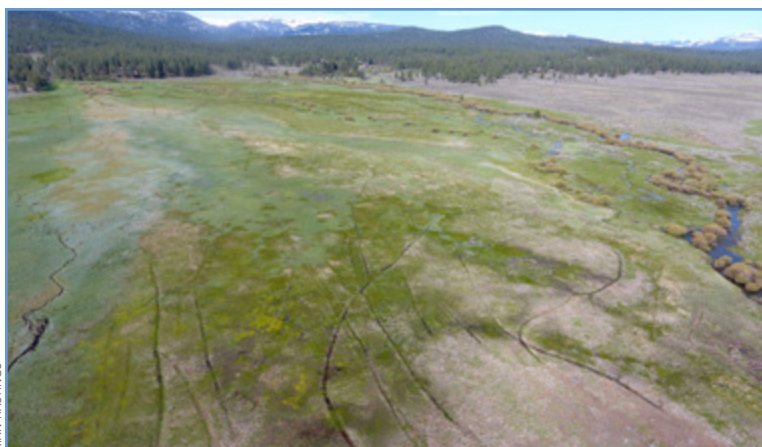
Decades of misuse from mining, grazing, logging and development has degraded the meadow's ability to perform its natural hydrological function. Which is exactly why the time is now—this summer—for a major restoration project.

TRWC is restoring the Martis Wildlife Area with project partners Northstar Community Services District, Northstar California Resort, and United States Army Corp of Engineers. Here's what we're fixing:

- 70 acres of wet meadow
- 2 miles of streams
- Habitats for fish, birds and mammals
- Revegetation of native wetland and riparian species

For more information about the Martis Wildlife Area project, visit meadowsforever.org. For trail access and recreation in the Martis Wildlife Area during construction, see page 8.

An aerial view of Martis Wildlife Area shows the damage and degradation in the meadow that will be reversed during the restoration.



BRIAN HASTINGS

Donated photos credited; others owned by TRWC.

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Volunteer to Help Fix Forever

Everyone can be part of the solution

Become an Ambassador. Invite 10 of your friends to a River Talk. In just one hour you and your guests will learn how the Truckee River watershed, one of the most breathtaking places on earth to hike, fish, ski and swim, can become a climate solution—buffering drought, flood, and wildfire.

- Hear about our restoration projects and volunteer opportunities
- Meet fellow river-lovers

Call Deidre at 530.550.8760, 3#

Be a Weed Warrior. Help prevent and control invasive weeds in the Truckee River watershed. Non-native weeds can invade anywhere. Neighborhoods. Meadows. Wilderness. In fact, there are over 2,800 infestations of nearly 60 non-native invasive plant species in the Truckee River watershed—and you can help. Call Matt at 530.550.8760, 6#



CATHY HOWARD

How do I volunteer?

SUBSCRIBE
to our weekly e-newsletter to stay up to date with upcoming events.

FIND A PROGRAM OR EVENT
you're interested in and RSVP to the staff member.

Truckee River Day, October 20. Engage in a solution. Work alongside your friends—and make new ones. This year, volunteers will:

- Restore selected sites
- Plant native vegetation
- Protect sensitive areas
- Create resiliency to buffer drought, flood and wildfire
- Repair our mountain home

Call Michele at 530.550.8760, 4#

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.

Be a biologist:

- Collect aquatic organisms
- Learn field collection techniques and habitat assessment skills
- Learn about aquatic insects
- Identify benthic macroinvertebrates (BMIs)

Call Beth at 530.550.8760, 1#

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#



JENNIKA RAIHN

Perazzo Meadows

Fifteen miles north of the Town of Truckee in the northern Sierra

Surrounded by snow-capped peaks to the west and upland forest to the north and south, the intricate network of meadowland in Perazzo is arguably one of the most breathtaking stretches of the Truckee watershed. The meadows are ranked by state and national agencies as some of the most valuable habitat in the Sierra Nevada. However, the meadows are degraded from extensive modification beginning in the late 1800s, followed by logging, road construction and dairy farming in the early 1900s. Meadow streams were collected into a channel causing erosion and drying out vegetation. Streams on their natural courses overtop their banks every year or two, inundating the meadow,



BETH CHRISTMAN

ABOVE: Post-construction in Upper Perazzo Meadow. BELOW: Lower Perazzo Meadow, scheduled for restoration August 2019.



BETH CHRISTMAN



BETH CHRISTMAN

Heavy equipment opens up remnant channels.

watering vegetation and filtering out sediment more effectively. But now it takes a 10-year flood event to overtop the eroded banks of the Little Truckee through Perazzo Meadows. This also means water isn't retained by meadow soils in the summer, and the stream gets too warm for many fish species to survive.

The Truckee River Watershed Council identified problems with Perazzo in 2008, and completed the first phase of restoration in 2010. Habitat recovery in these places has been remarkable.

