



Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Partnership Peaks

San Juan National Forest Partner Stories, Opportunities, and Updates

Summer 2024



Blooming wildflowers in the high country near Engineer Mountain

By Kevin Lindner, Fire Prevention & Education Officer



It's summertime here in the mighty San Juan Mountains! With all the residual snow gone from our yards and incrementally longer days ahead, now is the perfect time for a summer activity that will return on its investment long into your future. Of course, I'm talking about wildfire mitigation. As the [Mancos Conservation District](#) demonstrated for us at our recent "Landowner Fire Mitigation Bootcamp" event, every little bit of mitigation work matters. Landscape-scale change starts at the parcel-level, so let's enjoy some of our fine weather with a little bit of sweat equity.

We've taken some rain recently which has alleviated the immediate fire danger considerably. We're not staring down fire restrictions at the moment, but let's remember that there is a lot of summer left. Keep up to speed with [San Juan NF fire danger and restrictions here](#).

And of course, this summer marks another significant milestone in the life of our own Smokey Bear. On August 9th, 1944 the creation of Smokey Bear was authorized by the Forest Service, and the first poster was delivered October 10th (see above). Across the nation this summer we celebrate Smokey Bear's 80th Birthday. The San Juan will be celebrating at your local library – stay tuned to the [San Juan NF Facebook page](#) for details.

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Leadership Corner



The 2024 field season is looking like one for the books from my seat as Renewable Resources Staff Officer. From a spring busy with prescribed fires to a summer building an aquatic organism passage in the Upper Hermosa Watershed, 2024 will be remembered.

It is hard to believe I have been on the San Juan and with the Forest Service for eight years and what an incredible experience it has been. I started my public service career as a seasonal Range Tech on the Coconino National Forest for a season before shifting to the Bureau of Land Management (BLM) in a permanent Range position.

I served in many roles and locations during my 13 years with the BLM and was privileged to work with and experience many different landscapes, challenges, resource areas, and incredible staff. Now, after eight years on the San Juan, I feel qualified to say that the work we are doing is special—and we're not doing it alone.

This summer, we will work side by side with partners including National Forest Foundation, Trout Unlimited, Colorado State Forestry, Colorado Parks and Wildlife, Rocky Mountain Elk Foundation, Wildfire Adapted Partnership, Mountain Studies Institute, Conservation Legacy, and many more to complete critical projects on the ground. By the end of the summer our Renewable Resources programs will have completed numerous accomplishments including installation of virtual fence towers to support effective grazing, fuels mitigation work to reduce the risk to our communities from wildfire, our native fish populations will be reconnected to historic river reaches, we will have provided wood products to our tribal communities and supported the local economy through timber production.

I cannot express how grateful I am to experience such passionate, dedicated, and tireless public servants and partners. The way you all work across programs and challenges is remarkable. You are the backbone of the San Juan, and you are truly appreciated for all of your hard work and dedication. **THANK YOU!**

Lindsey Hansen - Renewable Resources Staff Officer

Restoring Wildcat Creek



View of log pour-over and scour pond which creates habitat for CRCT

By Abe Proffitt

In-channel stream restoration is a popular tool for improving conditions for trout that rely on limited habitat in small tributary systems. In FY23, the Wildcat Creek in-channel stream restoration project was completed, potentially resulting in more refuge pools for a very important fish population. Wildcat Creek has a unique strain of at-risk Colorado River Cutthroat Trout (CRCT) DNA, listed as the highest priority to protect and conserve in the face of a changing climate in the Dolores River Watershed. Over the last 50 years, the USGS estimates a 30% decrease in flow in Wildcat Creek (as measured at the river gauge near Rico), which equates to warmer temperatures and a reduction in aquatic habitat overall.

The restoration project was a collaborative partnership between the San Juan National Forest, the Dolores River Anglers chapter of Trout Unlimited (DRA/TU), Southwest Conservation Corps (SCC), and the Upper Dolores Stream Protection Working Group. Wildcat Creek is vulnerable to dewatering during even moderate drought – which drought is highly likely to increase in intensity and duration as the century progresses. Using locally available natural resources, partners implemented the paradigm of Low-tech, Process-based Stream Restoration (LTPBR), a set of principles that can be used to increase the number of pools and pockets that serve as refuge during low-flow periods.

