CFLRP Rio Chama CFLRP (CFLR025):
National Forest(s): Santa Fe National Forest, Carson National Forest, Rio Grande National Forest, San Juan National Forest

1. Executive Summary

In FY2023 the Rio Chama Collaborative Forest Landscape Restoration Program (CFLRP) successfully:

- Executed a 10-year Master Agreement with the Forest Stewards Guild (The Guild) for Watershed Restoration
- Finalized minor boundary adjustments including Santa Clara Pueblo Tribal Forest Protection Act (TFPA) Area
- Executed a TFPA Workforce Development Agreement with Santa Clara Pueblo for watershed and forest restoration treatments.
- Finalized and implemented the 2 Watersheds – 3 Rivers – 2 States Cohesive Strategy Partnership (2-3-2) Multiparty Monitoring Plan (MPM plan), including year 1 of field monitoring for ecological and socioeconomic indicators.
- Fostered and grew relationships with Tribal nations and Pueblos, including the Jicarilla Apache Nation and Santa Clara Pueblo
- Completed Geospatial Technology and Applications Steering Committee (GeoTASC) project.
- Completed first year pilot Seed Tree-Re-inventory Project to support reforestation efforts.
- Permanently staffed two remaining Rio Chama CFLRP positions (GIS Specialist and Public Affairs Officer)
- Finalized and implemented joint communication strategies for the 2-3-2 and Rio Chama CFLRP
- Provided wood to three Navajo Nation Chapters via the National Forest Foundation (NFF) Wood for Life Program through the Rock Creek Project and supported additional non-traditional wood utilization businesses including cottage industries.
- Completed prescribed burns on the Carson (Dorado/Cañada del Agua) and Santa Fe (Golondrino) totaling 4,381 acres and implemented 2,018 acres of managed fire on the Comanche Fire
- The United States Forest Service (USFS) completed 15,514 acres of fuels treatments, 15,951 acres of watershed improvement and reported 47,921ccf timber volume sold.
- Identified shared priorities for forest restoration treatments on- National Forest System (NFS) lands.
- Identified and tracked potential, in- progress, and completed CFLRP projects on non-NFS lands.
- Provided technical assistance to landowners for forest restoration treatment design and implementation.
- Hosted four full 2-3-2 meetings in a combined hybrid and field format with over 170 total attendees.
- Organized working group and committee meetings throughout the year to support full 2-3-2 Partnership activities.
- Coordinated and facilitated field trips with 2-3-2 partners, the USFS, public, Tribal communities and invested stakeholders including trips focusing on watershed protection and fuelwood availability in the landscape.
- Total CFLN funds expended=$3,095,899M (including carryover). Forest Service Discretionary Match Funds=$4,272,147 (includes expenditure for G&A and salary match) Partners contributed $4,847,840 of non-federal, private and federal funds to planning implementation and monitoring in the project landscape, exceeding 1:1 match requirement.

Left: A core planning group of Forest Service and non-profit partners meet at the Leopold House in Tres Piedras, NM on February 9 (photo: Esme Cadiente) Right: Field tour with Forest Service, 2-3-2 partners, private landowners, and members of the public at a quarterly 2-3-2 meeting in Chama, NM (photo Preston Keres).

Left: Forest Service, Forest Stewards Guild and Mountain Studies Institute staff enjoy the sunshine on the patio at the SWERI cross-boundary workshop in Fort Collins, CO. (photo: Brandy Richardson). Right: Forest Stewards Guild, Rio Grande Return and Forest Service work on beaver dam analogs in the Rito Pena Negras on Santa Fe NF (photo: Preston Keres).

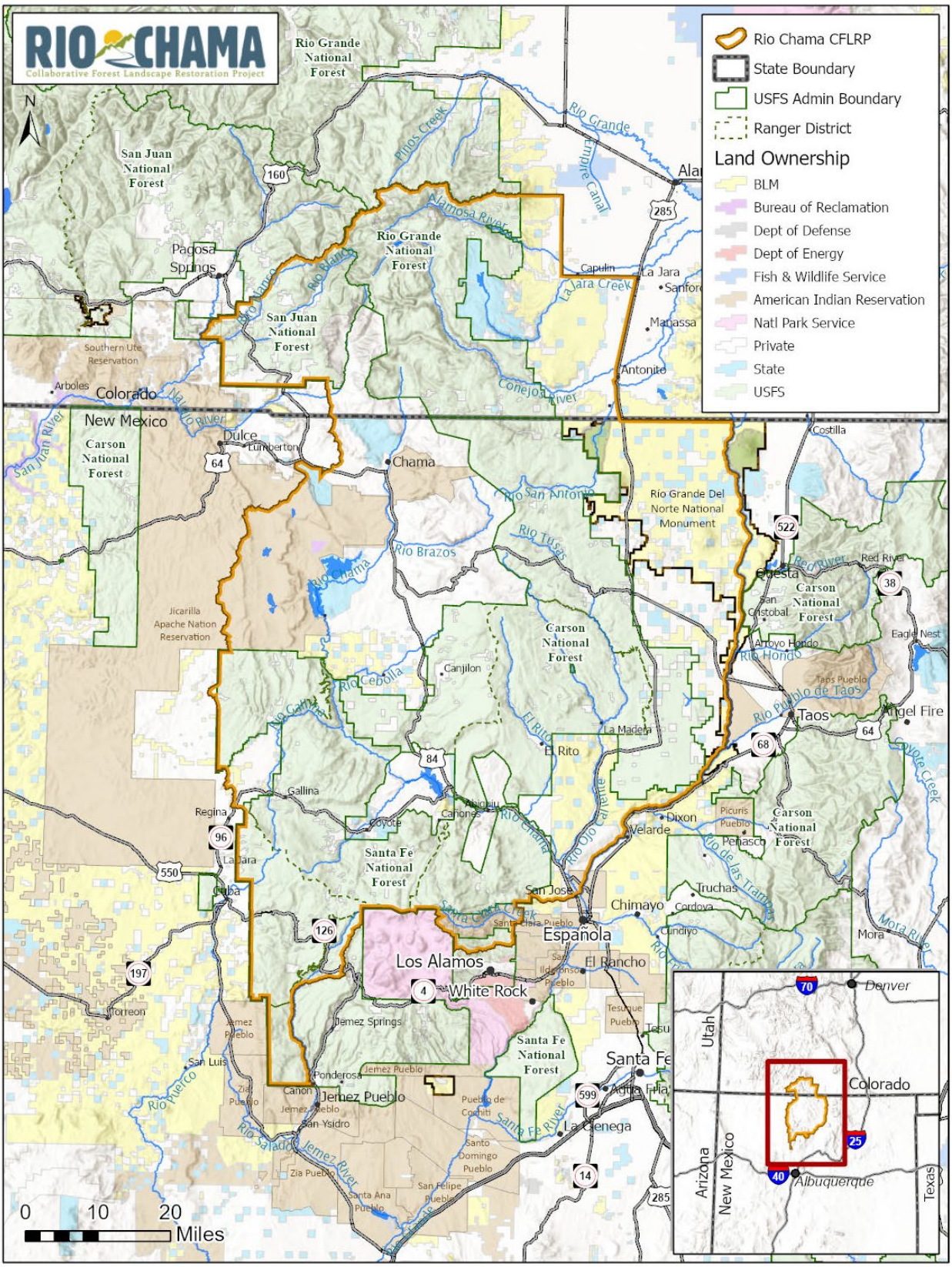


Figure 1. Map of Rio Chama CFLRP which spans 3.8M acres across 2 FS Regions, 4 National Forests and 9 Ranger Districts in two states in addition to state, Tribal, private, and other Federal lands.

