



Mountain Studies Institute

SAN JUAN MOUNTAINS COLORADO



Cohesive Strategy Report 2021

Acknowledgements

As is the case with any effort of this scale and nature, the important work outlined in this document, and the creation of this document itself, were true collaborative efforts. Our gratitude goes out to all involved.

Partners

The collaboratives listed to the right, and the work described in this document, would not have been possible without the ideas, effort, and commitment from the partners. Thank you to all the non-profits, federal and state management agencies, tribes, private landowners, and committed individuals who come to the table for the sake of our communities, and the forests and watersheds they rely on.

Report authors + designers

Aaron Kimple, MSI
Dana Guinn, MSI
Page Buono, Page by Page, LLC
Emily Swindell, MSI
Sarah Douglas, gaiacreative, LLC

Contributors

Dr. Michael Remke, MSI
Anthony Culpepper, MSI
Matthew Tuten, San Juan National Forest

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Funder



Recipient



Regional collaborative partnerships



2-3-2
COHESIVE
STRATEGY
PARTNERSHIP



SAN JUAN – CHAMA
WATERSHED PARTNERSHIP

Cover photo: Pigeon and Turret Peaks tower above the coniferous forests of the Animas River Watershed. Source: Michael Remke Photography

Acronyms

Aspen Center for Environmental Studies (ACES)

Carson National Forest (CNF)

Chama Peak Land Alliance (CPLA)

Collaborative Forest Landscape Restoration Program (CFLRP)

Colorado Forest Restoration Institute (CFRI)

Colorado State Forest Service (CSFS)

Colorado State University (CSU)

Conservation Leadership Through Learning (CLTL)

Dolores Watershed Resilient Forest Collaborative (DWRFC)

Four Rivers Resilient Forests Collaborative (Four Rivers)

Mountain Studies Institute (MSI)

National Cohesive Wildland Fire Management Strategy (Cohesive Strategy)

New Mexico Forestry Division (NMFD)

Prescribed Fire Learning Exchange (TRES)

Rio Grande National Forest (RGNF)

Rio Grande Water Fund (RGWF)

Rocky Mountain Restoration Initiative (RMRI)

San Juan-Chama Watershed Partnership (SJCWP)

San Juan Headwaters Forest Health Partnership (SJHFHP)

San Juan National Forest (SJNF)

Santa Fe National Forest (SFNF)

Stevens Hazardous Fuels Grant (CAFA)

Two Watersheds - Three Rivers - Two States Cohesive Strategy Partnership (2-3-2)

United States Forest Service (USFS)

Wildfire Adapted Partnership (WAP)

A grey jay perches on a ponderosa pine branch.
Source: Michael Remke Photography





Spring wildflowers bloom interspersed with ponderosa pines and ample regeneration in the Turkey Springs project area. Source: Michael Remke Photography

Introduction

In 2013, lightning ignited the West Fork Fire near Wolf Creek Pass. The ensuing complex of wildfires, and their uncharacteristic movement across the continental divide, challenged land and resource managers, and underscored the vulnerabilities posed by increasingly intense, frequent, and variable fire regimes. Perhaps most importantly, the fire served as a timely reminder of the connectivity of our landscapes, and the importance of building and promoting connectivity in the way we think, plan, and work together. The fire underscored that in order to mitigate vulnerabilities, an increase in pace, scale, and coordination of assessments, planning, and treatments across federal and private lands would be critical, and that it required understanding and support from local communities. In order to achieve these things, coordinated collaboration is imperative.

Against this backdrop in 2015, and in partnership with the San Juan National Forest (SJNF), Mountain Studies Institute (MSI) received funds to expand collaborative efforts to address the goals of the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy). Namely, to create: 1) resilient landscapes; 2) fire adapted communities; and 3) safe and effective wildfire response. In order to advance these goals, MSI adopted four primary objectives: 1) Support collaborative coordination; 2) Evaluate completed work and assess the effectiveness of current partnerships; 3) Continue efforts to inform, educate, and outreach to landowners and communities; and 4) Improve coordination of local wildfire response efforts. This investment of Cohesive Strategy funds supported the advancement of existing partnerships, as well as the development of new ones and the coordination between them. By empowering local collaboratives, funds invested resulted in increased capacity for implementation and monitoring, knowledge sharing, new and strengthened relationships, and a nearly seven-fold increase in funding for work in the region.

With these funds, MSI built on the proven collaborative successes in the region, increased capacity to continue collaboration, advanced partner involvement, and empowered collaboratives to inform the public about forest ecosystems and wildfire, thereby addressing community concerns about forest management processes, improving community understanding of and support for good fire, and increasing regional capacity to get the work done.

Further, these investments helped MSI and partners to selectively restore and maintain landscapes in areas of high community value and ecological risk, thereby lowering the risk of catastrophic fire and reducing the chance of devastating impacts to critical water sources and infrastructure that delivers drinking water to tribes, states, and multiple municipalities. Cohesive Strategy funds both strengthened partnerships in place at the time of the investment and helped launch two additional partnerships working on the SJNF. Cohesive investments provided the funding and capacity needed to guide partners in the development of a long-term vision for work in the area and established a shared stewardship approach to managing the landscape. Cohesive funds allowed collaborative partners to work alongside the SJNF and other regional forests to secure two Collaborative Forest Landscape Restoration Program (CFLRP) projects in Southwest Colorado and Northern New Mexico, as well as investments from the Rocky Mountain Restoration Initiative (RMRI) to the anticipated tune of nearly \$70 million dollars in future funding.

These funds can support effective forest management and secure resilient communities for the next decade, while continuing to grow capacity to support those efforts beyond the 10-year horizon. The region is now considered an innovative hub for collaboration and is advancing the kinds of landscape-scale initiatives that conditions on the ground demand.

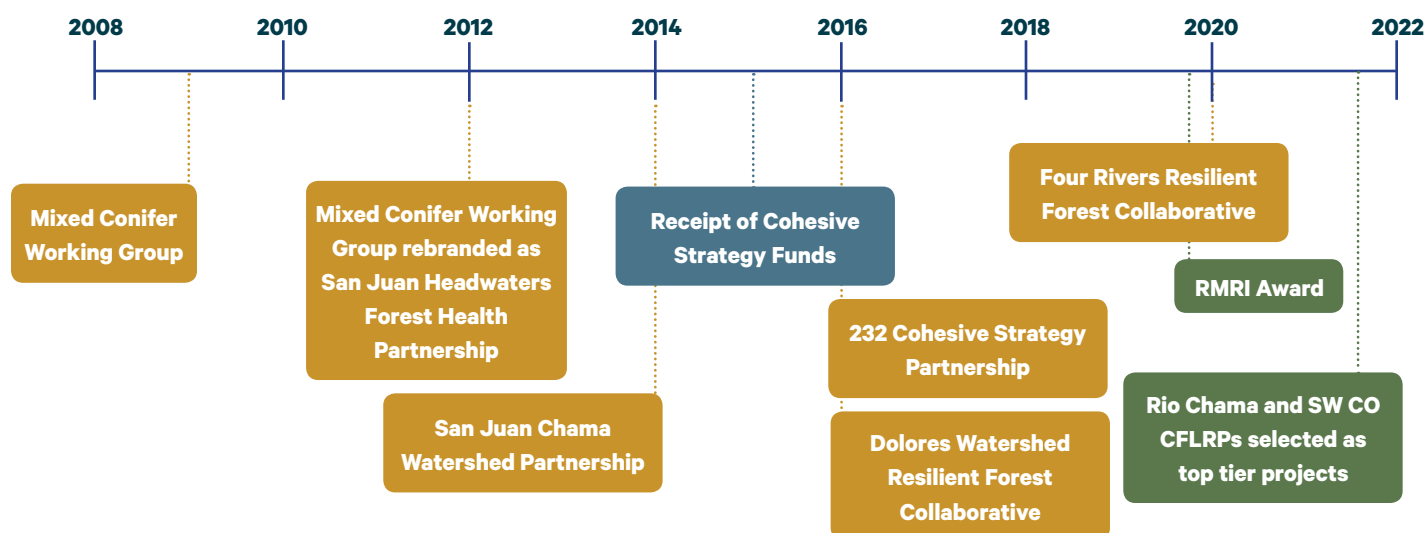
Executive Summary

There is a long history of collaboration on the SJNF. Beginning in the 1990's, groups began forming around both Dolores and Pagosa Springs to work at the community-level on issues of forest and watershed health. Those groups evolved and, in 2012, formed what is now the San Juan Headwaters Forest Health Partnership (SJHFHP). The group has expanded their interests, grown their partnership base, and established a formal partnership with MSI. Their long history of successful trust-building and relationships has resulted in numerous grant successes, events and tours, and cross-boundary projects. The SJHFHP developed shared priorities and used those priorities to secure funds from the first ever distribution of Joint Chiefs funding.