Restoring Wildcat Creek for a unique at risk CRCT

Healthy streams are not neat and tidy - they are complex and ever-changing, moving rocks and logs and constantly altering flow paths and stream material. At its most fundamental level, LTPBR attempts to return a stream to this natural state by mimicking (and retargeting) a healthy stream corridor's natural processes and functions.

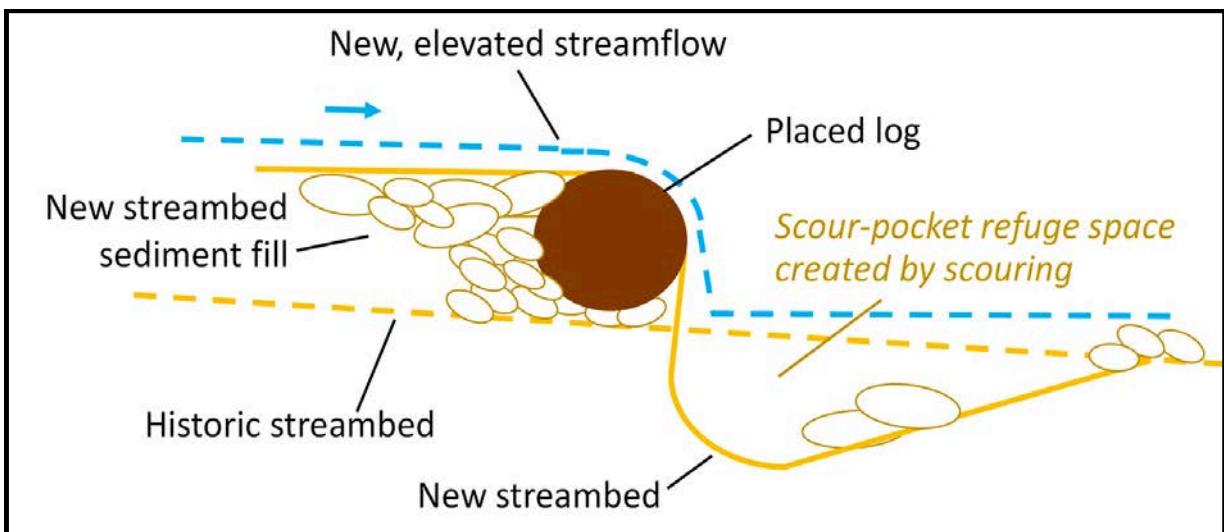
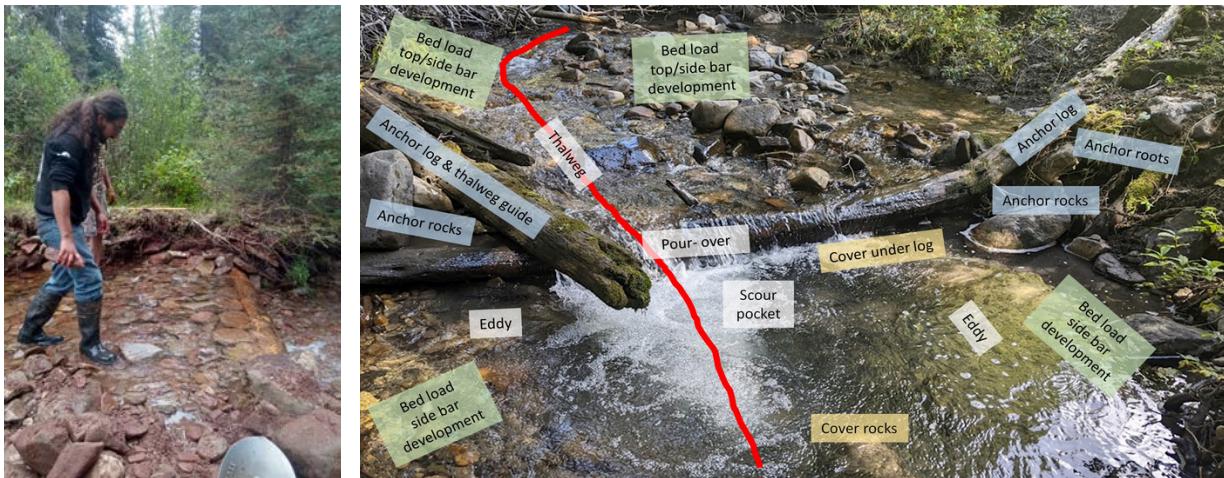
To implement LTPBR, San Juan NF staff and volunteers created log pour-over structures at four pre-determined sites along Wildcat Creek using medium diameter conifer logs and in-stream rocks of varying sizes. Pour-overs focus the stream's energy on scouring new pockets and pools and then sustains them over time. The sites were selected where there were long riffle habitats between existing pools to make these features more available to fish and distribute competition for limited resources. Willows were planted to grow a root structure and stabilize the anchor points for the logs along the streambank.