2. Funding

CFLRP and Forest Service Match Expenditures

Fund Source: CFLN and/or CFIX Funds Expended	Total Funds Expended in Fiscal Year 2023
CFLN2523	$2,540,773
CFLN2522	$555,126
TOTAL	$3,095,898

This amount should match the amount of CFLN/CFIX dollars spent in the FMMI CFLRP expenditure report. Include prior year CFLN dollars expended in this Fiscal Year. CFLN funds can only be spent on NFS lands.

Fund Source: Forest Service Salary and Expense Match Expended	Total Funds Expended in Fiscal Year 2023
NSCF2523 Region 3	$1,008,623
NSCF2523 Region 2	$550,502
WSCF2523 Region 3	$449,409
WSCF2523 Region 2	$15,055
TOTAL	$2,023,589*

*These fund sources did not match FMMI amounts, or were not included in the upward reporting databases as CFLN match. The official total in the FMMI CFLRP expenditure report for Salary and Expenses was $0. Staff time spent on CFLRP proposal implementation and monitoring may be counted as CFLRP match – see Program Funding Guidance.

Fund Source: Forest Service Discretionary Matching Funds	Total Funds Expended in Fiscal Year 2023
CFDS2522	$164,000
CFHF2523	$870,231
CFTM2523	$225,000
NIHX5923	$463,000
NIVX7T23	$250,000
CFRT0922	$42,727
RTRT1022	$230,600
TOTAL	$2,245,558

This amount should match the amount of matching funds in the FMMI CFLRP expenditure report, minus any partner funds contributed through agreements (such as NFEX, SPEX, WFEX, CMEX, and CWFS) which should be reported in the partner contribution table below. Per the Program Funding Guidance, federal dollars spent on non-NFS lands may be included as match if aligned with CFLRP proposal implementation.

Partner Match Contributions[1]

[1] *Addresses Core Monitoring Question #13*

Fund Source: Partner Match	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY23	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
Forest Stewards Guild – Coyote Forest Stewards Youth Corps Crew	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$35,000	Forest Stewards Youth Corps Coyote crew worked for 9 weeks on the Coyote Ranger District completing conservation projects, earning pay checks, earning college credit.	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Forest Stewards Guild – Espanola Forest Stewards Youth Corps Crew	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$45,000	Espanola youth crew worked in fall 2022 and fall 2023 in the landscape completing fuels, trails, and stream projects.	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Forest Stewards Guild – Forest Health Initiative	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$5,220	In partnership with New Mexico Department of Energy Minerals, and Natural Resources (EMNRD) State Forestry, The Guild reimbursed a landowner for 9 acres of forest health treatments.	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
Forest Stewards Guild – Rio Arriba Community Wildfire Protection Plan (CWPP)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$20,000	Update to the Rio Arriba County CWPP to support wildfire risk reduction projects	☒ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
Mountain Studies Institute (MSI) – Pagosa District Coordination Agreement	☒ In-kind contribution ☐Funding Budget Line Item, if relevant:	$8,881	MSI coordination, public education and outreach for San Juan Headwaters Forest Health Partnership (SJHFHP) place-based partnership	☒ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private, Municipal
MSI – SJHFHP Donations	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$9,000	Private donations for coordination, public education and outreach for SJHFHP place-based partnership	☒ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private, Municipal

MSI – Best Management Practice (BMP) Water Quality (CSFS)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$20,000	Water quality monitoring	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
MSI – Adaptive Silviculture for Climate Change (ASCC) Jackson Mountain Monitoring	☐ In-kind contribution ☒ Funding Budget Line Item, if relevant:	$60,000	Monitoring for ASCC study on the Pagosa Ranger District (RD), SJNF	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
MSI – Snowtography Colorado Water Conservation Board (CWCB)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$40,000	Snowtography monitoring for site on Jackson Mountain on the Pagosa RD, San Juan National Forest (SJNF)	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Upper San Juan Watershed Enhancement Partnership	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$29,290	Organizational capacity and coordination, watershed planning, stream restoration	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private, municipal
River Source	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$66,000	Stream restoration, monitoring, erosion control, and youth training. Woody biomass utilized on-site for erosion mitigation	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
River Source	☐ In-kind contribution ☒ Funding Budget Line Item, if relevant:	$25,000	Resource Advisory Council Secure Rural Schools (RAC SRS) funding applied to stream restoration and wetland monitoring	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
New Mexico Energy, Minerals and Natural Resource Department (EMNRD) State Forestry – Bernalillo District	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$574,000	Wildfire risk reduction in the Cuba, NM area and additional work in partnership with the Pojoaque Soil and Water Conservation District (SWCD)	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private

New Mexico EMNRD State Forestry – Chama District	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$480,141	Hazardous fuels reduction, reforestation, and mastication	☒ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
National Forest Foundation (NFF)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$1,000,000	New Mexico forest program, watershed restoration, and Wood for Life	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Chama Peak Land Alliance (CPLA)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$115, 614	Grant proposal development, project design and coordination	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
Wildfire Adapted Partnership (WAP)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$40,700	Hazardous fuels reduction and defensible space cost-share programming	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
The Nature Conservancy (TNC) - NM	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$254,068	Hazardous fuels reduction, administration, monitoring, education and outreach	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
East Rio Arriba soil and water conservation district (SWCD)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$145,000	Acequia cost share program, noxious weeds cost-share and youth conservation corps	☐ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: Private
Rio Grande Return	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$229,000	In-stream restoration, monitoring, fencing, erosion control	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Trout Unlimited (TU)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$325,000	Stream restoration on Chihuenos Creek and Rio San Antonio	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Trout Unlimited (TU)	☐ In-kind contribution ☒ Funding Budget Line Item, if relevant:	$70,000	Stream restoration on Chihuenos Creek and Rio San Antonio	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Santa Clara Pueblo	☐ In-kind contribution ☒ Funding Budget Line Item, if relevant:	$1,100,000	Fencing and copse cutting area development	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:

Rocky Mountain Youth Corps (RMYC)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	$5,909	Seed cone collection and inventory with youth corps member including mentorship	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Rocky Mountain Youth Corps (RMYC)	☐ In-kind contribution ☒ Funding Budget Line Item, if relevant:	$33,870	Seed cone collection and inventory with youth corps member including mentorship	☒ National Forest System Lands ☐ Other Lands within the CFLRP Landscape:
Environmental Defense Fund (EDF)	☐ In-kind contribution ☒ Funding Budget Line Item, if relevant:	$105,008	Multiparty Monitoring expansion and 232 Partnership outreach	☒ National Forest System Lands ☒ Other Lands within the CFLRP Landscape: All-Lands

Total In-Kind Contributions: $3,447,823
Total Funding: $ 1,393,878

Total partner in-kind contributions for implementation and monitoring of a CFLR project across all lands within the CFLRP landscape.

Goods for Services Match

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY23)	Totals
Total revised non-monetary credit limit for contracts awarded in FY23	$8,625
Revenue generated through Good Neighbor Agreements	**Totals**
	$0

"Revised non-monetary credit limit" should be the amount in the "Progress Report for Stewardship Credits, Integrated Resources Contracts or Agreements" as of September 30. Additional information on the Progress Reports available in CFLRP Annual Report Instructions. "Revenue generated from GNA" should only be reported for CFLRP match if the funds are intended to be spent within the CFLRP project area for work in line with the CFLRP proposal and work plan.