While the local focus of the SJHFHP was, and continues to be, important for engaging partners, planning and identifying projects, and responding to needs on the ground, partners recognized the need to think at a larger scale. With a landscape-scale lens in mind, the SJHFHP worked under that initial investment from Joint Chiefs to connect values, opportunities, and projects over the Continental Divide onto the Rio Grande National Forest (RGNF), and engaged groups committed to supporting water delivery from the headwaters of the Navajo and Blanco Rivers to communities in New Mexico. Specifically, they began engaging with another place-based collaborative in the Rio Chama watershed called the San Juan-Chama

Watershed Partnership (SJCWP), formed in 2014, and the Chama Peak Land Alliance (CPLA), a collaboration of private landowners in the Rio Chama Watershed. These relationships were beginning to materialize in 2016, and the investment of Cohesive Strategy Funds, paired with partner buy-in, catalyzed something bigger. Together, and alongside the Rio Grande Water Fund (RGWF) and other stakeholders in the region, these groups formed the Two Watersheds, Three Rivers, Two States Cohesive Strategy Partnership (2-3-2) as an umbrella collaborative, or *conlaborative*, for their continued coordination, demonstrating that place-based collaboratives can work together to scale and leverage work across a large landscape.

Timeline of Activity



Through consistent coordination, support and leadership, 2-3-2 partners have progressed from relationship building to planning together and coordinating work on the landscape. They have influenced dialogue across two states and four forests in two United States Forest Service (USFS) Regions. For example, 2-3-2 Partnership participation in both Colorado and New Mexico's State Forest Action Planning processes resulted in acknowledgement and attention in both plans of the resource connectivity across the Colorado - New Mexico state line. By working together, the groups secured investment for two CFLRPs, the RMRI, and one Regional Conservation Partnership Program grant. Further, numerous partners of the various collaboratives have used collaborative planning processes and prioritization efforts to secure funds for their planning, stakeholder engagement, and work on the ground.

The many successes of these collaborative efforts are hard won. Collaboration takes a ton of work and does not come without challenges. In all likelihood, every partner at one time or another has thought, "Is this worth it?". But while collaboration is not always the easiest path, it is increasingly clear that staying in silos is no longer an option. Collaboration requires patience from all sides: land managers must be willing to release a degree of control; stakeholders must be willing to learn, understand, and help navigate federal processes, and all participants must be active listeners, commit to agreed upon collaborative norms, and be willing to step outside their silos to implement actions decided upon collectively. The continued and growing commitment of partners involved in each of the collaboratives supported with Cohesive Funds is perhaps the most important attestation of their value. People do not dedicate their time, energy, and resources because this is easy; they do it because they continue to see value and opportunity in their investment. The alternative wasn't working.

This is an incredibly exciting time for collaboration in the region. In many ways, the work of these groups is only just beginning. By bringing forests, water, wildlife, recreation, and industry partners together, partners are working holistically to secure natural infrastructure and community resilience.

In order to meet the pace and scale of current demand, and to navigate away from postage-stamp treatments toward a coordinated and connected approach, continued maintenance and investment are required. Collaboratives in the region are at a critical moment: trust is built, we are actively planning and prioritizing projects on the landscape, funding is in place, but we can only sustain this momentum with continued commitment, engagement, and support. We need an approach that encourages shared responsibility and shared investment over the long term, and in the spirit of Shared Stewardship.

Cohesive Funds in Action

Investment of \$790,000 from USFS



Mountain Studies Institute
SAN JUAN MOUNTAINS COLORADO

To create and advance regional collaboratives



2-3-2
COHESIVE
STRATEGY
PARTNERSHIP



Resulted in:

- A return on investment of nearly \$70 million secured for future work on the landscape
- Over 100 educational and relationship-building events, with over 3,000 attendees
- More than 200 partners engaged in the collaborative process annually
- The Bighorn/Stateline burn project
- First TREX in Southwest Colorado
- The establishment of a FireWise program in Rio Arriba County
- and so much more...

Objectives & Accomplishments

The initial investment from the USFS was tied to the four distinct objectives described above and outlined in detail below. Through these investments, MSI and its partners increased the capacity of existing collaboratives, supported the development of two new collaboratives, established a third umbrella collaborative (the 2-3-2), hosted over 100 outreach events, and secured over \$70 million in future funding. In addition, it helped Rio Arriba County develop a Firewise Program, an important step to being able to spend over a million dollars in Title II funds on important fuel reduction projects in critical areas. Further, this funding provided the critical capacity required to support annual and long-term cross-boundary planning and implementation plans that improve community resilience to wildfire, increase capacity for forest restoration, and engage diverse partners in creative and holistic problem-solving. This collaborative effort, and the trust and relationships built and maintained through the process, is one of the greatest successes of the Cohesive Strategy investment, and its worth cannot be overstated.

OBJECTIVE 1: SUPPORTING COLLABORATIVE COORDINATION

The story of MSI's support for collaborative coordination begins back in 2012, when the SJHFHP formally adopted that name. The strong foundations laid by the Mixed Conifer and ponderosa pine working groups--both committed to advancing the science around regional forest management and improving coordination for work on the ground--prepared the group for the next phase of true collaboration supported through formal partnership with MSI. In 2016, the SJHFHP began conducting an annual planning exercise that engages private landowners, wood products industry, non-profits, forest service partners, local governments, and tribes in a conversation about planned work, cost sharing or leverage opportunities, and discussions of the latest available science. MSI was and continues to be at the helm, helping to coordinate the group and acting as a fiscal agent. Through consistent and continued coordination both from MSI staff and from partners who have been at the table for over 10 years, the SJHFHP has completed a

number of on-the-ground projects and attracted diverse funding to the region. The group has also engaged in new research with partners from the Colorado Forest Restoration Institute (CFRI), the Rocky Mountain Research Station and others that can help inform future work not only on the SJNF, but on private and other federal lands throughout the region. Partners of the SJNF have built a strong foundation and are now engaged in thoughtful, adaptive management.

The relationships built through the SJHFHP are not superficial. Partners have mourned the loss of a strong and knowledgeable founding member. They have worked together through difficult and challenging topics, striving always to innovate new solutions, even when it gets messy. For example, when industry partner the Forest Health Company, seeking to monetize small diameter timber by turning biomass into energy to sell to the local power grid, was unable

Left: In 2019, collaborative partners tour a mixed-conifer project in the Pagosa Creek area to discuss forest treatment options. Right: *The 416 & Missionary Ridge Tour: Ecological Resilience & Changing Landscapes*: MSI led a tour of the 416 & Missionary Ridge Fire burn scars in 2018 that included in-depth conversations with fire ecologists Dr. Julie Korb (Fort Lewis College) and forester Gretchen Fitzgerald (former forester with the SJNF) on fire ecology, fire mitigation and restoration, collaborative forestry practices, and human interactions with fire. Source: MSI Staff



to make the plan cost effective the group helped support a pivot to biochar technologies in 2015. As a result of the SJHFHP rallying with them, the Forest Health Company has continued long-term stewardship on USFS lands and completed forest thinning on key municipal properties. While the biochar facility is still in development, important hurdles like Colorado Department of Public Health and Environment permitting have been cleared and partners are getting closer to realizing local biochar production. With the desire to use project sites as case studies for future learning, the SJHFHP came together with the local high school to engage students in monitoring, and in the design and installation of educational signage on Reservoir Hill, a beloved forested town park. At this project site, thinning sought to improve the resilience of the forest ecosystem, benefit wildlife, and reduce significant wildfire threat to downtown Pagosa Springs. Given the prominent location and heavy use of the park, data produced and communicated by local students was key to gaining public support for the project, completed in 2017. All of these efforts and projects require tremendous coordination. Every meeting, every event, every new relationship requires consistent time and effort, and successful projects are realized through those investments.

When partners from SJHFHP, CPLA and the SJCWP came together with support from Cohesive Dollars and the RGWF to form the 2-3-2, it didn't happen overnight. MSI stepped up, alongside partners from the The Nature Conservancy, NM and CO State Forestry, and the SJNF, RGNF, Santa Fe National Forest (SFNF), and Carson National Forest (CNF), to facilitate conversations about the structure, mission, and vision of the group. As is the case with convening any new group of people for the first time, building relationships and consistent communication structures were paramount to establishing a foundation of trust. Cohesive investment enabled MSI staff and partners to take the time to build relationships that have flourished and enabled the 2-3-2 to begin truly working and planning together.