“Willows – and beavers - play an important role in retaining the natural flow of the stream. They are nature’s way of mitigating stream flow. This area was once a beaver meadow, but the elimination of beavers and subsequent natural erosion and channel deterioration have funneled the creek into the shallower, narrower, and more vulnerable stream we see today. Long-term, these types of projects could help to restore historical wetland ecosystems and provide the CRCT with a safer habitat during low-water periods.”

Duncan Rose, Conservation Chair of the Dolores River Anglers chapter of Trout Unlimited.



Restoring Wildcat Creek for a unique at risk CRCT



Diagrams of log pour-over and scour pocket

Clay Kampf, Supervisory Aquatic Biologist on the San Juan NF, was excited at the potential this project held for other projects across the forest. *"This was a pilot program to gauge the feasibility of doing this type of project on other streams throughout the forest,"* said Kampf. *"I have about 11 more streams on my list that would really benefit from this type of project, which I'm hoping to get to in the next 10-15 years."*

SJNF staff, with DRA/TU's assistance as needed, will be monitoring the performance of the pour-over technique for the foreseeable future and making adjustments to future deployments as lessons are learned.

Overall, the in-stream portion of the project took around a week of 10 hour days by SJNF and SCC staff to complete with an estimated 168 hours of volunteer work. Below are photos from the project:

Restoring Wildcat Creek for a unique at risk CRCT



Where's the Beef?

Virtual Fencing and New Opportunities in Rangeland Management

By Abe Proffitt

It's getting warmer on the San Juan National Forest and that means animals are on the move, including cattle and other livestock. Some roam through pastures testing bunches of fescue grass for the sweetness that frost brings. Others push their way between bushes and trees to munch on grasses, clover, forbs, and brambles. In Colorado and other western states, ranchers and land managers rely on thousands of miles of permanent wire fencing to manage cattle and other livestock. Many ranchers in this region have been managing livestock on this Forest for several generations, which has included building and repairing those fences from damage caused by fallen trees, machinery, or general wear-and-tear.

The wire fence became popular in the late 1800s as a widely used method for controlling the timing and distribution of livestock grazing across the landscape – however, it poses limitations. Wire fence is prone to damage and construction and maintenance represent a significant economic cost. When gates are left open, grazing permittees often spend multiple days gathering livestock back into their scheduled pasture.

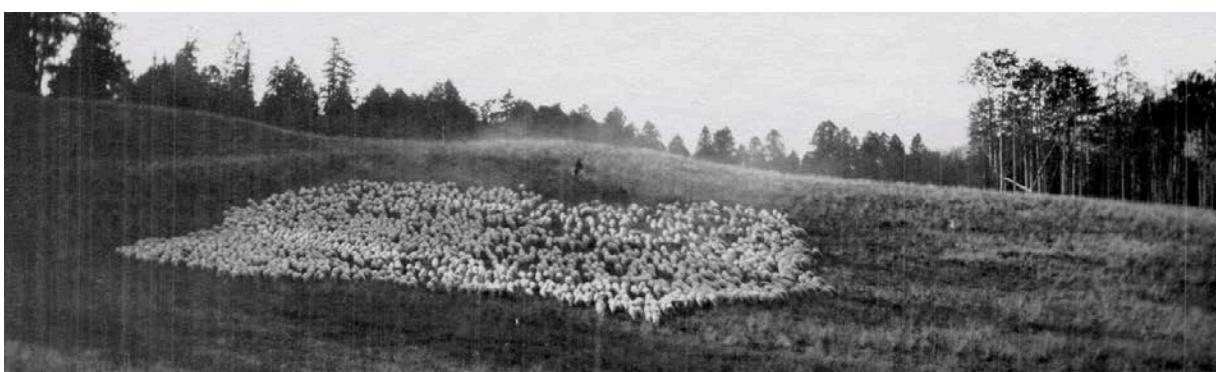
Traditional wire fence may also be slower to respond to on the ground conditions observed by the grazing permittee and Rangeland Management Specialist. When virtual fence is deployed on an allotment, managers can respond more quickly with new pasture boundaries to achieve the desired distribution of livestock.