This summer, the TRWC and its project partners, the U.S. Forest Service and Truckee Donner Land Trust will complete the final restoration phase:

Expanding the Floodplain

By restoring streams to their natural channels, we allow the meadow to once again 'hold water'—a natural function of a healthy meadow.

Revegetating Meadowlands

Bringing back wetland plant species—like sedges and rushes—restores the meadow's ability to sustain life.

Re-establishing Habitats

Numbers of native species—like Willow Flycatchers and Sandhill Crane—are on the rise.

Nurturing Diversity

Improving habitats for wildlife—including bugs, birds, fish, deer, even black bear—has made Perazzo one of the most diverse meadow systems in the Tahoe National Forest.



BETH CHRISTMAN

Restoration will recover critical habitat in Dry Creek Meadow.

Dry Creek Meadow

Adjacent to Dry Creek in Russel Valley, north of the Town of Truckee

Although you may know of this meadow, you might not know modern roads, historic logging and skid trails, construction of a railroad grade, and undersized culverts have caused severe stream channel incision, headcutting, and lack of overbank flow—degrading the meadow. As the meadow dries out, sagebrush replaces grasses, sedges and willows. Meadow habitat, an important refuge for willow flycatchers and other native species, has diminished in size and function.

In 2012, TRWC completed a watershed assessment of the area in partnership with the U.S. Forest Service. Several restoration opportunities have been identified, including the Dry Creek Meadow restoration project.

The TRWC and the U.S. Forest Service will restore meadow hydrology by reconnecting historic stream channels.

Project Benefits

- 30 acres of mountain meadow restored
- Improve water quality and aquatic habitat
- Improve resiliency to climate change
- Improve surrounding forest habitat

Added together, the result is a healthier meadow for wildlife, for us, and for our future.

Mclver Dairy Meadow

North of I-80 on Donner Pass Road in the Town of Truckee

Known for its sledding hill, the meadow's historic use as a dairy, as well as more modern land uses, have contributed to the degradation of the meadow and its function as a wetland. Without a properly functioning wetland or floodplain to slow, infiltrate, and filter runoff, water from this site is flowing untreated directly into the Truckee River. When our water quality monitoring estimated 2 tons of sediment were being contributed from this site annually to the Truckee River, it was clear something had to be done.

With our partner, the Town of Truckee, we are going to restore four acres of wetland habitat while maintaining access for public uses and protecting historic building in the meadow.

Project Benefits

- Improve habitat quality
- Improve water quality
- Re-water dry portions of meadow
- Protect the foundation of a historic dairy barn
- Prevent continued erosion

By enhancing meadow function, water from precipitation will be naturally filtered, decreasing the amount of sediment that otherwise ends up in the Truckee River. This means better fish habitat, cleaner water, and an overall healthier ecosystem for us to live in, preserving what we love so much about our mountain home.



MATT FREITAS

Working closely with stakeholders, the project will control erosion around the historic dairy barn.

DEFINITIONS

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

River-Friendly Landscaping

Did you know...

Soil erosion and water runoff are the biggest contributors to water pollution in our rivers and streams. Join us in protecting the Truckee River watershed. Help improve water quality by controlling soil erosion and reduce water consumption by converting your yard to a more efficient, drought tolerant landscape.

What You Get

- Up to \$3,000 in rebates for implementing recommendations*
- FREE on-site evaluation and recommendations
- FREE site plan
- DOWNLOADABLE *Sierra Nevada, the Yard and Garden Guide*
- DOWNLOADABLE *Invasive Weeds of Tahoe National Forest* booklet
- Enhanced landscaping for increased property value

Where It Works

The program covers neighborhoods in the Truckee River watershed within the Town of Truckee, Placer County, and Nevada County.

Solutions So Far

- Over 650 site evaluations completed
- 400 recommendations implemented
- 100 tons of sediment (yearly) kept out of waterways
- 100,000 gallons of water saved yearly
- Over \$80,000 in rebates awarded

To schedule a FREE evaluation of your property, call Eben at 530.550.8760, 7#.

**Pending eligibility for erosion control and lawn conversion*



EBEN SWAIN

Thoughtful landscaping beautifies while it helps control erosion.

2019 is the last year for River-Friendly Landscaping!

Implement now to receive up to \$3,000 in rebates!



Water Quality Reporting

From time to time, the Watershed Council gets questions on how, when and where to report water quality problems.

1. Visit www.truckeeriverwc.org
2. Click on library at the bottom of the page
3. Under Resources, click on Reporting Water Quality Problems

Be prepared to report:

1. Location of the water quality problem
2. Date the problem occurred
3. Time the problem occurred
4. Photos of the problem

THANK YOU TO THE Overall Family Foundation!
Their \$50,000 gift, inspired by restoration in Martis Valley, was matched by River Breakfast guests.