With the guidance and vision established during initial meetings, the 2-3-2 has allowed place-based collaboratives like the SJHFHP to focus on work in local geographies, support management activities that are meaningful to local communities and stakeholders, and consider how place-based work can be amplified to have landscape scale impacts. The 2-3-2 conglaborative activates goals identified in federal programs like the Cohesive Strategy and Shared Stewardship but, through regular communication and coordination, grows them from local initiatives. By working together, partners of the 2-3-2 have coordinated and leveraged work to influence the resilience of the Rio Grande and San Juan watersheds with headwaters located in Colorado and downstream water users in both Colorado and New Mexico. The 2-3-2 is now a forum where four national forests in two

USFS regions, two states, multiple tribes and pueblos, and place-based collaborative partners build bridges between water interests, forest groups, wildlife conservationists, industry, innovators, and researchers in the Southwest. The mail list for this group has well over 100 individuals, spread across more than a 5 million acre geography. Coordination at this scale could be a full time job: the logistics of hosting and preparing for quarterly meetings that are informative, productive, and well-planned, paired with the time it takes to build meaningful, trusting relationships that lead to partner investment and commitment, is no small task. Further, coordination capacity from MSI has helped lead numerous 2-3-2 sub-committees dedicated to specific tasks like developing monitoring strategies and promoting education and outreach, hosted cross-boundary tours, and brought new partners into the fold without having to start at square one with every staff turnover. In this way, through supported coordination, collaboratives like the 2-3-2 maintain institutional knowledge of work happening on the ground, and have become an invaluable resource for new and established partners working in the region.

Collaborative discussions are well established or growing on the Pagosa (SJHFHP) and Dolores Ranger Districts of the SJNF, where the Dolores Watershed Resilient Forest (DWRF) collaborative was formally established through support of a loose group of interested stakeholders

Con-glab-or-a-tive:
Noun: a team of teams. Several local collaboratives working together across a broader region for greater impact. A conglomerate of collaboratives welded together for weight and mass.

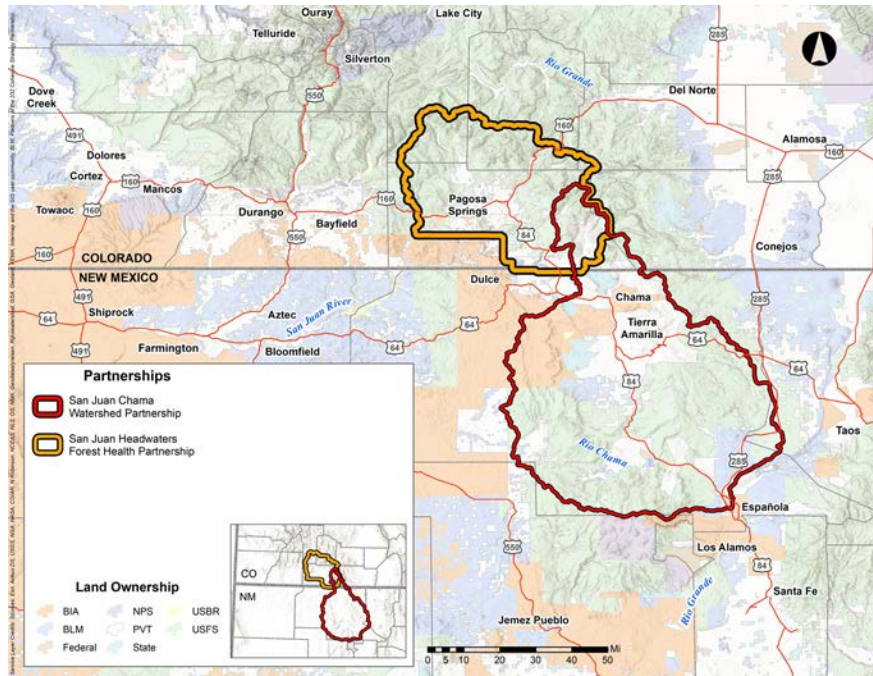
by Wildfire Adapted Partnership (WAP) and MSI in 2016. Until recently, however, the Columbine Ranger District, with the greatest population density in the area, did not have an avenue for incorporating community discussion into land management planning. By identifying key values and stakeholders and with support from Cohesive Funds, MSI, partners, and the USFS formed what has become the Four Rivers Resilient Forests Collaborative (Four Rivers). Four Rivers brings together key

partners from across La Plata County including industry, environmental, municipal, county, private land, and tribal members to address forest management in the district. Already, this group has helped develop successful RMRI and CFLRP proposals and has worked to identify values on the landscape that are threatened by wildfire. Four Rivers also faced the unique challenge of developing its strategic plan during the early months of the COVID-19 pandemic. Despite limitations, stakeholders engaged in the strategic planning process, demonstrating a desire for and commitment to collaboration.

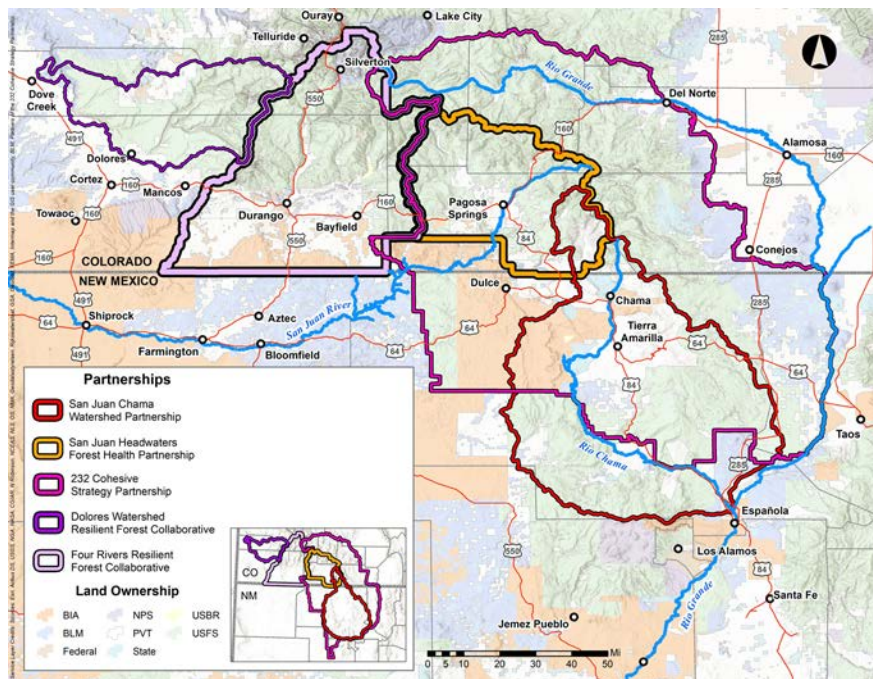
Through establishing relationships, and by developing venues for ongoing dialogue in the collaborative space through the SJHFHP, 2-3-2, DWRF, and Four Rivers, staff at MSI have been able to elevate community concerns to federal and state representatives. Staff and partners have been invited to direct conversations with elected officials, hosted community discussions, and participated in state initiated advisory councils for both Colorado and New Mexico.