Paradise Valley, 1978 - credit: Library of Congress



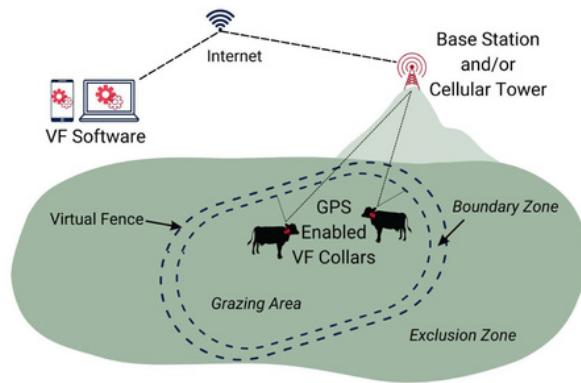
O'Neal Park, Pagosa Springs, 1908 - San Juan NF Historical Archives



Sheep grazing near Devil Creek, Pagosa Springs, 1908 - San Juan NF Historical Archives

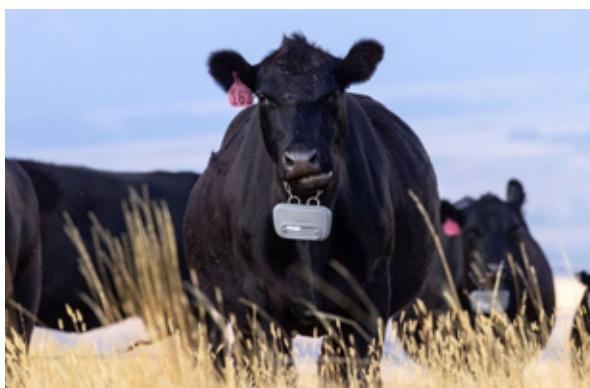
Where's the Beef?

Grazing is currently permitted on 1.2 million acres of the San Juan NF (around 67% of the total land mass managed by the Forest Service) and this area is divided using wire and/or wood fencing and natural barriers. Given the time and cost of covering such expansive distances, ranchers and land managers are now looking to Virtual Fencing as a way to supplement traditional wire fence.



Conceptual model of VF system.

Credit: Antaya, A., et al. "What is Virtual Fence? Basics of a Virtual Fencing System."



Cow with VF collar - Merck & Co.

Virtual Fencing (VF) is a management tool that uses invisible barriers established with a Global Positioning System (GPS) collar to influence livestock movement with auditory and electrical cues. Using a computer or smartphone, land managers digitally draw virtual fence lines on the landscape that synchronize with an animal's collar.

When an animal outfitted with a programmed collar approaches a virtual boundary, the collar emits an auditory or electrical stimulus. Other cattle within hearing distance perk up, freeze, and then slowly move away from the line, despite the lack of a physical barrier. Overtime, livestock learn to associate the stimulus with the barrier and generally stay within the confines of the grazing area.

This year, the San Juan NF is implementing VF systems on more grazing allotments between Durango and Silverton. On Friday, June 7th, I joined Sean Kelly (Rangeland Management Specialist), Corey Ertl (Rangeland Program Manager), Ty Dittman (Range intern) as well as grazing permittees and two Vence Contractors (Matt Wisniewski and Hayden Wright) to install a base station near Lime Creek Rd.



Solar panels can power device for up to 5 years

Where's the Beef?

These base stations act to receive and transmit data to the collars, updating pasture boundaries and livestock locations. In most cases, base stations are designed to stay in place year-round by using solar power, while others are mounted on a trailer that can be moved and stored during the off season.