3. Activities on the Ground

FY 2023 Agency Performance Measure Accomplishments[2] - Units accomplished should match the accomplishments recorded in the Databases of Record. Please note any discrepancies.

Core Restoration Treatments	Agency Performance Measure	NFS Acres	Non-NFS Acres	Total Acres
Hazardous Fuels Reduction (acres) in the Wildland Urban Interface*	FP-FUELS-WUI (reported in FACTS)[3]	5,221	530	

[2] This question helps track progress towards the CFLRP projects lifetime goals outlined in your CFLRP Proposal & Work Plan. Adapt table as needed.
[3] For service contracts, the date accomplished is the date of contract award. For Force Account, the date accomplished is the date the work is completed

Core Restoration Treatments	Agency Performance Measure	NFS Acres	Non-NFS Acres	Total Acres
Hazardous Fuels Reduction (acres) outside the Wildland Urban Interface*	FP-FUELS-NON-WUI (reported in FACTS)[3]	10,339	590	
Wildfire Risk Mitigation Outcomes - Acres treated to mitigate wildfire risk	FP-FUELS-ALL-MIT-NFS (reported in FACTS)	300		
Invasive Species Treatments (acres) - Noxious weeds and invasive plants	INVPLT-NXWD-FED-AC (reported in FACTS)[3]	1,931		
Road Improvement (High Clearance) (miles)	RD-HC-IMP-MI (Roads reporting)	1		
Road Improvement (Passenger Car System) (miles)	RD-PC-IMP-MI (Roads reporting)	0		
Road Maintenance (High Clearance) (miles)	RD-HC-MAINT-MI (Roads reporting)	7		
Road Maintenance (Passenger Car System) (miles)	RD-PC-MAINT-MI (Roads reporting)	81		
Trail Improvement (miles)	TL-IMP-STD (Trails reporting)	1		
Trail Maintenance (miles)	TL-MAINT-STD (Trails reporting)	231		
Wildlife Habitat Restoration (acres)*	HBT-ENH-TERR (reported in WIT)	10,978	250	
Stream Crossings Mitigated (i.e. AOPs) (number)	STRM-CROS-MITG-STD (reported in WIT)	0		
Stream Habitat Enhanced (miles)*	HBT-ENH-STRM (reported in WIT)	20	1.4	
Water or Soil Resources Protected, Maintained, or Improved (acres)*	S&W-RSRC-IMP (reported in WIT)	5,156	See context below	
Stand Improvement (acres)	FOR-VEG-IMP (reported in FACTS)	5,660		
Forests treated using timber sales (acres)	TMBR-SALES-TRT-AC (reported in FACTS)	1,111		
Rangeland Vegetation Improvement (acres)	RG-VEG-IMP (reported in FACTS)	14,053		

Is there any background or context you would like to provide regarding the information reported in the table above?
The NFS numbers above were gathered from the final gPAS Accomplishment Report generated after November 6, 2023 using databases COMPUTED, FACTS, ROADS, TIM, TRAILS, WIT and WORKPLAN (acronyms for various Forest Service Databases). As this project is being implemented across four National Forests in two US Forest Service (USFS) Regions, there continue to be challenges with consistent reporting across National Forest System (NFS) land jurisdictions and multiple databases. Our team continues to work on these issues, and the addition of a GIS and data manager to the team has been very helpful in this area. Non-NFS acres and miles, in addition to information to supplement USFS database information for NFS acres and miles, were gathered via key informant interviews as part of the socioeconomic reporting process. Individuals representing partner organizations working in the Rio Chama CFLRP landscape were contacted directly for this purpose, as there is currently no operational database for non-NFS jurisdictions (although the NM Shared Stewardship Portal and new Colorado Forest Tracker have the potential to serve this purpose in the future). While not all inclusive, these amounts provide context for the Rio Chama CFLRP investment, and we expect the ability of team to collect accurate and complete information regarding non-NFS metrics to continue to improve over time. As partners work to refine data gathering processes, they will also continue to consider creative ways to incorporate and communicate both qualitative and quantitative all lands information.

Non-NFS acres/miles

While there is not a specific number of acres reported for non-NFS lands in the Water or Soil Resources Protected, Maintained, or Improved category, The East Rio Arriba SWCD worked with 30 landowners in the Rio Chama footprint to improve irrigation efficiency through an acequia cost share program in FY23. This material intensive work is hard to quantify in acres, given the dispersed nature of these communal irrigation systems and the way acequias are managed by communities as commons.

The majority of stream habitat improvement in FY23 occurred on NFS lands and was conducted with a combination of federal and non-federal investments contributing to working on these lands and by local contractors and restoration organizations. The 1.4 miles of stream habitat enhancement reported on non-NFS lands were completed in the Turkey Creek area on Santa Clara Pueblo. Many of these efforts also supported workforce and skills development. Complexities with reporting and tagging in database reporting systems continues to be a challenge and one project that portions of the treatments were not reflected in the Streams Habitat Enhanced measure above but were completed is the Rito Penas Negras Project. A summary of this project and what has been accomplished in FY 2023 can be found below and will be reported on in FY 2024. Given the all-lands objectives of the Rio Chama project and the new opportunities afforded by a new master participating agreement between The Guild and the four National Forests involved with the Rio Chama CFLRP, the goal is to strategically plan and expand stream and riparian improvement activities on both NFS and non-NFS lands in FY24 and beyond. See Figure 3 for more information about increasing the pace and scale of watershed restoration in the Rio Chama landscape.

NFS acres/miles

An additional 196 acres was harvested on the Willow Timber Sale on the Carson NF in FY 2023, but those acres are not entered into FACTS because that timber sale was entered into the database as a single unit spanning multiple years. Units harvested in FY23 are accounted for in the TREAT model, however those acres treated won't be recorded until a future year when harvest is completed across the entire unit, therefore this shows an under performance in "Forest Treated Using Timber Sales" measure for planned versus accomplished as shown in Figure 4.

There were additional miles of road maintenance accomplished on both the Carson and Santa Fe National Forests within the Rio Chama CFLRP landscape, but those accomplishments were not appropriately recorded and tagged in the database of record, so are not differentiated between RD-HC-IMP-MI, RD-PC-IMP-MI, RD-HC-MAINT-MI, and RD-PC-MAINT-MI. The following accomplishments are reported in narrative format from the Northern New Mexico Engineering group:

Carson National Forest (NF):

- El Rito Ranger District: Canon Largo Road Maintenance Contract - 19.3 miles of total road work: 17 miles of standard maintenance on Carson NFSRs 173M1 and 106, 2.3 miles of significant road reconditioning on Carson NFSRs 173M2 and 173M3. Standard road maintenance on NFSRs 3 (1.8 miles), 559 (16.7 miles), 137 (14.9 miles)
- Canjilon Ranger District: Standard road maintenance on NFSRs 125 (10.2 miles), 124 (13.6 miles), 559 (10 miles), 137 (29.8 miles).
- Tres Piedras Ranger District: Standard road maintenance on NFSRs 556 (16 miles), 42 (4.7 miles), 91 (7.5 miles), 87 (28.2 miles), 712 (4 miles), 133 (4 miles), 80 (12.2 miles).

Santa Fe NF:

- Coyote Ranger District: Standard road maintenance on NFSRs 8 (15 miles).
- Cuba Ranger District: Standard road maintenance on NFSRs 312 (5 miles), 312J (0.93 miles), 20 (14.6 miles), 70 (17.5 miles), 69 (5.7 miles), 533 (6.7 miles), 534 (1.2 miles), 5 (10 miles), 6 (5.7 miles), 7 (3 miles).
- Espanola Ranger District: Standard road maintenance by contract on NFSR 27 (2.5 miles).