Objectives & Accomplishments

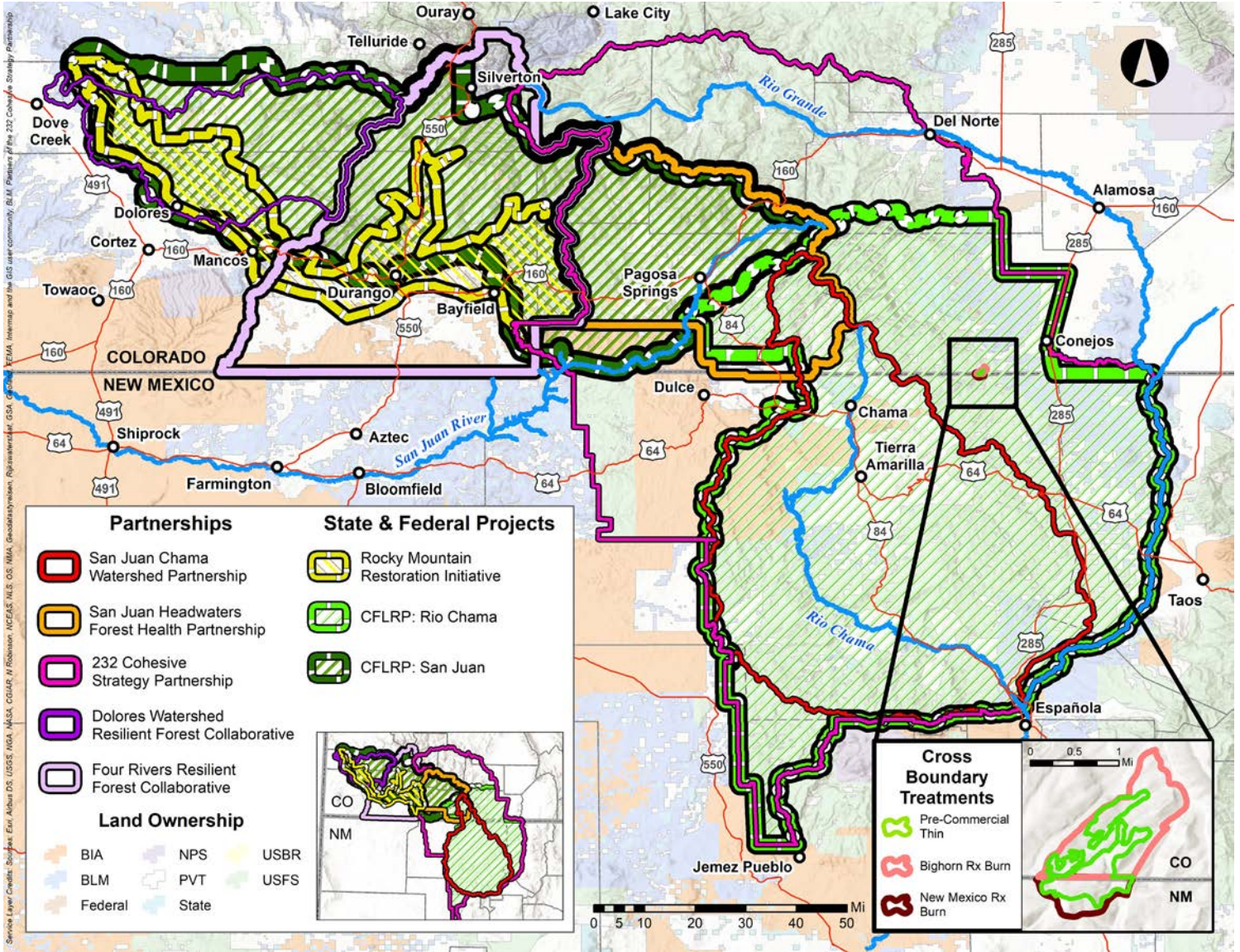
OBJECTIVE 1 CONTINUED



PAST: When Cohesive Strategy Funds were received, the SJHFHP, originally established as the Mixed-Conifer Working Group in 2009, and the SJCW, established in 2014, were operating in the area.



PRESENT: Cohesive Strategy Funds hastened and enabled the formation of two new place-based collaboratives, DWR, established in 2016, and Four Rivers, established in 2020, as well as the development of the 2-3-2 Cohesive Strategy Partnership, an umbrella collaborative that networks and elevates place-based groups.



FUTURE: Coordinated, cross-boundary planning and implementation made possible by collaborative functionality supported by Cohesive Strategy funds have attracted the RMRI and two CFLRPs to the area. These funding sources will put money on the ground for collaboratively planned projects, and enable planning and implementation processes to continue. This growth exemplifies successful and well-planned leveraging of resources that collaboratives and partners can build upon and replicate in the future.

Objectives & Accomplishments



In 2019, MSI Forestry Crews established long-term research plots to monitor forest recovery in the 416 Fire burn Area. Source: Michael Remke Photography

OBJECTIVE 2: EVALUATING COMPLETED WORK AND ASSESSING EFFECTIVENESS OF CURRENT PARTNERSHIPS

As place-based collaborative groups form and function in Southwest Colorado and Northern New Mexico, Cohesive Strategy dollars have empowered partners to learn from the best available science and share in dialogue that helps shape future forest and watershed management. These communication networks enable partners to take advantage of opportunities to complete work on the ground when they arise while ensuring alignment with partnership knowledge and community values. Groups have also supported robust monitoring efforts to inform future management decisions. Pre- and post-treatment monitoring results have been analyzed and disseminated as written reports and oral presentations to collaborative groups and thus demonstrated lessons learned, successes, and challenges from ongoing management efforts in a timely fashion to help inform future management action. Fuels manager for the Pagosa District of the SJHFHP described monitoring results as “science that people can use” in the clear and concise presentation of results with direct implications for management.

Science at work at the SJHFHP forum

Science is put to use at the annual SJHFHP science forum where partners hear from guest speakers about topics of interest applicable to collaborative conversations and management recommendations.

In February 2020, for example, the SJHFHP hosted speakers Brett Wolk, Marin Chambers and Dr. Tony Cheng of CFRI, Dr. Michael Remke of MSI, and Dr. Peter Brown of Rocky Mountain Tree Ring Research. These speakers offered partners case study examples of applied adaptive management processes in the collaborative space, illuminated monitoring results through report analysis, and presented geographically specific and relevant information about historical fire regimes.

The 2020 science forum attracted over 40 participants from the Pagosa Springs and further afield in Southwest Colorado.

Partnerships supported through Cohesive Strategy funding have a vested interest in documenting and evaluating their growth and effectiveness through annual end-of-year surveys. While monitoring and reporting the value of relationships, trust, engagement, and social change is challenging, anecdotal evidence from partners highlights the value of relationship and trust building among stakeholders and how that process translates to successful, high-impact planning and projects on the ground:

“As a wood products manufacturing company seeking to transform the way we design and build in rural communities, collaborative efforts such as DWRF and Four Rivers are pivotal to our growth and development. A community cannot move forward in a cohesive and purposeful manner without a well thought out and well coordinated conversation that represents many voices. The partnerships and facilitation provided by the Cohesive Strategy funds provide for just that sort of conversation and platform on which we build a shared vision of success”

—ANDREW HAWK

Co-Founder Timber Age Systems in Durango, CO

“The application of Cohesive Strategy funds for collaborative facilitation and coordination have provided a productive conduit for Senator Bennet’s office to understand community concerns in rural Southwest Colorado. Through discussions and visits with collaboratives, Senator Bennet has gained a better understanding of how communities work with federal opportunities and initiatives. This process has allowed the Senator to better represent his rural constituents and craft legislation for on the ground work in forested landscapes and watersheds with the ultimate aim of bolstering community resilience.”

—JOHN WHITNEY

Western Slope Regional Director, Senator Michael Bennet

“Having a strong collaborative partnership in our region has assisted us in targeting high priority areas to implement cross-boundary projects and provide a unified message on the importance of forest management to the community.”

—JERRY ARCHULETA

NRCS, Pagosa Springs, CO

“When I reflect on the Cohesive Strategy, my first thoughts are drawn to its vision statement: Safely and effectively extinguish fire where needed; use fire where allowable; manage our natural resources; and, as a nation, live with fire. Realizing this vision is a challenge. But then I remember the name of this strategy and I focus on the word cohesive and its meaning. Togetherness, interrelatedness, interconnection, bond ... These words are not singular. Absent partners and collaboration, this vision will not and cannot be realized. But then another question comes to mind -- Is the challenge the vision, or is the challenge us?”

—KEVIN KHUNG

Deputy Forest Supervisor, Bridger Teton National Forest (former Pagosa District Ranger on the SJNF)

“The value of the 2-3-2 from the Colorado State Forest Service (CSFS) perspective is that it provides a venue for partners to discuss forest management projects. We have been able to share biomass utilization opportunities and current prices as well as what helped make a successful project.”