Members of the Together for the Truckee Society pledge a minimum of \$1,000 a year for five years toward our long-term sustainability. We deeply appreciate their confidence in our restoration and protection projects.

PRESERVE THE WATERSHED – \$10,000 A YEAR FOR 5 YEARS

- | | | |
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| Laird Norton Family Foundation | Squaw Valley Alpine Meadows | Tahoe Mountain Resorts Foundation |
| Northstar California/Vail Epic Promise | Gail and Rick Stephens | Cathy and Tom Van Berkem |

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- | | | |
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We thank these donors who made contributions since November 2016. They provide resources to fund solutions to protect, enhance and restore the Truckee River watershed. Together we are making a difference.

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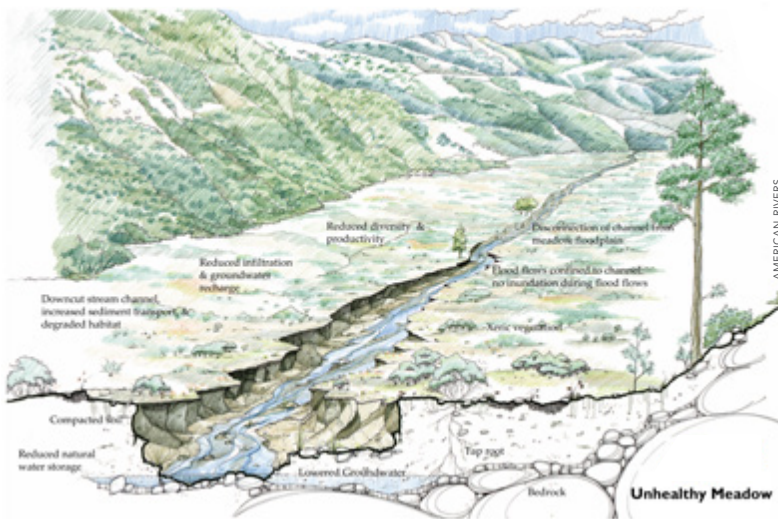
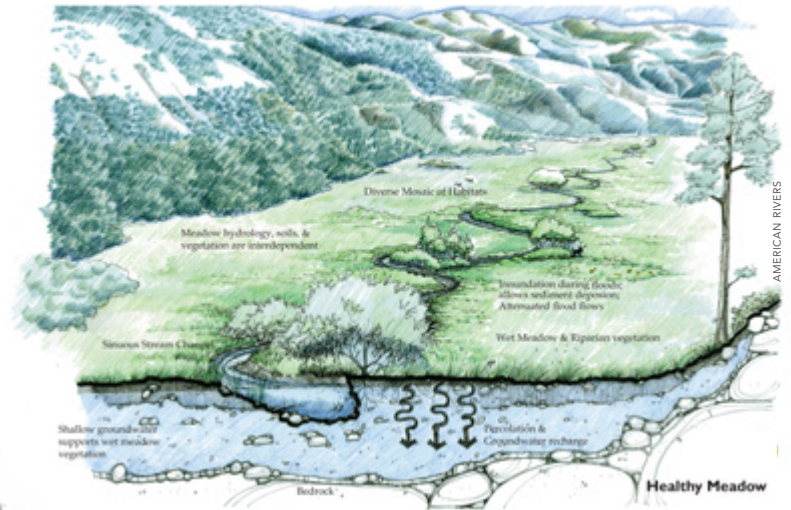
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Benefits of a Functioning Meadow

A healthy meadow (right) is nature’s sponge. It captures precious rainfall and snowmelt, slowing run-off and reducing sedimentation. But a drying meadow (below) repels water—hastening erosion and disconnecting streams and rivulets. Without sufficient moisture, upland flora—like sagebrush—take over. And with less absorbency there’s a greater threat of drought, wild fire and flooding. Eventually there comes a point in which a meadow is lost forever.



Once hydrological function is restored in a meadow, get ready for an explosion of dazzling wildflowers and rippling native grasses. It will look amazing and hold and filter more water, keeping the meadow wetter and greener—providing a significant climate solution. Dryland sagebrush will retreat because the ground will be moist. Camas lilies, Larkspur and Lupine will bounce back.

Martis Wildlife Area: Where to Get Your Meadow Fix while the Meadow Is Getting Fixed

Your favorite spots in the Martis Wildlife Area on the Tompkins Memorial Trail (TMT) surrounding the meadow will still be accessible. Plus, you can use this summer to revisit former favorites or discover new trails throughout our breathtakingly beautiful Truckee/Tahoe area.

Please remember to respect all signage, trail closings and pet rules. It’s all for the good of your meadow.

See page 1 for information on the Martis Wildlife Area restoration project. For more information about trail access and parking, visit www.northstarcsd.org/tompkins-memorial-trail.