Base station overlooking Purgatory Resort



Base station install

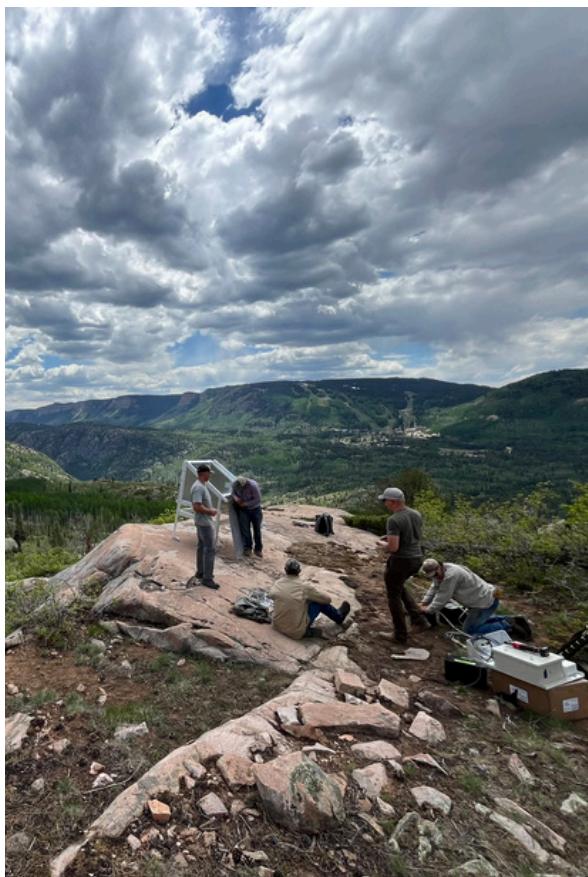


Mobile VF base station

How will Virtual Fence Improve Rangeland Management?

“Some grazing permittees on the San Juan NF have determined VF fits well into their grazing operations. VF is not a one size fits all approach, grazing permittees and land managers must take into account their specific circumstances such as economics, livestock temperament, their allotment terrain, and operations outside the Forest. In 2023, two grazing permittees on the San Juan NF deployed VF for the first time. In 2024, VF is expanding to seven grazing permittees on the San Juan NF.”

Corey Ertl, Rangeland Program Manager



Base station overlooking Purgatory Resort

Where's the Beef?

The VF software program will allow grazing permittees to track livestock distribution and location and receive daily updates on their smartphone or computer. This allows permittees to quickly locate livestock outside their planned pasture and gather them into the scheduled area. Additionally, pasture boundaries can be changed virtually if it is likely to result in ecological benefits. With traditional wire fence, this would be a time consuming and significant expense to implement.



Setting the transmitter antenna

There is a lot of enthusiasm towards advancements in this technology as it becomes economically viable. Initial feedback from grazing permittees who implemented VF in 2023 has largely been positive. As is often the case with the adoption of new technologies, there is a learning curve in understanding its most effective application. Through these trials, adjustments are being made to improve its effectiveness going forward.

The heterogeneous terrain and vegetation of western rangelands has always necessitated significant labor and economic inputs to achieve the desired distribution of livestock. Ironically, VF represents the most significant step in managing livestock distribution not seen since the advent of barb wire over 150 years ago.



Finished installation with Purgatory in the background

Planting for the Future

A Xeriscape Garden Takes Shape at the Pagosa Ranger District



Volunteers removing weeds and planting native flowers

By Abe Proffitt

On May 14th, the Pagosa Ranger District's front garden space received a much needed and more sustainable 'Xeriscape' facelift. The project was a collaboration between Mountain Studies Institute (MSI) and the San Juan National Forest's Green Team, with the help of volunteer students from Pagosa Springs High School. Amanda Kuenzi, Community Science Director at MSI, used grant money through the National Forest Foundation's Matching Award Program to buy flowers and irrigation supplies from Cliffrose Garden Center in Cortez.

The space was originally planted in 2008 as a demonstration garden with native plants that catered to pollinators from surrounding nurseries ---- but over time,

weeds and other non-native species crowded out the space. Last year, Kevin Conwell (Developed Recreation Technician) and other Pagosa Ranger District employees began brainstorming ideas to renovate the existing space into a xeriscape garden.

Xeriscaping is the practice of landscaping with slow-growing, drought tolerant plants to conserve water and has been embraced in dry regions of the western United States for decades.

In regions subject to prolonged drought, including southwest Colorado, water is a limited resource, and many cities and municipalities are encouraging homeowners to use less water on lawns and gardens.

Planting for the Future



Pagosa Highschool students - Credit: Pagosa Sun / Clayton Chaney

An element of the renovation involved removing non-native plants like Russian Sage, Cheeseweed, and Prickly Lettuce and replacing them with native plants like Rocky Mountain Penstemon and Colorado Blue Columbine. Gardening with regionally native plants is a beneficial alternative to planting exotic and non-native species because native plants provide key resources for the native animals and insects that have had relationships with these plants for thousands of years, making them foundational to a healthy ecosystem. The hope is that the garden will inspire other people to incorporate native plants into their gardens at home to support local pollinator populations. More information regarding native plants in our region and the role they play in our environmental health and resilience can be found on the Colorado Native Plant Society website.