—ADAM MOORE

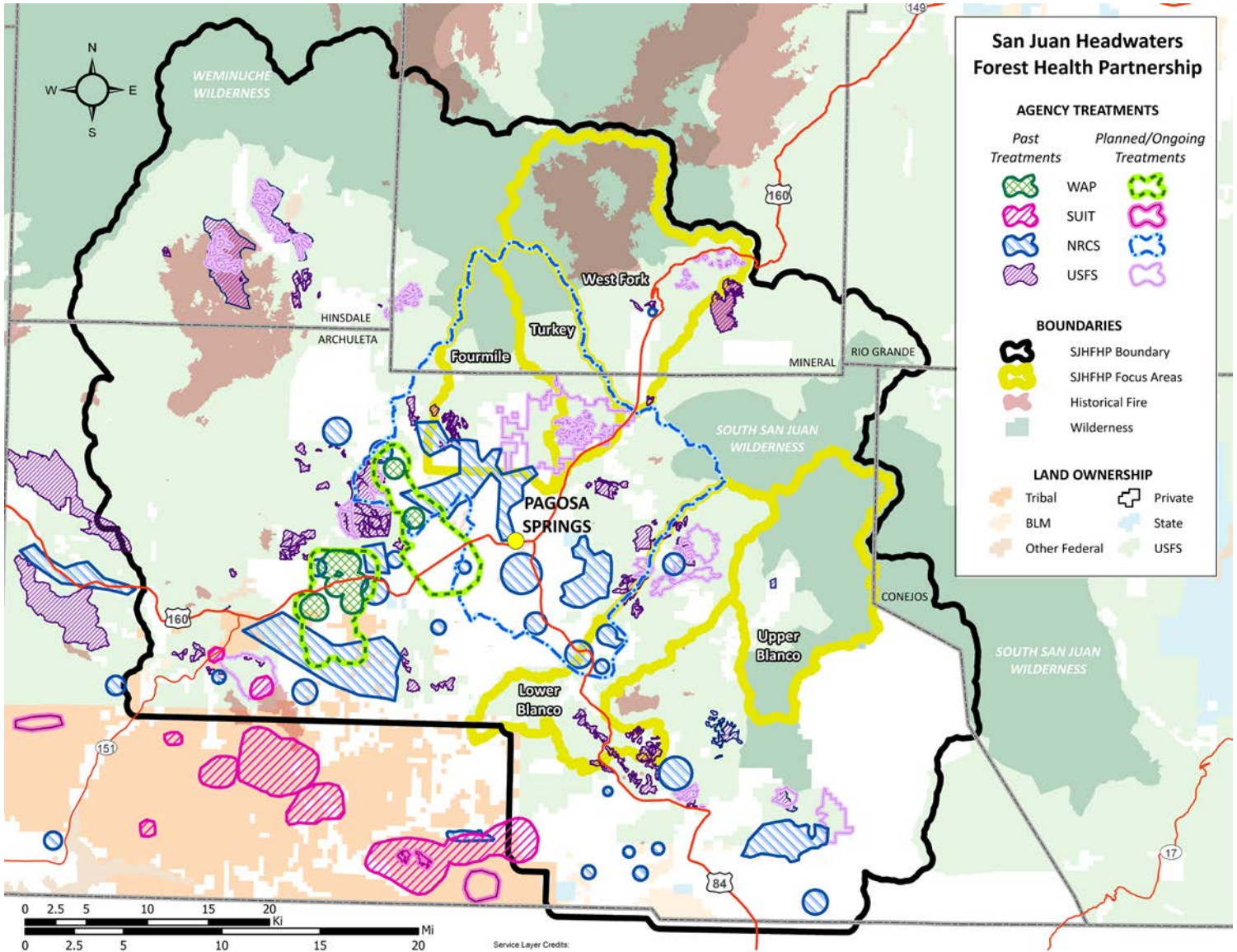
CSFS Supervisory Forester, Alamosa, CO

Anthony Culpepper quantifies canopy cover in a moderate burn severity plot in the 416 Fire. Source: Michael Remke Photography



Objectives & Accomplishments

OBJECTIVE 2 CONTINUED



SJHFHP land management partners gather every spring to report completed landscape work and to discuss slated work and future planning opportunities that align values and resources. The map they create together is available online to all partners and to the public at sanjuanheadwaters.org.

Each year, the SJHFHP and 2-3-2 solicit stakeholder input about progress towards identified goals, alignment with strategic plans, and general partnership growth and functionality. In its nascent stages, Four Rivers has not yet conducted these surveys, but intends to. Digital surveys distributed to full partnership lists collect both quantitative and qualitative feedback and help partners set goals large and small for the upcoming year. Survey results are presented to partnerships at a meeting early in the year, discussed, and help

with short and long range planning and budget building. Survey questions remain the same from year to year, and ask participants to let coordinators know things like: whether or not the group has helped advance the partner/partner organization's mission; whether or not the meetings and activities are effective; what partner goals are; where we should focus our time, energy, and resources as a group; and who else should be involved.

These surveys provide an avenue for collaborative partners to celebrate successes and consider ways to improve their functioning on an annual basis. Over time, the SJHFHP has highlighted the diversity of skills, experience, expertise, and interests of partners as an important asset, and continues to identify additional partners they want to bring to the table. Partners of the SJHFHP and 2-3-2 have also consistently emphasized the importance of trust and relationships that enable productive disagreement and honest dialogue that moves conversations about landscape management decisions and initiatives forward. Notably, these foundations have enabled 2-3-2 Partners to evolve from using the 2-3-2 forum as a way to prioritize and network to a way to plan and work together. Consistently, partners highlight that these key ingredients to successful collaboration take time to develop, but pay dividends in the long run.

The 2-3-2 and the SJHFHP have also worked with Conservation Leadership Through Learning (CLTL) master's students at Colorado State University's (CSU) Warner College of Natural Resources to develop situation assessments that describe collaborative successes, challenges and opportunities for growth. These assessments, conducted by CLTL students, involve extensive interviews with

partners and research into collaborative functionality. The 2-3-2 worked with the CLTL program in 2019, and the report produced by the students that year informed the development of the collaborative's strategic plan and guiding documents. The SJHFHP worked with CLTL in the spring of 2020 and received a thorough report that is now guiding a strategic plan review and informing goal setting for the future.

There are a number of reports that the MSI team has produced to communicate specific monitoring efforts and findings, which can be found on the MSI and collaborative partnership websites. These reports have been used to inform and inspire adaptive management actions in both collaborative and decision making spaces. From both a qualitative and quantitative perspective, data and information collected and presented for and by collaborative groups results in improved efficiency and quality of landscape management projects supported by increased funding. The same information also improves communication, trust and coordination among stakeholders and land management professionals.

A three-toed woodpecker feeds on spruce bark beetles in the old growth spruce forests near Deer Creek.
Source: Michael Remke Photography

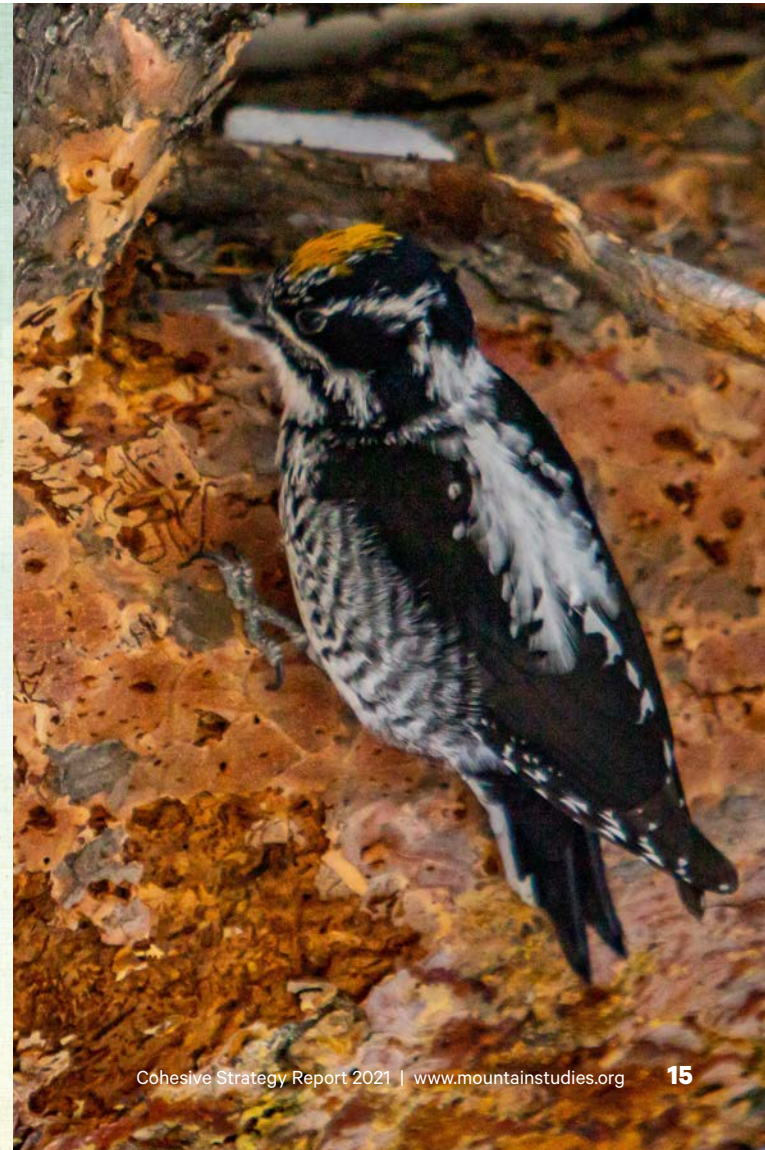
Partners get in the field and generate science despite COVID challenges

A unique example of monitoring through community science is the partnership that exists between the SJHFHP and Audubon Rockies.