- Jemez Ranger District: Standard road maintenance by contract on NFSRs 376 (26 miles), 10 (14.3 miles), 604 (8 miles).

Reflecting on treatments implemented in FY23, if/how has your CFLRP project aligned with other efforts to accomplish work at landscape scales?

Southwest Colorado and Northern New Mexico have a number of active cross-boundary initiatives including adjacent Rio Chama and Southwest Colorado CFLRPs, which border one another on the Pagosa Ranger District of the San Juan National Forest. The Rocky Mountain Restoration Initiative, geographically to the north-west of the Rio Chama CFLRP landscape, is also a key cross-boundary effort in the area, as is the Rio Grande Water Fund landscape, which encompasses the headwaters and downstream regions of the Rio Chama and Rio Grande rivers. Additionally, the Carson National Forest is experiencing both challenges and opportunities associated with having two priority landscapes on the forest, the Enchanted Circle Wildfire Crisis Landscape and Rio Chama CFLRP. These landscape-scale efforts, in addition to place-based collaborative initiatives and projects are depicted in figure 2. Shared stewardship planning and implementation efforts are underway in many of these project landscapes, and the alignment of priority areas in the Colorado and New Mexico State Forest Action Plans across the state line in the Rio Chama landscape is supporting these efforts explicitly. Due to this formal alignment of state and federal priorities, in addition to the values partners place on what connects them in this region – water, wildlife, large landscape disturbance, culture, economy – the Rio Chama project is slated to realize the benefits of cross-boundary planning and implementation in future project years and beyond the life of the CFLRP.

Riparian and watershed planning efforts ramped up in the Rio Chama and adjacent landscapes in FY23, including a National Wildlife Federation led Upper Rio Grande Riparian Action Planning effort that builds on and compliments the Wetland Jewels work of Amigos Bravos, and a New Mexico Aquatic Connectivity planning effort spearheaded by American Rivers. Given an emphasis on watershed connectivity and scaled planning, implementation, and monitoring that connects riparian corridors to upland forest treatments in the Rio Chama landscape, the 2-3-2 Partnership is engaging actively with these efforts. While these planning efforts are drawing attention to important landscape values, 2-3-2 and Rio Chama leadership have some concerns about partner fatigue from multiple, overlapping and/or redundant planning efforts and are working to strategize and connect with those coordinating various efforts about ways to effectively gather partners, garner, and package critical information, and realize targeted, effective on the ground action.

The Northern New Mexico Riparian, Aquatic, and Wetland Restoration (NNM-RAWR) Project Decision Notice and Finding of No Significant Impact signed in December 2021 on the Carson, Santa Fe, and Cibola National Forests continues to be an important tool that supports implementation of watershed projects in the Rio Chama landscape. This planning tool will further support increased pace and scale of watershed projects and their integration with upland projects over the life of the Rio Chama CFLRP. This and other planning tools also support the stacking and leveraging of projects across time and at different scales within the Rio Chama landscape.

Sharing and leveraging of resources and targeted planning with adjacent cross-boundary, landscape-scale efforts is critical to opening up all-lands opportunities in the Rio Chama landscape, and for successful planning, implementation, and monitoring. The 2-3-2 Partnership, in addition to place-based collaboratives play a key role in landscape planning, project implementation, monitoring, and adaptive management processes associated with the Rio Chama CFLRP. While communication across landscape-scale efforts is occurring, improving systems, defining expectations, and considering how coordination serves the landscape and communities will help partners and the Rio Chama CFLRP team continue to refine these processes. More information about landscape-scale planning efforts, prioritization, and treatment optimization can be found below, in the answer to question 4.

The following activities and initiatives exemplify the ways in which the Rio Chama CFLRP aligns with, compliments, and may drive cross-boundary, landscape-scale efforts in forest and watershed restoration:

- The Rio Chama team has developed a 10-year Master Participating Agreement and Supplemental Project Agreements (SPAs) that support work across boundaries at the landscape scale. Figure 3 depicts a progression for establishing a watershed restoration program that increases the pace and scale of watershed restoration across all-lands.

- The Santa Clara TFPA project leverages external partnerships with organizations already actively engaged with the 2-3-2 Partnership such as the Ancestral Lands Conservation Corps to increase both crew and professional workforce capacity. Santa Clara Pueblo, in partnership with the Rio Chama CFLRP, received Bipartisan Infrastructure Law and TFPA funding for workforce development in watershed and forest restoration, which will support work at scale and across boundaries into the future. The Santa Clara Pueblo was awarded additional Bureau of Indian Affairs funding to establish a new Tribal nursery operation, which could help meet future demand for reforestation and riparian restoration materials in the Rio Chama landscape.

- 2-3-2 partners and Rio Chama Leadership participate in local and regional networks for sharing challenges and successes associated with collaborative land management planning, implementation, and monitoring including the Colorado Forest Collaboratives Network, Coalitions and Collaboratives, the NFF, Southwest Ecological Restoration Institutes (SWERI) events, and the Southwest Collaborative Support Network. While we often contribute knowledge, expertise, and information to these venues, we also seek to learn new approaches and techniques for effective project development, management, implementation, and reporting.

- 2-3-2 Partnership leadership and the Rio Chama team are developing and navigating more formal partnerships and ongoing connectivity with the San Juan Chama Project Contractors Association (SJCPCA), the US Bureau of Reclamation (Reclamation), private land managers and the SJNF regarding source watershed protection in the San Juan Chama Project headwaters, an area the delivers water to millions of downstream users via the Rio Chama and Rio Grande. Multiple grant proposals and potential agreements are pending in support of cross boundary planning and implementation of projects in this priority location (Community Wildfire Defense Grants, National Fish and Wildlife Foundation, Reclamation internal, USFS, Reclamation WaterSMART Environmental Water Resources Projects, US Fish and Wildlife Service)

- The 2-3-2 monitoring team is worked with the New Mexico Department of Game and Fish to install sensors that monitor stream temperature and flow in the Rio Chamita, an important tributary to larger water systems in the region and a key wildlife migration corridor. This work is anticipated to help tie data from state managed land together with data collected on other jurisdictions that can drive landscape-scale watershed planning and adaptative management.

- The GeoTASC project uses remote sensing and other geospatial data to monitor change on the Rio Chama and Southwest Colorado CFLRP projects. GeoTASC project outcomes provide guidance for integrating geospatial and remote sensing products and tools into monitoring plans of both CFLRPs to support effective data collection, analysis, and the eventual treatments informed by monitoring activities. Results and deliverables of this project can also inform remote sensing applications for other CFLRPs and landscape-scale projects. While this project lays some groundwork for remote sensing-based monitoring approaches, further work is needed to understand how well particular approaches meet CFLRP reporting requirements and support adaptive management over time.

- The Rock Creek Wood for Life project on the Cuba District of the Santa Fe NF, funded in part by CFLRP, exemplifies how partners and USFS specialists are tying together riparian and upland treatments and has played a key role in the development of NFF Wood for Life programming in northern New Mexico. To expand this successful program, the Santa Fe NF will designate future project units for the Wood for Life program. Other forests in the southwest have had great success with the Wood for Life program and the Rio Chama CFLRP and

its partners (2-3-2 & NFF) will continue to collaborate and share knowledge on ways to expand the program and reduce barriers for fuelwood access to Tribal and local communities.

