

# Annual Report 2023

## PRESIDENT'S LETTER

Marla Stark

#### It's been a magical year!

Hard work, solid science, and good timing. Plus a historic snowpack to manage.

This Conservancy has now targeted high-elevation restoration projects across the full length of the JMT's 213.7 miles over the next 8 to 10 years. To ramp up, our team worked extremely hard over the last 9 months to scale up projects, expand our internship program, migrate to an advanced accounting platform, and adopt state reporting formats. A major achievement.

While restoring meadow ecosystems is critical for sustainable water supply, it is also a key element of **climate management**. Carbon emissions from fossil fuels in the energy sector are not the biggest piece of the pie chart of global warming. Policymakers and scientists have long known that the loss of photosynthesis, ie. the destruction and degradation of green growth on the planet, is a much larger component.

The United Nations Intergovernmental Panel on Climate Change (IPCC) has identified the major causes: deforestation, agricultural practices, and *damage or destruction of terrain*. Our Conservancy is working in the third branch to restore the vast and powerful meadow ecosystems and riparian corridors of the Sierra Nevada.

This restoration work achieves stunning results. An August 2022 study led by researchers at the University of Nevada, Reno reported that:

Restored Sierra Nevada meadows sequester carbon at a rate up to 10 times greater than international climate change goals, and they continue to do so for more than 20 years after being restored.

Please consider joining this effort. We need sustained philanthropic support to grow our organization, expand our field work, and improve our operations. Thank you.

Marla Sturk

The JMT Wilderness Conservancy is a nonprofit public benefit corporation tax exempt under IRC section 501(c)(3).



Mono Lake Tufa State Natural Reserve Inyo National

JMT Yosemite National Park

Forest

**Ansel Adams Wilderness** 

Mammoth Lakes

**Reds Meadow Valley** 

Vermilion Valley

Sierra National Forest

**Kings Canyon** 

Kings Canyon National Park



Woods Creek

Mt. Whitney Westside



Sequoia National Park



### **RESTORATION ACHIEVEMENTS**

Even with the historic snowpack limiting our access, the Conservancy **worked in** *five locations* across the JMT's 2.8 million acres. Our intern crews inventoried damaged terrain, collecting GPS points, photographs, and descriptions, which have now been submitted to federal scientists. This data will be used to develop the work plans across the region for the 2024 season.

Although delayed by the snowpack, we nevertheless deployed two restoration crews who finished 13 weeks of work during the short summer season. They **restored and repaired riparian corridors and meadows**, down-cut trails, campsites in sensitive terrain, and several dangerous stream crossings. Our intern crews also monitored sites that had been restored in the previous 3 years. This provides consistent tracking of the effectiveness of the prescriptions and fieldwork.

Finally, we learned that additional data is needed. Next season, our intern crews will find a **control site** near every restoration area so we can **measure success against a natural standard**. They will also test water quality adjacent to damaged terrain with set GPS points to enable re-testing in successive years. Additionally, we will be training our intern teams to conduct botanical species surveys to better track healthy regrowth in restored sites.





A new bridge was installed over McGee Creek to provide safe crossings and protect the riparian habitat along the banks.



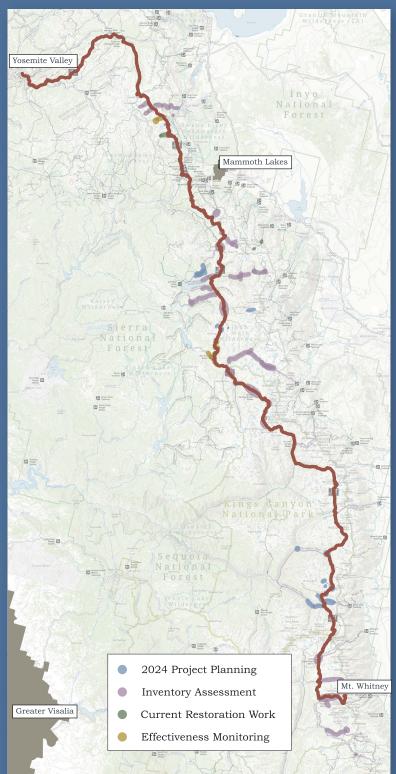
A damaged meadow at Ediza Lake showing healthy regrowth after restoration and the redirection of recreational use.

Our efforts over the coming years will provide sustainably restored ecosystems as well as a substantial and varied database to support practical research. Scientists have well documented the degrading impacts of high-density recreational use and extreme weather. Restoration techniques in such high alpine terrain are relatively new to environmental science. This Conservancy hopes to **add to that knowledge base while advancing both water and climate resiliency** through our hands-on field work.

## 2023 SIERRA SNOWPACK



## CURRENT JMT PROJECT PHASES





#### **Ansel Adams Wilderness**

Because of the record-breaking snowpack (see satellite photo on previous page) our planned work in the high-elevation terrain of Donohue Basin was not possible this season. Instead, work was done along the Shadow Creek corridor and Rosalie Lake **restoring degraded campsites and the ripar***ian corridors*. Our intern cohort completed **restoration monitoring** to document work before and after it occurred and conducted wider ranging *effectiveness monitoring* to check on recovery at prior restored sites.



#### **McGee Creek**

As snowmelt accelerated, work along McGee Pass Trail was significantly delayed because of several dangerous highwater crossings. With access barred until mid-August, we redeployed our intern cohort to collect an **inventory** of damaged terrain along the Eastern Sierra access trails for future projects. Once access was possible, aging and damaged log bridges were re-built and our interns were able to complete **restoration monitoring** of damaged trail and meadow terrain as the field crews worked their way westward.