For the past four years, community science volunteers have visited three sites in the forest surrounding Pagosa Springs. At one of these sites, no management action has been taken, at another a thinning prescription has been completed, and at a third, both thinning and prescribed fire have been implemented.

Annual reports produced by the local Audubon Rockies Chapter, Weminuche Audubon, have added a unique layer of data that further helps partners understand ongoing impacts of forest treatments and engages the community in learning about wildlife, forest ecology, and forest management tools.

The project has fostered valuable and amenable relationships among land managers and wildlife enthusiasts. In 2020 alone, despite the challenges presented by the COVID-19 pandemic, this project amassed over 700 volunteer hours. Weminuche Audubon reports are presented to the full partnership each year and made available on the SJHFHP and Audubon websites.



Objectives & Accomplishments



SJHFHP members celebrate the completion of restoration work and the installation of educational signage on Reservoir Hill, a cherished community park in Pagosa Springs, CO. Source: MSI Staff

OBJECTIVE 3: CONTINUING EFFORTS TO INFORM, EDUCATE, AND OUTREACH TO LANDOWNERS/COMMUNITIES

Cohesive Strategy Funds were integral to MSI and partner efforts to provide thoughtful, timely, engaging education and outreach to local communities and stakeholders. Since the initial investment of Cohesive Strategy Funds, MSI and the partnerships we coordinate have hosted more than 100 events and outreached more than 3,000 individuals.

That outreach has taken multiple forms. In the spring of 2018, MSI brought together local land managers, collaborative leaders, decision makers, and community members to figure out ways to enhance public awareness and education about wildfire during what was shaping up to be a particularly worrisome year. The resulting event was the “**Forest and Fire Learning Series**,” a community event that highlighted and explored relationships between forests and fire. The event hosted a panel of scientists, land managers, and emergency responders over the course of a three-part series. At the local Powerhouse Science Center, an average of 30-50 guests engaged in each of the sessions. Just a few weeks after the final session, the 416 Fire was ignited on the SJNF. MSI continued outreach and engagement throughout the fire, and following it.

Since then, MSI has hosted the Forest and Fire Learning Series annually, advancing the conversation about the realities of living with fire and smoke, community preparedness, the ecological roles of fire in mixed conifer and ponderosa pine ecosystems, collaborative forest management, and the impacts of climate change on forest dynamics and fire behavior. During the COVID-19 pandemic, MSI hosted the event online successfully and now plans to move forward with hybrid events to impact broader audiences in the future.

Additionally, MSI partnered with the Aspen Center for Environmental Studies (ACES) to produce an annual **State of the Forest Report**. ACES had already developed a format, and contributed funding for design, writing, and expertise. By producing the reports for the Roaring Fork

Outreach Examples

- Annual Forest and Fire Learning Series
- State of the Forest Report
- 2-3-2 Cross Boundary Tour
- Bridging the Divide
- Connecting for Conservation
- Collaborative Partnership Tours

Valley and the SJNF in tandem, we had the opportunity to identify, discuss, and advance information and knowledge about how climate change, insects and disease, and fire affect our respective landscapes.

In 2018, the 2-3-2 Partnership worked with local, place-based collaboratives to host a **cross-boundary tour**. We brought together representatives from State Forestry in both Colorado and New Mexico, Regional Foresters from US Forest Service Regions 2 and 3, congressional representatives, local partners, and small businesses to tour the private land headwaters of the Rio Chama, critical fuels treatment work being done to protect water resources on both sides of the state line, challenges posed by massive beetle kill on Wolf Creek Pass, and the Blanca Wood Mill to illustrate industry opportunity. In many ways, this trip catalyzed the decision to pursue the Rio Chama CFLRP proposal in 2019.

In addition to these three significant events and efforts, Cohesive Strategy funds have supported over 40 on-the-ground tours of treatments, numerous science events, and community forums. In 2015, 2016, 2018, and, in limited form, 2019 the SJHFHP hosted “**Bridging the Divide**,” an event dedicated to bringing together practitioners and stakeholders on both sides of the continental divide for an update on the state of science, networking, and old fashioned storytelling. In 2019, Dr. Jonathan Coop of the Clark Family School of Environment and Sustainability at Western Colorado University incorporated the Bridging the Divide event into his fall curriculum for undergraduate students. As part of their class, students traveled to Wolf Creek Pass to participate in the science talk and tour, and were able to both learn from SJHFHP partners and provide valuable perspectives and insights to the

Senator Hickenlooper joins local forest collaborative leaders, industry professionals, USFS leadership, and county government officials in Durango for a listening session about place-based collaborative support of wildfire preparedness, social well-being, economic foundations and opportunities across southwest Colorado. Source: John Whitney, Western Slope Regional Director for Senator Michael Bennet



group. Other tours in the region have focused on integrated resource management opportunities involving recreation projects, landscape implications and impacts of using prescribed fire as a management tool.

Additionally, MSI coordinates “Connecting for Conservation”, a monthly lunch meeting and annual conference for individuals working in conservation throughout the region. These events provide a valued networking and information sharing venue. And our engagement doesn’t just stop with existing practitioners. MSI spends time in local schools in Pagosa and Durango, engaging the next generation of scientists and land managers through field trips, classroom science, and on the ground monitoring opportunities.

Cumulatively, these and other events have advanced community understanding of forest dynamics, and the realities and opportunities for living with wildfire. This improved understanding can be seen in the increase in stakeholders willing and interested in engaging with community discussions about forest and watershed dynamics, asking specific questions about land management actions and implications, and pursuing fuels mitigation near their homes.

Additionally, we’ve seen increased support and participation in collaborative efforts from both local and state decision makers, from city council members and county commissioners to senators. Participation in local collaboratives from non-profit, private landowner, and tribal communities helps to increase social license, knowledge, and capacity for doing important work to protect forest and water resources and the communities that rely on them.

Partnerships with WAP and land owners

Through partnerships with WAP and land owners, private lands work has been incorporated into mapping and impact assessments. Included is the development of a program to treat homes in less affluent communities free of charge, funded through a Stevens Hazardous Fuels Grant (CAFA) and administered together with WAP in Archuleta County.

From 2018 to 2021, CAFA funds were used to employ four local contractors that completed fuels mitigation work on 43 properties, totaling 106 acres.



In early June of 2018 the 416 Fire was making active crown runs on the Hermosa Cliffs above Highway 550. Source: Michael Remke Photography

OBJECTIVE 4: IMPROVING COORDINATION OF LOCAL WILDFIRE RESPONSE EFFORTS

In addition to enhancing community understanding of the role of wildfire in a healthy forest, the investment of Cohesive Strategy funds into partnerships in Southwest Colorado and Northern New Mexico has improved wildfire response efforts in a multitude of ways.

First, the improved communication and trust fostered by the regular meetings and networking of collaboratives across the region has proven beneficial for fire planning and response on multiple occasions. Take, for example, the RGNF and the CNF, which abut the state line. The two forests have, for years, desired to burn along that state line, but weren't in communication. Through the 2-3-2 Partnership, representatives from both forests were able to bring forward their needs, concerns, capacity limitations, and outline opportunities to coordinate. After a number of years, in the spring of 2021, an initial cross-boundary burn took place.

The 2018 prescribed fire learning exchange (TRES) on the SJNF is another result of Cohesive Funds at work. The first ever TRES in this region, the event brought together fire practitioners from diverse backgrounds to conduct prescribed burns and advance capacity for individuals working on all manner of qualifications from Burn Boss to FFT2. This effort brought together participants from non-profit organizations, academia, the Bureau of Land Management, USFS, and representatives from local and Front Range fire departments to burn in a heavily trafficked ponderosa pine area on the Pagosa Ranger District adjacent to a large housing development.

Cross-boundary burn

The Bighorn/Stateline prescribed burn took place in the spring of 2021 after years of pre-treatment and coordinated preparation enabled by relationships formed through the 2-3-2.

The project, led by the Conejos Ranger District on the RGNF (USFS Region 2) and supported by the Tres Piedras Ranger District on the CNF (USFS Region 3) straddles the Colorado - New Mexico state line and encompasses 1600 acres of ponderosa and pinyon pine forest interspersed with Douglass-fir and white fir.