- The Guild and the Mountain Studies Institute (MSI) continue to collect information from non-NFS land management partners to identify planned watershed, forestry, and fuels treatments in the Rio Chama CFLRP and 2-3-2 boundaries. This information continues to be used to anticipate opportunities for co-development and shared implementation of on the ground activities.

- Within the 2-3-2 Partnership, stakeholders are working to bring land managers, timber sale administrators on public land, and forest management planners for private land together with contractors and industry partners to better understand capacity, wood utilization capabilities, profitability, effective communication strategies, and relevant timing. These conversations and planning activities are ongoing and ever evolving.

- In alignment with 2-3-2 Partnership and Rio Chama CFLRP goals, partners continue to work together and with local communities to increase acceptance, develop plans, and successfully implement prescribed and managed fire. The Hermits Peak/Calf Canyon and Cerro Pelado fires influence current acceptance of prescribed fire use, particularly on NFS lands. Guided by the 2022 National Prescribed Fire Program Review, 2023 National Wildfire Commission Report, and feedback from proximal communities, practitioners are adjusting their preparations and procedures to support cross-boundary burn planning. For example, 2-3-2 partners are working within the Rio Chama CFLRP footprint to implement the existing burn plan on Edward Sargent Wildlife Management Area, support Archuleta County's consideration of new regulations to accommodate prescribed fire on municipal and private lands and expand cross-boundary planning and implementation capacity through the All-Hands All-Lands burn team.

- There is less collaborative and staff capacity in the northeast portion of the Rio Chama landscape than in other areas, and 2-3-2 leadership is working to secure funds and resources to increase capacity and accessibility of Rio Chama and 2-3-2 Partnership activities in this area including through an Infrastructure Investment and Jobs Act (IIJA) funding request that would support Spanish language and translation services, opening up new opportunities to work together across both jurisdictional and cultural boundaries. Environmental Defense Fund dollars are also available to support diverse participation in 2-3-2 leadership spaces and a program is being developed to facilitate the expenditure of this resource starting in 2024.

- Rio Chama staff led an effort to create a Rio Chama CFLRP and Watershed Restoration Investment Team that includes two Guild staff and will participate in the 2024 USFS Conservation Finance training to consider ways to creatively invest and leverage dollars across all-lands in the Rio Chama landscape.

All Hands All Lands Burn Team (AHAL)

- Since 2018 the Forest Stewards Guild (Guild), The Nature Conservancy, Region3 of the USDA Forest Service, and many others have partnered to make the All Hands All Lands Burn Team effort a success.
- In FY23 the team supported two burns in the Rio Chama CFLR landscape across 3,383 acres.
- The 65 acre Deer Lakes Rx was the first prescribed burn the Santa Fe National Forest implemented after Hermit's Peak Calf Canyon. The second prescribed burn was the 3,318 acre Dorado Canada Rx on the Tres Piedras Ranger District of the Carson National Forest. The Burn Team contributed 19 operational shifts for these two burns comprised of Guild staff, Santa Clara Pueblo's Forestry Department staff, and Tesuque Pueblo's Environment Department staff.

Current partnerships and relationships exist with non-NFS land managers and owners including, but not limited to:

- Colorado State Forest Service
- The Nature Conservancy (NM and CO)
- New Mexico State Forestry
- Chama Peak Land Alliance
- National Forest Foundation
- Trout Unlimited
- Santa Clara Pueblo
- Archuleta and Rio Arriba Counties
- City of Santa Fe
- US Fish and Wildlife Service
- New Mexico Department of Game and Fish
- Bureau of Reclamation
- Rio Grande Headwaters Restoration Project
- Wildfire Adapted Partnership
- National Resource Conservation Service
- Upper Chama Soil and Water Conservancy District
- Jicarilla Apache Nation
- Southern Ute Indian Tribe
- Upper Chama SWCD
- East Rio Arriba SWCD
- Rio Grande Headwaters Restoration partnership
- National Wildlife Federation
- American Rivers
- Private land owners in CO and NM

Rock Creek Wood for Life Program (WFL)

- Project was developed in partnership with the National Forest Foundation (NFF), the Santa FE National Forest (SFNF) and the Navajo Nation to provide fuelwood from forest restoration on the SFNF to the Tri-Chapters of the Navajo Nation.
- Over 90% of the Navajo Nation relies on wood as the primary source of heat in homes.
- 1,050 acres of forest restoration provided a total of 63 loads (roughly 14k cords) to Tribal and local communities; 3 Navajo Nation Chapter Houses received 20 loads each and 3 loads went to a local land grant community.
- NFF contracted with a local contractor and successfully hauled all planned wood for this project putting wood into the hands of Indigenous and local communities.
- For the People, a Tribal non-profit assisted with approximately 763 hours of community volunteer time over 11 days providing wood to 95 homes, 75 of which were elders.
- The effort showcased the capacity of the Navajo Nation to get involved in forest stewardship and their commitment to participate, not just in receiving the end product, but in engaging with forests in the development of sustainable projects to support the WFL program and to provide wood for Indigenous communities.
- Often Tribal communities lack supplies and equipment for processing such as chainsaws, wood splitters and trailers; funds from external partners can be used to support these needs in ways federal funds cannot.

Left: Vice President of the Torreon Chapter of the Navajo Nation Richelle Montoya and Santa Fe NF Deputy Forest Supervisor Jeff Marszal at a recognition event for the Rock Creek Wood for Life Project Torreon, NM. (Photo: Liam Sullivan) Right: Volunteer community members from the Navajo Nation processing wood at the Torreon Fire House. (Photo: Mannie Lopez)