Colorado Blue Columbine - San Juan NF

The San Juan National Forest Green Team is comprised of individuals in varying positions across the three Ranger Districts. All members are passionate about collaboration and sustainability and are motivated to bring more environmentally friendly practices to operations to the forest. The Green Team often applies for sustainability grants to fund projects that encourage water conservation, waste and energy reduction, and other environmentally beneficial practices. Special thanks to the Green Team members who helped develop this idea!

Planting in Pagosa

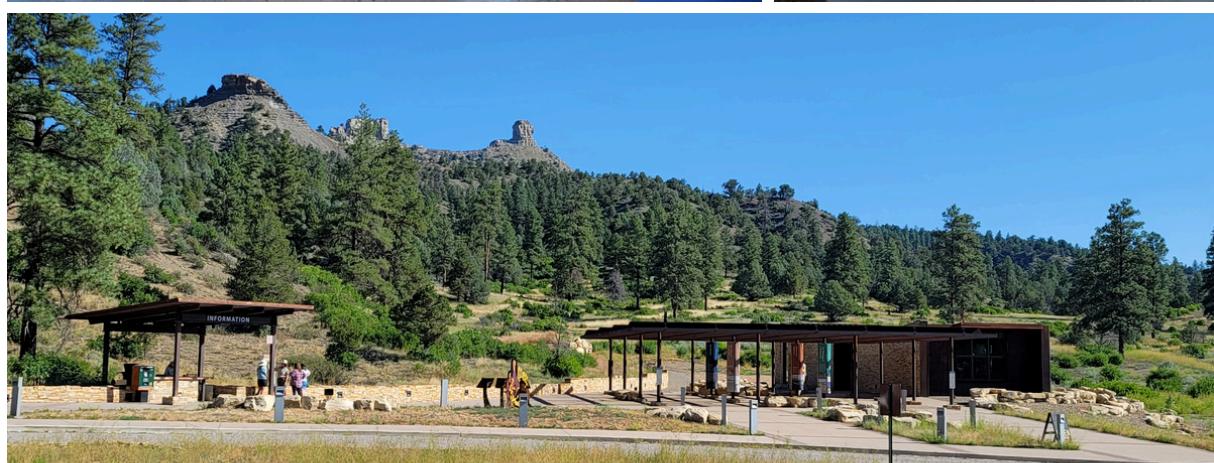


Pagosa RD staff completed the garden with mulch donated by the City of Pagosa Springs