Pre-commercial thinning took place in the project area in 2014 to prepare for returning fire to this fire adapted landscape, and from May 27-29th of 2021, active lighting took place on 560 project acres, with special care taken around culturally modified trees.

Desired prescribed fire outcomes included fuels reduction, improved forest health, and rejuvenation of open forested areas. Leaders and specialists from both the RGNF and CNF are committed to ongoing coordination to identify and meet community and ecological needs in this area. Some of this coordination and additional on the ground treatments will be supported by the upcoming Rio Chama CFLRP.



The Bighorn/Stateline prescribed burn, an ongoing cross-region fuel treatment project managed by the Conejos Peak (RGNF) and Tres Piedras (CNF) Ranger Districts, was successfully planned and executed in the spring of 2021. This project spans the Colorado - New Mexico border. ABOVE: Standing on the CNF looking at the smoke coming from the RGNF portion of the Bighorn/Stateline burn. LEFT: A small ponderosa pine tree tree torches during the Bighorn/Stateline burn. Source: Rio Grande National Forest

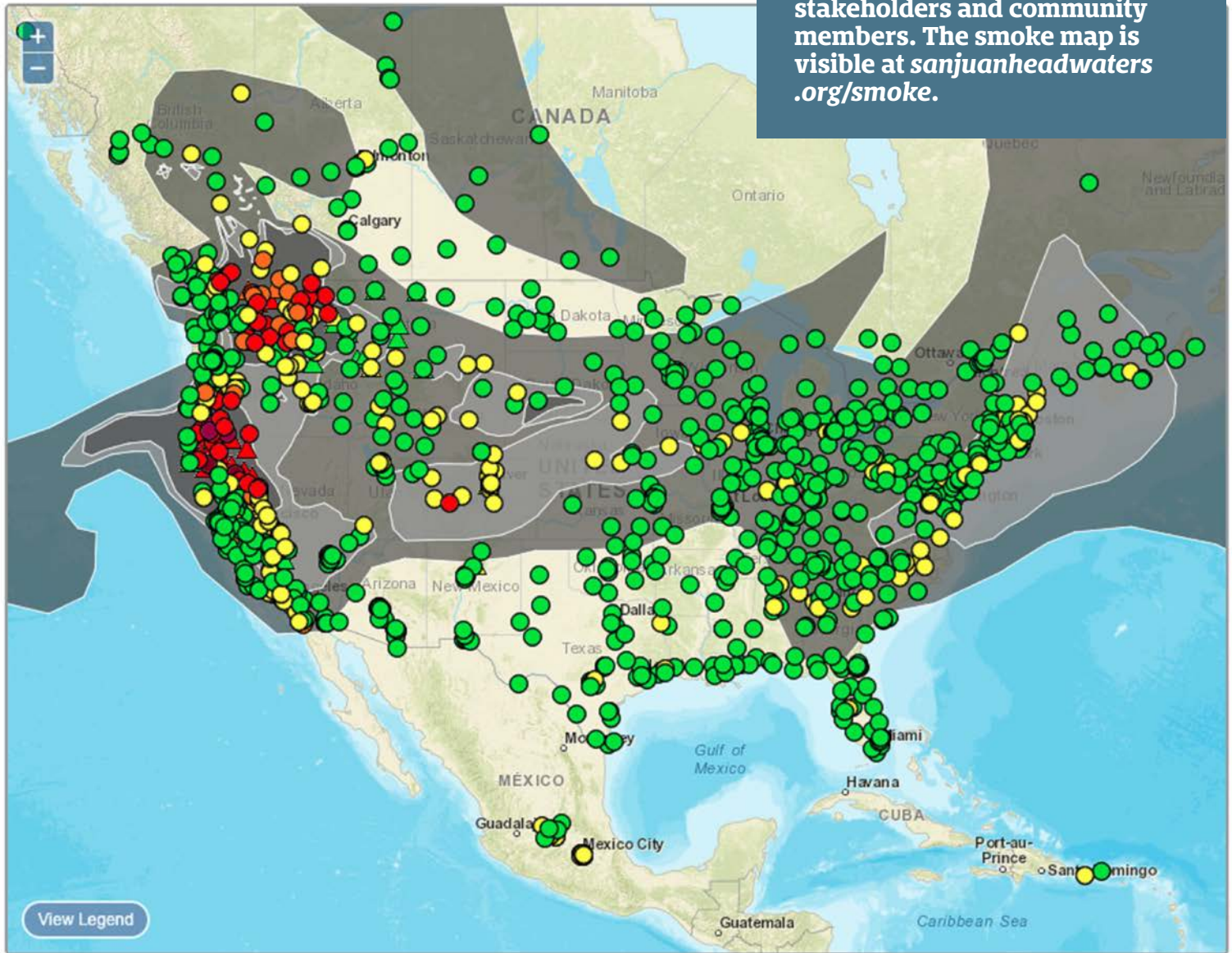
2018 Chama TREX crew traveling from operations on Brockover Mesa. Source: Michael Remke Photography



OBJECTIVE 4 CONTINUED

Where is the smoke coming from?

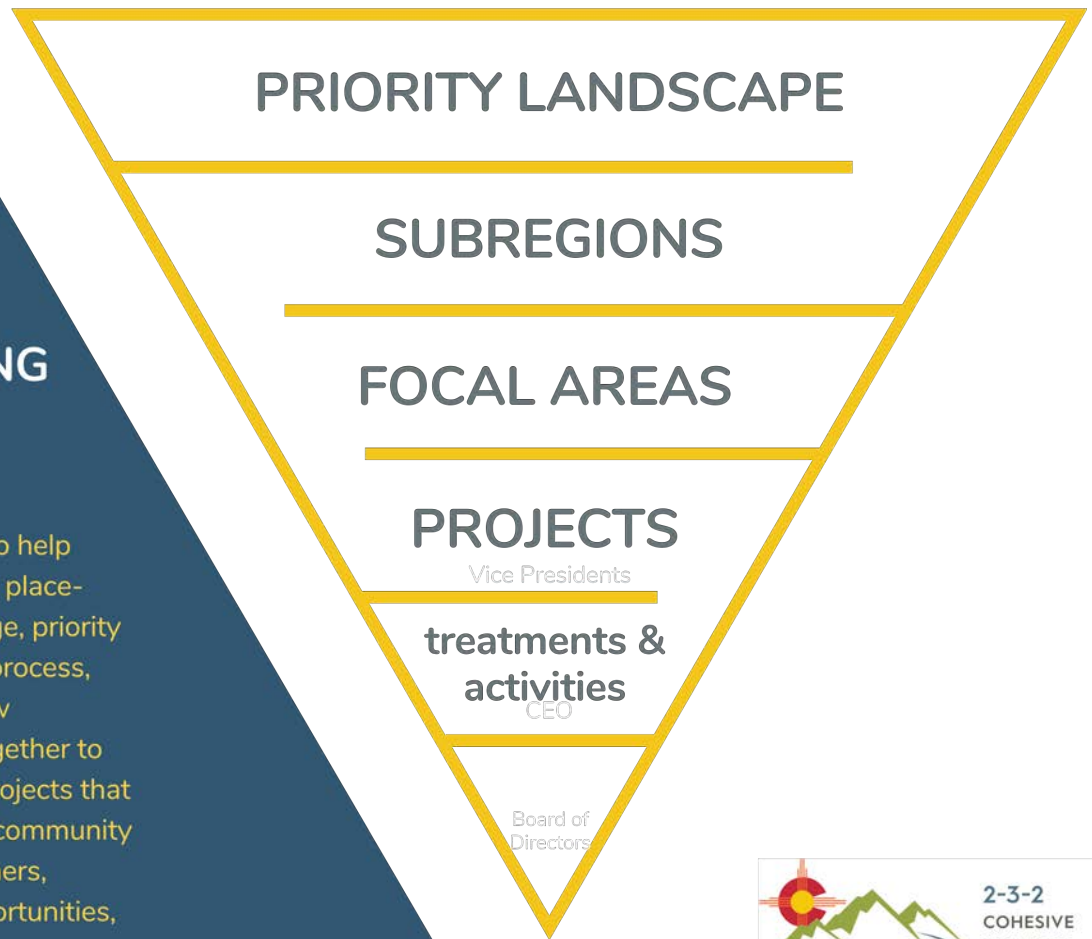
In 2018 and 2019, MSI worked with partners to develop a smoke map that allows users to both identify and share the locations of smoke sources with stakeholders and community members. The smoke map is visible at sanjuanheadwaters.org/smoke.