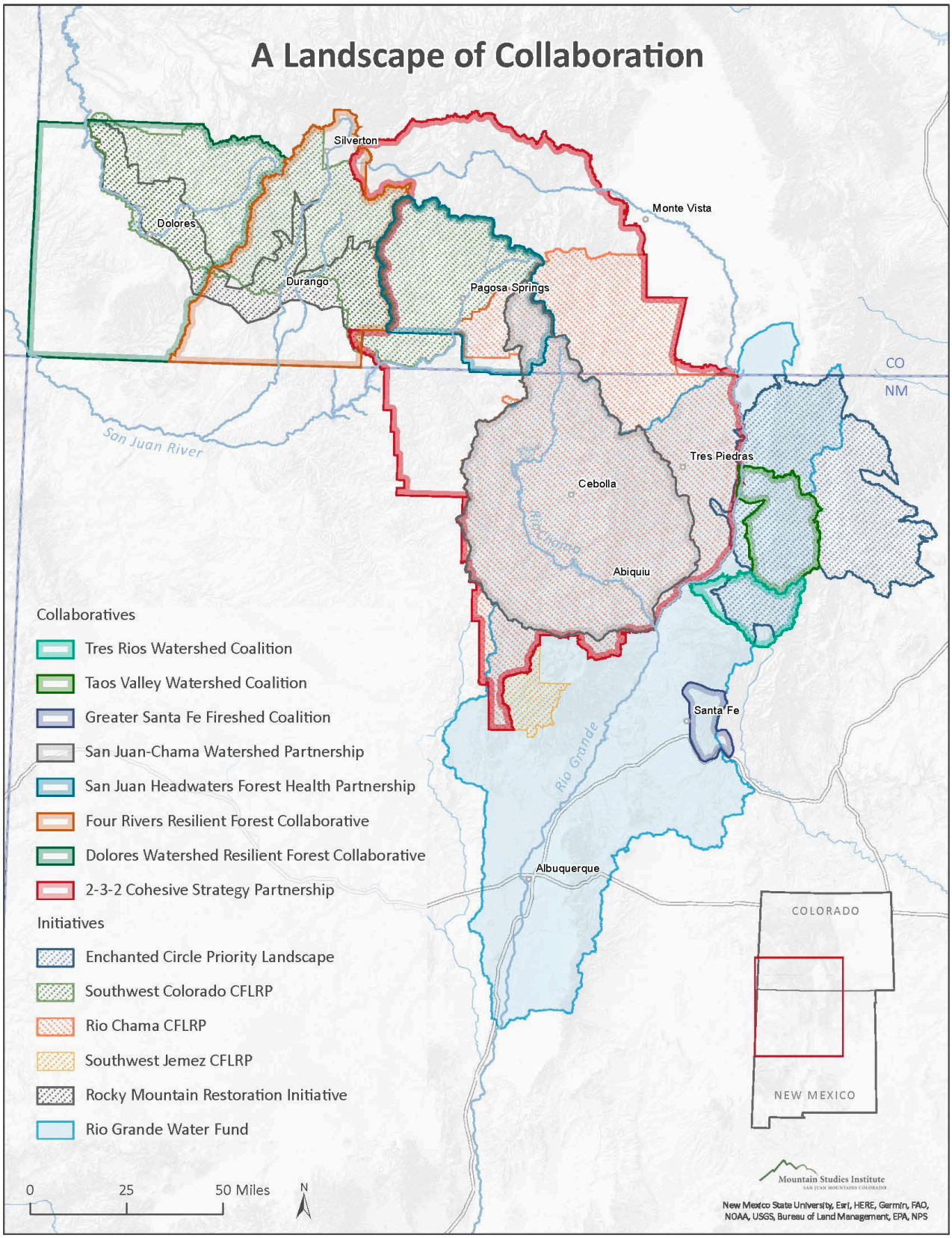


Figure 2, landscape scale efforts and place-based collaboratives in the Rio Chama footprint and surrounding areas

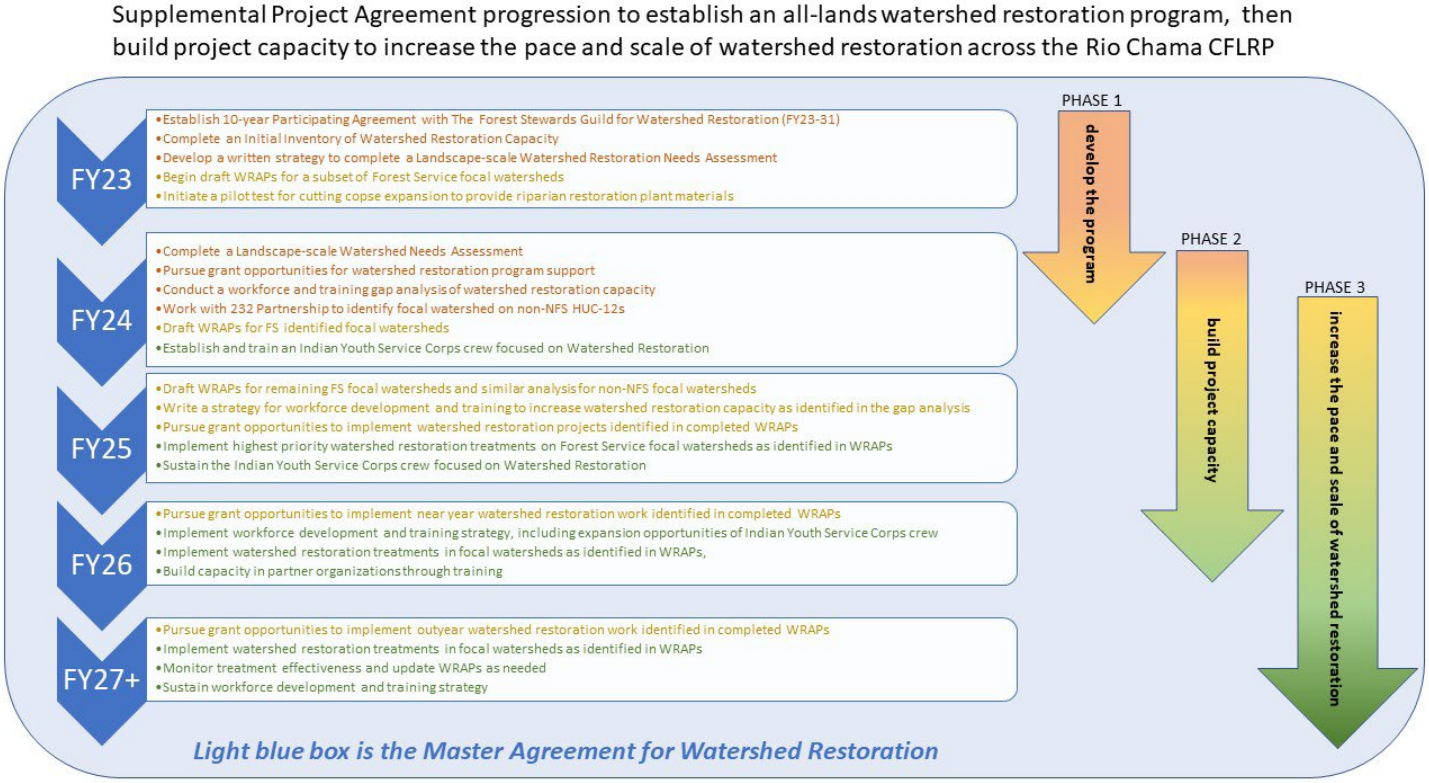


Figure 3 graphic showing progression of the establishment of an all-lands watershed restoration program

4. Restoring Fire-Adapted Landscapes and Reducing Hazardous Fuels

Narrative Overview of <u>Treatments Completed in FY23</u> to restore fire-adapted landscapes and reduce hazardous fuels, *including data on whether your project has expanded the pace and/or scale of treatments over time, and if so, how you've accomplished that – what were the key enabling factors?*

Between 2020 and 2022, Rio Chama partners coordinated and completed a focal area planning process to identify and communicate qualitative values across the 2-3-2 and Rio Chama landscapes and set the stage for co-development of cross-boundary projects. A timeline and overview of this process can be referenced in <u>Appendix B</u> in FY23, much of the focus was on understanding the outcomes of this process and taking planning further by considering spatial optimization tools including PROMOTe, Land Tender, Potential Operational Delineations (PODS) planning, and other models and systems to help identify outyear planning priorities. These tools and partner processes apply to all-lands in the Rio Chama CFLRP footprint, and the participation of place-based partnerships within the 2-3-2 structure including the San Juan Headwaters Forest Health Partnership (SJHFHP) and San Juan Chama Watershed Partnership contribute the outcomes of existing prioritization tools and processes used locally to landscape-scale efforts.

The Rio Chama CFLRP is currently exploring options for prioritization and spatial optimization of fuels treatments across the landscape. Many GIS datasets and models that can inform a data driven approach have recently been compiled, and there is value in tapping into existing data sets and methodologies as well. The overall goal of our approach is to identify areas with a need for reduction of hazardous fuels where wildfire poses the greatest threat to communities, infrastructure, and natural resource values. At the same time, one of the primary objectives of the Rio Chama project is to return fire to fire adapted landscapes and set communities and ecosystems up for ongoing maintenance in alignment with protecting both highly valued resources and assets (HVRAs) and enhancing ecological function. In many areas in the

Rio Chama landscape including steep, inaccessible terrain and/or roadless and wilderness designations, prescribed and managed fire are the best or only tools available for scaled hazardous fuels reduction. New investments in and capacity for PODS boundary refinement on all-lands in the Rio Chama landscape are expected to accelerate and support the use of these tools in alignment with USFS and partner goals.