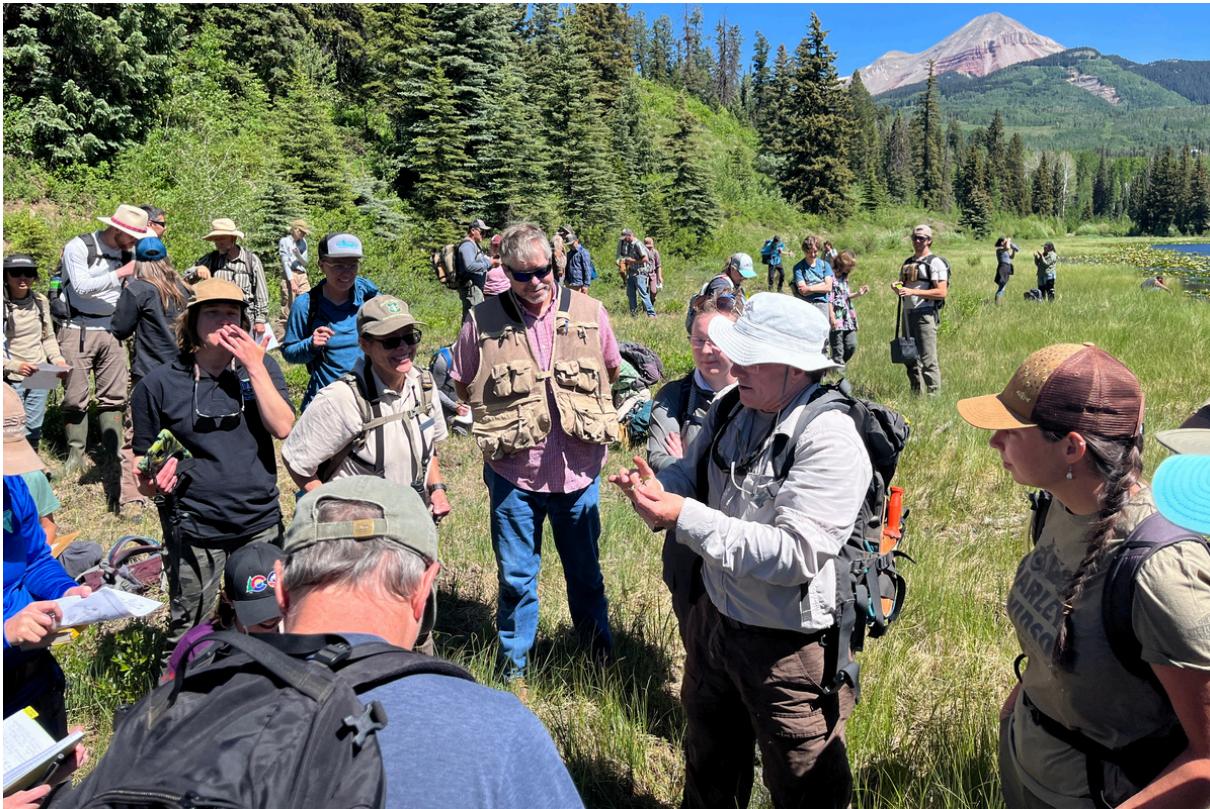
Chimney Rock NM Visitor Center Award

In 2023, Chimney Rock National Monument was awarded an Interpretive Media Award from the National Association of Interpretation (NAI), receiving 3rd place for the Visitor Center interior exhibits! The NAI is a nonprofit professional organization dedicated to advancing the profession of heritage interpretation and the NAI Interpretive Media Awards promote excellence in the delivery of natural, cultural, and historical nonpersonal interpretive services.

Chimney Rock continues to be a place of wonder, reflection, connection, and appreciation and the amazing work being done at the site by the Chimney Rock Interpretive Association (CRIA) and San Juan National Forest staff has not gone unnoticed!



Partnership Opportunities



Multi-agency identification tour of the Bog Violet (and potential Silverspot Butterfly habitat) near Purgatory Resort.



An important element we want to highlight in this newsletter is our commitment to our partners. The San Juan National Forest works to sustain the health, diversity, and productivity of this region's forests and grasslands to meet the needs of present and future generations - and we're able to achieve that through partner connections. Our partners include land management agencies across all levels of government, nonprofit and for-profit entities, tribes, and community groups. By working with partners with diverse backgrounds and knowledge, we are increasing the resiliency of our natural resources and strengthening the community that enjoys and works in these lands. For information about partnering with the USFS, follow this link: <https://www.fs.usda.gov/working-with-us/partnerships>

To become a partner with the San Juan NF or for questions, contact Abe Proffitt (SJNF Partnership Coordinator) by email at abraham.proffitt@usda.gov or by phone at (970) 501-0261.

For general questions about the San Juan NF, call (970) 247-4874, visit the forest website, or follow us on social media.

[**Click here to get on our newsletter mailing list!**](#)



Welcome to the San Juan!



*Tesha Lundock
Customer Service Representative - Pagosa RD*



*Rachael Zima
Assistant Center Manager - Durango Dispatch*



*Paige Adam
Forestry Tech Hotshot/Handcrew - Pagosa RD*



*Alice Cooke
Recreation/Trails - Pagosa RD*



*Jacob Stauble
Forestry Tech Hotshot/Handcrew - Pagosa RD*



*Abrianna Bennett
Timber Crew Technician - Dolores RD*



*Oosten Tompkins
Developed Recreation Technician - Dolores RD*



*Kelsey Harkness
Range Technician - Pagosa RD*



Across the San Juan NF, program managers are welcoming and onboarding this year's group of temporary seasonal employees and interns. Each year, seasonal employees arrive to the San Juan with fresh energy and enthusiasm to carry out much of our day-to-day project implementation. From trail building to fish surveys, firefighting to weed monitoring, seasonal employees are a critical component of our workforce. Welcome, San Juan NF Seasonals!