Data sources: EPA's AirNow, MODIS Satellite Hazard Mapping, NOAA, InciWeb, and Google, inc. Note: Wildfire detections by satellite do not always represent an actual fire and are not always ground truthed. Smoke plumes are those detected by satellite and may have greater spatial extent and settle in valleys in low concentrations.

2-3-2 PLANNING PROCESS OVERVIEW

This process is designed to help develop and contextualize place-based priorities within large, priority landscapes. Through the process, partners develop and grow relationships and work together to generate a catalogue of projects that addresses ecological and community needs, and identifies partners, funding and leverage opportunities, and timelines.



Our collaboratives have developed a community approach to learning how to live with fire. Through the RMRI, our communities reviewed, informed values, and prioritized geographic potential operational delineations. Additionally, our collaborative efforts helped refine the modeling of highly valued resources and assets on the landscape and translated that into a Risk Analysis and Decision Support System that will advance effectiveness and efficiency in the use of funds for programs like the Southwest Wildfire Impact Fund. These efforts will also help inform monitoring needs and progress our evaluation of work completed to make sure we are meeting desired outcomes.

Finally, as an attestation to the evolution of the partnership and the bounty of trust developed through the process, partners in the various collaboratives (SJHFHP, DWRP, Four Rivers, 2-3-2) have undertaken a series of coordinated planning exercises that will help mitigate wildfire impacts to shared values and restore fire to forest ecosystems. The 2-3-2 Partnership is working closely with the SJHFHP and the SJCWP to build from their existing planning and prioritization efforts to develop an approach for use throughout the nearly 5 million acre 2-3-2

geography. In order to curb the “random acts of restoration” approach to forest treatments, and to strategically focus work in areas of high need and strong potential for beneficial return, the 2-3-2 brought together assessments from both the Colorado and New Mexico State Forest Actions Plans, as well as five-year planning processes on the four national forests (SJNF, RGNF, SFNF, and CNF), and integrated those with stakeholder and community-driven development of focal areas. This staged process continues to help partners develop a shared language around scale, and has brought strategic parties together to focus on specific landscapes, framed within the context of the full landscape.

The goal was for this process to be well underway in advance of CFLRP funding, and partners now have a great start on meeting this goal because of Cohesive Strategy resources. In this way, Cohesive Strategy funds have helped ensure optimal readiness for the arrival of CFLRP funds, and perpetuated collaborations that have made long-term, large-scale projects critical for collective responses to growing threats from unprecedented wildfire attainable.

Recommendations



One year after the 416 Fire, lupines are abundant in the mosaic of the fire footprint. Source: Michael Remke Photography

The tremendous impact of the Cohesive investment in regional collaboratives, and how far that funding has been leveraged for future work on the landscape, makes a compelling case for continued investments in collaboratives. And, through this process, we've learned a number of lessons that can help inform and enhance the impact of those future investments.

One of the clearest takeaways from the last three years is how critical a stable funding base is to the success of collaboratives. Consistent, reliable funding ensures that collaboratives have reliable coordination and can engage specific skill sets and expertise (e.g.: monitoring, mapping, design and outreach) as needed. Further, consistent coordination and engagement provides institutional knowledge that can ensure collaboratives continue moving forward, rather than experience stop-and-go starts often associated with high turnover of involved land management and community partners. This same institutional and landscape knowledge also supports and familiarizes new partners as they arrive in the community. Consistent, reliable funding and coordination helps collaboratives meet community needs, maintain a consistent presence, adapt to political changes, grow opportunities, build long-term programs, and advance a diversity

of funding sources that perpetuate these processes. Garnered and leveraged funds enable work on the ground, and provide resources for ongoing evaluation of collaborative processes and project implementation.

One of the greatest outcomes of ongoing discussions in the collaborative space is the determination of appropriate scales for work on the landscape. Local communities need to be able to address the areas that are of relevance to community members. That said, our communities are often connected by values on geographically disparate landscapes. This demonstrates the need to work on several scales to address local issues, show regional connectivity, and manage resources on a landscape scale. Building place-based collaboratives, and networking them through a *conglaborative* structure like the

2-3-2, allows place-based groups to speak to leadership and high-level planning processes at the state and federal levels and to connect plans with on the ground outcomes.

With the successes of working at varied scales comes the challenge of aligning outcomes and monitoring efforts to tell the story of collective impacts. Monitoring can help determine if we are working in the right places and whether or not we are truly influencing the resilience of values. While Cohesive Funding supported monitoring, specifically through the SJHFHP, and partners saw the benefits for funding and adaptive management, other collaborative partnerships are just now in the nascent and critical stages of developing thoughtful, holistic monitoring strategies that integrate partner values and feedback and align with federal-level requirements and goals for things like CFLRP funding.

Cohesive Strategy funding has set the stage for work going forward. Already, and because of these initial investments, we are well on our way to co-managing fire risk as outlined in the Shared Stewardship vision at a scale that meets demand. The planning processes

undertaken at the state and forest level, paired with the knowledge, tools and capacity offered by collaborative partners has positioned us to do the right work in the right places and at the right scale in Southwest Colorado and Northern New Mexico. Partners are helping to inform which tools make sense to use where, and to bring capacity that optimizes the use of those tools. Cohesive funding has launched us into a productive model for Shared Stewardship, but we aren't done. Continued and optimized success of this initial investment will require ongoing and reliable financial investments in addition to commitments of USFS partner time, transparent and regular integration of local values, and active collaborative partnership engagement with project priorities and planning at every stage. It's critical that new partners, USFS and otherwise, enter into collaborative spaces and dialogue willing to actively engage, committed to the groundwork that's been laid, and ready to build upon and grow relationships in place. Non-USFS partners must demonstrate a willingness to understand and work within the parameters of USFS planning and protocols, and to continue to add value and capacity through shared knowledge and information, resources, and funding.

At Banded Peak Ranch in 2018, a 2-3-2 cross-boundary tour discussed watershed connectivity on federal and private lands and explored the work happening across the watershed's landscape. Source: MSI Staff



What's Next



Senator Bennet joins the SJHFHP on Reservoir Hill, a cherished community park in Pagosa Springs, to learn about forestry treatments, community buy-in, and the resources required to plan and execute work on the ground in the fall of 2020. Source: Michael Remke Photography

Considering the many initiatives and projects completed, in process, and being planned through our collaborative efforts, how do we plan for the future beyond the completion of energizing projects and the sunset of funds that supported them? How do we advance our capacity, develop a workforce, and innovate utilization of materials removed from forested areas?

Cohesive Strategy funds were a catalyst that made it possible to secure additional initiatives that will allow our region to serve as a model for Shared Stewardship, coordinating work across public and private lands. Our collaborative efforts to date have inspired a spirit of shared responsibility and shared investment in the work that needs to be done, and has made firm investors and partners of diverse stakeholders. Together, stakeholders and collaboratives from the region have secured the RMRI for Southwest Colorado, the Rio Chama CFLRP, and the Southwest Colorado CFLRP. These projects pose an exciting opportunity to integrate the recommendations above into the next decade of Shared Stewardship in our region, and to continue innovating planning, outreach, and implementation mechanisms that help us respond to immense threats from wildfire and climate change.


In many ways, the real work begins now. Making the most of landscape-scale opportunities will require collaboratives to up their game, as the scale at which we're coordinating (across two CFLRPs and multiple place-based collaboratives) is unprecedented. Through collaborative platforms, we will work to align these efforts, supporting

an effective and efficient landscape scale approach. We will work to define outcomes, outputs, and align monitoring efforts, so that we can measure the impact of collaboration on the social, economic, and ecological fabric of our region.

Eyes are on us. This region now has a national reputation for a culture of strong partnership, where stakeholders who do good work together exemplify the benefits of collaboration and coordination. These partners have and continue to build trust, demonstrate a willingness to tackle the inherent challenges of working together, and establish a bold and necessary vision for preparing the landscape and communities that rely on it for the changes to come. Our task is to keep moving forward with a deepened dedication to these processes and work and a renewed sense of urgency so we can address the challenges our landscape and communities face in efficient, effective, and holistic ways.



Anthony Culpepper looks across the Hermosa Creek drainage where the 416 Fire burned approximately 54,000 acres in June 2018. Source: Michael Remke Photography



The Mountain Studies Institute is an independent not-for-profit mountain research and education center established in 2002 in Silverton, Colorado. MSI develops science that people can use to address environmental issues facing the San Juan Mountains.

www.mountainstudies.org

Gambel's Oak is abundant and a colorful red in the 416 Fire burn scar with the vibrant yellows of Aspen in the footprint of the Missionary Ridge Fire in the background. Source: Michael Remke Photography