To identify areas of treatment gaps and current treatment potential, prioritization efforts will make use of recently developed spatial datasets of treatment history, fire history, and existing NEPA in the CFLRP landscape. Feasibility for various types of treatments will be determined by distance from roads and slope first. While data and modeling tools can help identify key areas, discussing values and needs collaboratively with partners plays a critical role in identifying where to plan and implement treatments, and ensure communication about land management activities happens early and often with communities and key partners. Prioritization tools and models will be used as conversation starters for Rio Chama, and projects and activities will be considered and refined through collaborative processes. Non-spatial criteria that play an important role in ongoing and developing prioritization efforts include alignment with CFLRP objectives, returns on investment based on anticipated project outcomes, feasibility, leveraging opportunities, and alignment with 2-3-2 partner vision and values.

LANDFIRE data will be used to characterize vegetation and fuel types and measure vegetation departure and condition class compared to historic conditions. Based on the LANDFIRE data, fire behavior and burn probability models have been created using the Interagency Fuels Treatment Decision Support System (IFTDSS). This model predicts where fire is most likely to occur and its potential severity under extreme weather conditions. The development of a post-fire erosion model is also being discussed so partners can actively pre-plan for post fire debris flows within and in proximity to the CFLRP footprint. This modeling is especially important to partners given the 2-3-2's interest in planning at the watershed scale and considering how watershed connectivity drives restoration work in both the forested uplands and downstream areas.

During FY23, partners at The Guild and MSI worked to develop an interactive watershed prioritization tool, but it has yet to be applied for general partner use based on some partner feedback about information sharing and the interface received at the May 2023 2-3-2 Partnership meeting. With the availability of a new Master Participating Agreement for all-lands watershed restoration in the Rio Chama landscape and beyond, The Guild and MSI will build on and refine this model for application in FY24.

To determine how to reduce risk to communities and resources the datasets and models mentioned above can be overlaid in GIS with a variety of datasets such as the wildland urban interface (WUI), surface water, infrastructure, and socioeconomic mapping. A more sophisticated approach would be to run an exposure analysis and Quantitative Wildfire Assessment model, which would involve identifying and ranking HVRAs. Many of the inputs for such an approach have already been developed, such as Fire Behavior and Fuel models.
Although the Rio Chama CFLRP is only in the second year of CFLRP funding, we have exceeded our planned fuels acres in the WUI and stand improvement and are close to target for other forest restoration measures in the landscape (see Figure 4). Those prioritization and spatial optimization tools discussed above are anticipated to assist with increasing the pace and scale of treatments overtime.

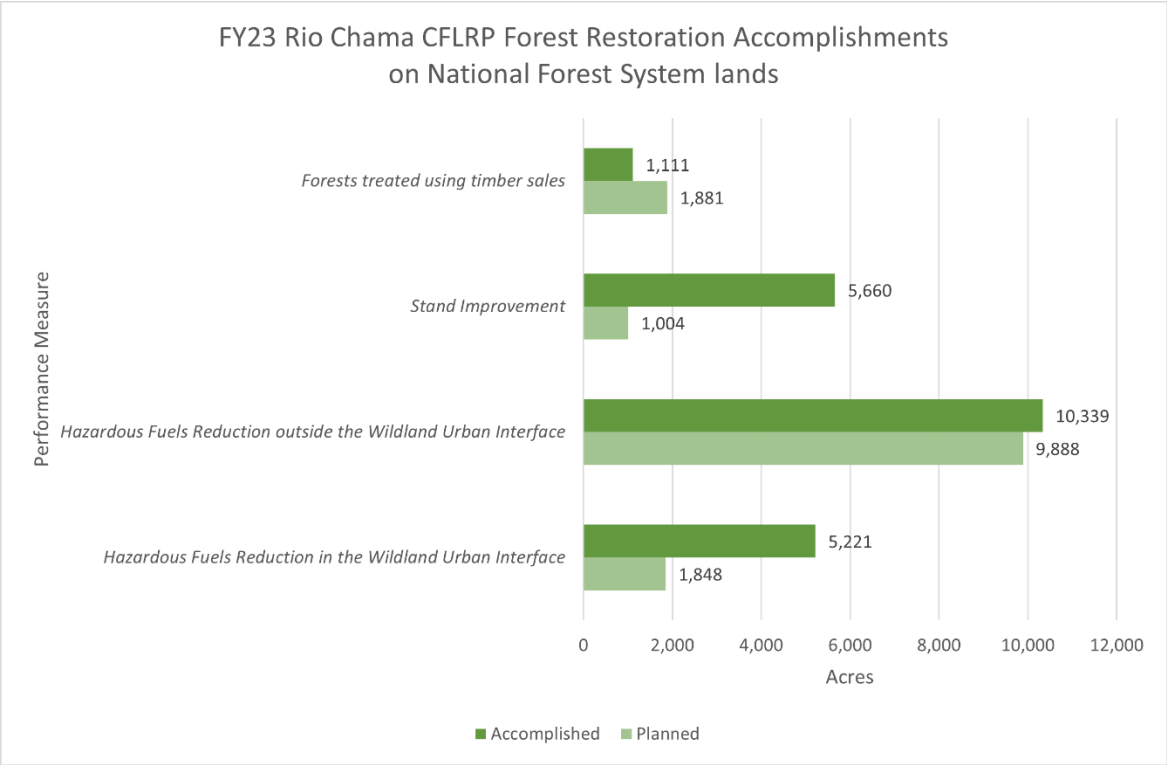


Figure 4 Forest Restoration Accomplishments on National Forest System Lands in FY 2023 on the Rio Chama CFLRP.

On non-NFS lands, partners completed 530 acres of hazardous fuels reduction in the WUI and 590 acres of hazardous fuels reduction in non-WUI areas for FY23. Based on partner and all-lands predictions submitted with the Rio Chama onboarding package in 2022, non-NFS WUI acres for FY23 exceeded anticipated acres by 70, a significant amount considering that many WUI acres are completed in subdivisions and on small parcels. Key partners accomplishing hazardous fuels reduction in the WUI include Wildfire Adapted Partnership (WAP) and both the New Mexico EMNRD State Forestry and the Colorado State Forest Service. WAP applied Colorado State grant dollars to WUI work in FY23 and received approximately $1 Million in Community Wildfire Defense Grant (CWDG) dollars this year, which will support ongoing WUI and defensible space work for the next 5 years in the Colorado portion of the Rio Chama landscape, inclusive of chipper rebate programming. The 590 non-WUI acres fell short of partner anticipated acres in this category by 833 acres, due to longer than expected planning horizons, changes in operator capacity, harvest timelines, and private landowner preferences. The annual acres in both of these categories on non-NFS lands are expected to increase annually as partners co-plan and implement projects, gaining momentum at scale over time. This is especially true for prescribed and managed fire for accomplishing non-WUI acres as these tools become more accessible and applicable on non-NFS lands in accordance with pre-planning, strategic applications of authorities, and capacity.