#### **Vermilion Valley**

In our first year of this project along roughly 25 miles of the JMT and 30 miles of access trails, our intern cohort traveled across the region. They covered a large area to **inventory** degraded terrain along Mono Creek, Bear Ridge, the Bear Creek corridor, and north and south of the Silver Divide. This critical data is now in the hands of our federal partner to build out work plans for the following seasons. **Restoration** is planned to start in one segment of this area in the 2024 season.



#### **Kings Canyon**

A substantial bridge along the South Fork of the San Joaquin River collapsed this spring under the weight of the melting snowpack. As a result, all our work southward in Evolution Valley was blocked. Our JMT Intern Cohort instead was diverted to Piute Canyon north of the downed bridge to conduct the necessary **inventory** and returned for **effectiveness monitoring** to document the recovery process at prior restored sites along Sallie Keyes Lakes.

### MT. WHITNEY

In August, our Conservancy set out on our most ambitious project: *critical ecosystem restoration* on the remote landscapes west of Mt. Whitney. A giant standing 14,505 feet in elevation, it is the highest point in the lower 48 states and serves as the southern terminus of the JMT.

Four of our most highly-qualified and intrepid interns, along with two experienced team leads (one a former '21 JMT intern!), were deployed for 42 consecutive days in the backcountry. With their basecamp established about 14 miles west of the summit, they journeyed north to Forester Pass and south to Chicken Springs Lake to **inventory** damaged terrain in need of restoration and recovery. Bivouacking at basecamp, they stayed dry and warm while Hurricane Hillary passed by and then ventured out to trek the summit, finishing the **inventory** along upper Crabtree Meadows and Guitar Lake.

This data will be the basis for years of fieldwork that will begin next season. Other JMT Intern Cohorts will follow in their footsteps & share the experience.



#### **RED'S MEADOW VALLEY**

Another considerable effort for us started this year in Red's Meadow Valley west of Mammoth Lakes. Directly adjacent to 6 miles of the Middle Fork of the San Joaquin River are 5 public campgrounds, which in high season can accommodate roughly 950 visitors and 250 vehicles. We have been tasked to redesign, master plan, and reconstruct these campgrounds and their roadways.

This season, we worked with the Inyo National Forest to select a landscape design & ecological restoration team and begin the process. A civil survey and the location of water assets, wetlands, and drainage were completed and mapped. USFS standards for compliance and campground design were researched. We will finish design schematics this winter and complete any permit requirements during the summer. Construction is scheduled to begin in 2025.



The San Joaquin is California's longest river with incredible biodiversity along its length. Red's Meadow Valley and the watershed to its north are the headwaters. This project will restore vital ecosystems that support the San Joaquin, assuring water resiliency and robust habitat while sustaining the recreation economy vital to the area.

## 2023 JMT INTERNSHIP HIGHLIGHTS

We rely on highly educated, enthusiastic undergraduate students to collect the key data we need to effectively restore high alpine terrain. The program allows us to *gather data for our landscape-level projects* and provides participants with an invaluable opportunity for career development and future environmental leadership.

For the 2023 season, we recruited from Stanford University and the Universities of California in Berkeley, Davis, and Santa Cruz. To expand and diversify our pool of qualified applicants, in 2024 we will also start recruiting from UC Merced, California State University, Fresno, and University of Nevada, Reno.



Our 2023 JMT Intern Cohorts hiked, and surveyed terrain over, a combined **4,371 miles** in the High Sierra. An astounding achievement!

Academic majors included:

- Environmental Science
- Biology
- Sustainable Food & Agriculture
- Mechanical Engineering
- Community & Regional Development

#### SOIREE FOR THE SIERRA NEVADA

In October, we hosted the *Soirée for the Sierra Nevada* at the Carolands Château in Hillsborough to provide information and education for our leadership supporters. A spectacularly restored Gilded Age estate, we used its galleries for displays about how we plan and achieve these landscape-level projects and the essential role the JMT Internship Program plays.



During a glittering evening, David Kennedy delivered a Pulitzer Prize winner's speech presenting the idea that conservation and recreation can and *should* coexist and thrive. Many of our JMT interns were present, dressed to the nines. They talked with the guests and shared their experiences working for the summer in the High Sierra.

We anticpate the next Carolands gala will be in May of 2025 to coincide with the 110th Anniversary of the John Muir Trail!

### WATER RESILIENCY



While restoring meadow ecosystems is critical to manage climate change, we have long emphasized the important role it plays in our state's *water resiliency*. The Sierra Nevada snowpack and meadow ecosystems supply water to nearly all of us in California. As the above schematic shows, this water is distributed to the major population centers throughout the state, providing water to over 33.5 million California residents.

#### The health of our meadow ecosystems is an issue for all of us.

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# DONATE TODAY

The next decade is critical for our state's water resiliency and defense against climate impacts. The Sierra Nevada plays a pivotal role in building our "sponge" for infiltration and retention of water and mitigation of climate change. We have begun an enormous task and *need your help* to continue these projects, build our team, and finish the job!

#### **Our Mission:**

Caring for the wilderness, wildlife, and waters along the John Muir Trail (est. 1915) in the high Sierra Nevada of California for people to enjoy in the centuries to come.

Photo by Cody Mathison, from our 2021 Ansel Adams Wilderness Outing

For those interested in learning more with leadership philanthropy in mind, join our **2024 Backcountry Outings** - pack-stock supported, 5-8 day JMT hikes.

Contact Paige Klugherz, Paige@JMTwilderness.org JMTwilderness.org