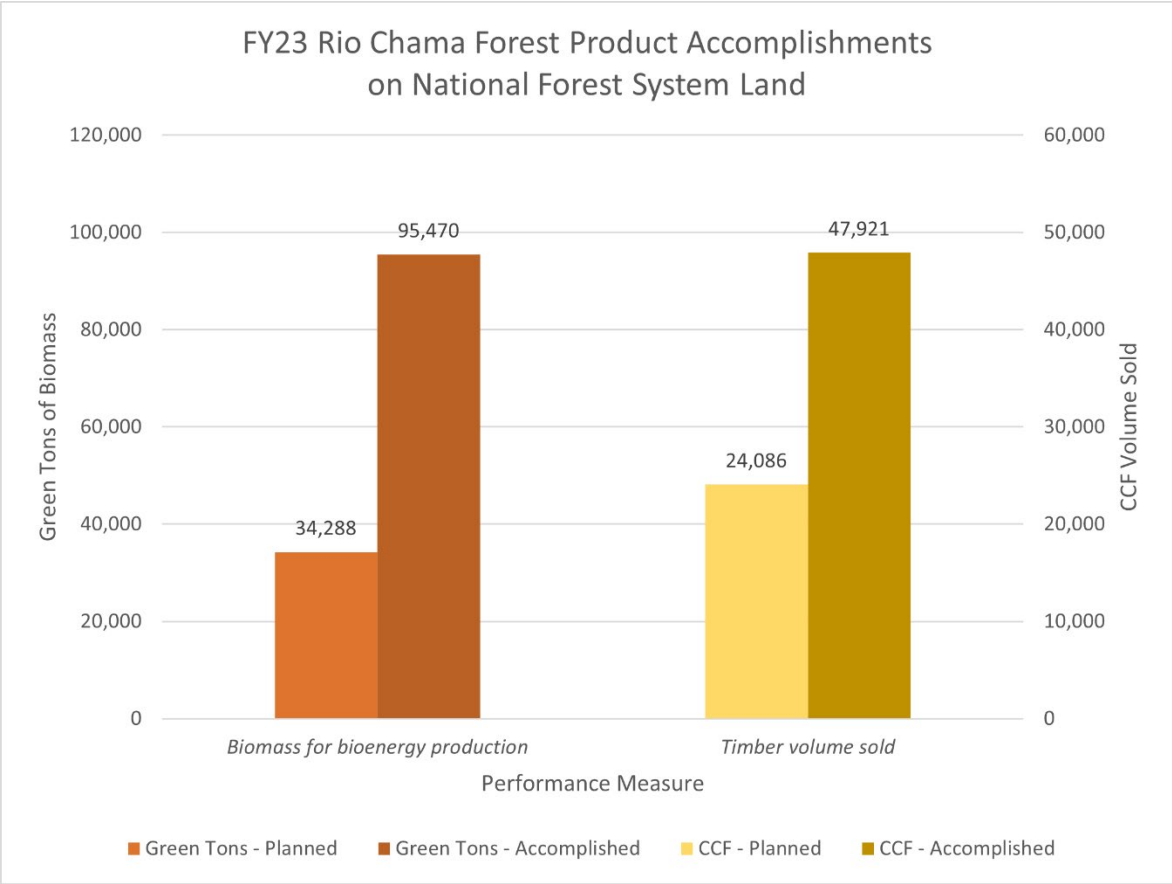


Figure 5 Forest Product Accomplishments on National Forest System Lands in FY 2023 on the Rio Chama CFLRP.

Fire Adapted Communities New Mexico Learning Network

The Guild coordinates the Fire Adapted New Mexico learning network (FACNM) in partnership with the New Mexico Bureau of Land Management (BLM) and New Mexico Association of Counties. FACNM is an interorganizational learning network that is designed to support peer-learning and professional relationship building for community wildfire mitigation across New Mexico. FACNM is supported with funding from the NM BLM as well as from national "community navigators" programming dedicated to support information sharing about Inflation Reduction Act (IRA) and IIJA funding opportunities. In FY2023, FACNM applied for and received $20,000 to update the Rio Arriba County Community Wildfire Protection Plan (CWPP) and supported a microgrant to the Brazos Canyon Firewise community for a community slash disposal event within the Rio Chama CFLRP boundary.

As many federal grant programs require an up-to-date CWPP, the Rio Arriba County CWPP update will set a strong foundation to pull in funding and complete work on private lands within Rio Arriba, which is a large portion of the Rio Chama CFLRP project area. CWPPs identify priority actions for wildfire risk reduction across boundaries and involve an in-depth inventory of values at risk, WUI areas, and community risk ratings that will support future project development and funding proposals. The Rio Arriba CWPP update will build on the Focal Area Atlas developed by Chama Peak Land Alliance (CPLA), which prioritizes wildfire risk reduction projects based on watershed-level data analysis.

In addition to the Rio Arriba CWPP, FACNM continues to support its network of community leaders across Northern New Mexico. For example, FACNM recently onboarded a Firewise leader from the Brazos Canyon Firewise community to FACNM as a leader. This FACNM leader was awarded $2,000 to support a community slash disposal event. By working with community leaders across Northern New Mexico, and within the Rio Chama CFLRP boundary, programs like FACNM can support project design and proposal development for wildfire risk reduction and forest health projects on non-federal lands.

If a wildfire interacted with a previously treated area within the CFLRP boundary: There was no wildfire interaction with previously treated areas within the CFLRP boundary in FY 2023.
N/A

- FROM FTEM (can be copied/summarized): Did the wildfire behavior change after the fire entered the treatment?
- FROM FTEM (can be copied/summarized): Did the treatment contribute to the control and/or management of the wildfire?
- FROM FTEM (can be copied/summarized): Was the treatment strategically located to affect the behavior of a future wildfire?
- Please describe if/how partners or community members engaged in the planning or implementation of the relevant fuels treatment. Did treatments include coordinated efforts on other federal, tribal, state, private, etc. lands?
- What resource values were you and your partners concerned with protecting or enhancing? Did the treatments help to address these value concerns?
- How are planned treatments affected by the fire over the rest of the project? Was there any resource benefit from the fire that was accomplished within the CFLRP footprint or is complementary to planned activities?
- What is your key takeaway from this event – what would you have done differently? What elements will you continue to apply in the future?

FY23 Wildfire/Hazardous Fuels Expenditures

Category	$
FY23 Wildfire Preparedness*	$464,464
FY23 Wildfire Suppression**	$13,340,270
FY23 Hazardous Fuels Treatment Costs (CFLN, CFIX)	$528,584
FY23 Hazardous Fuels Treatment Costs (other BLIs)	$1,034,231

* Include base salaries, training, and resource costs borne by the unit(s) that sponsors the CFLRP project. If costs are directly applicable to the project landscape, describe full costs. If costs are borne at the unit level(s), describe what proportions of the costs apply to the project landscape. This may be as simple as Total Costs X (Landscape Acres/Unit Acres).
** Include emergency fire suppression and BAER within the project landscape.

How may the treatments that were implemented contribute to reducing fire costs? If you have seen a reduction in fire suppression costs over time, please include that here. (If not relevant for this year, note "N/A")

N/A

5. Additional Ecological Goals

Narrative Overview of Treatments Completed in FY23 to achieve ecological goals outlined in your CFLRP proposal and work plan. *This may include, and isn't limited to, activities related to habitat enhancement, invasives, and watershed condition.*

Multiple projects in FY23 contributed to achieving ecological goals outlined in the CFLRP proposal and work plan. Figure 6 shows planned versus accomplished acres by performance measure for wildlife habitat restoration, water or soil resources protected, maintained or improved, and invasive species treatments on NFS acres in the Rio Chama landscape.

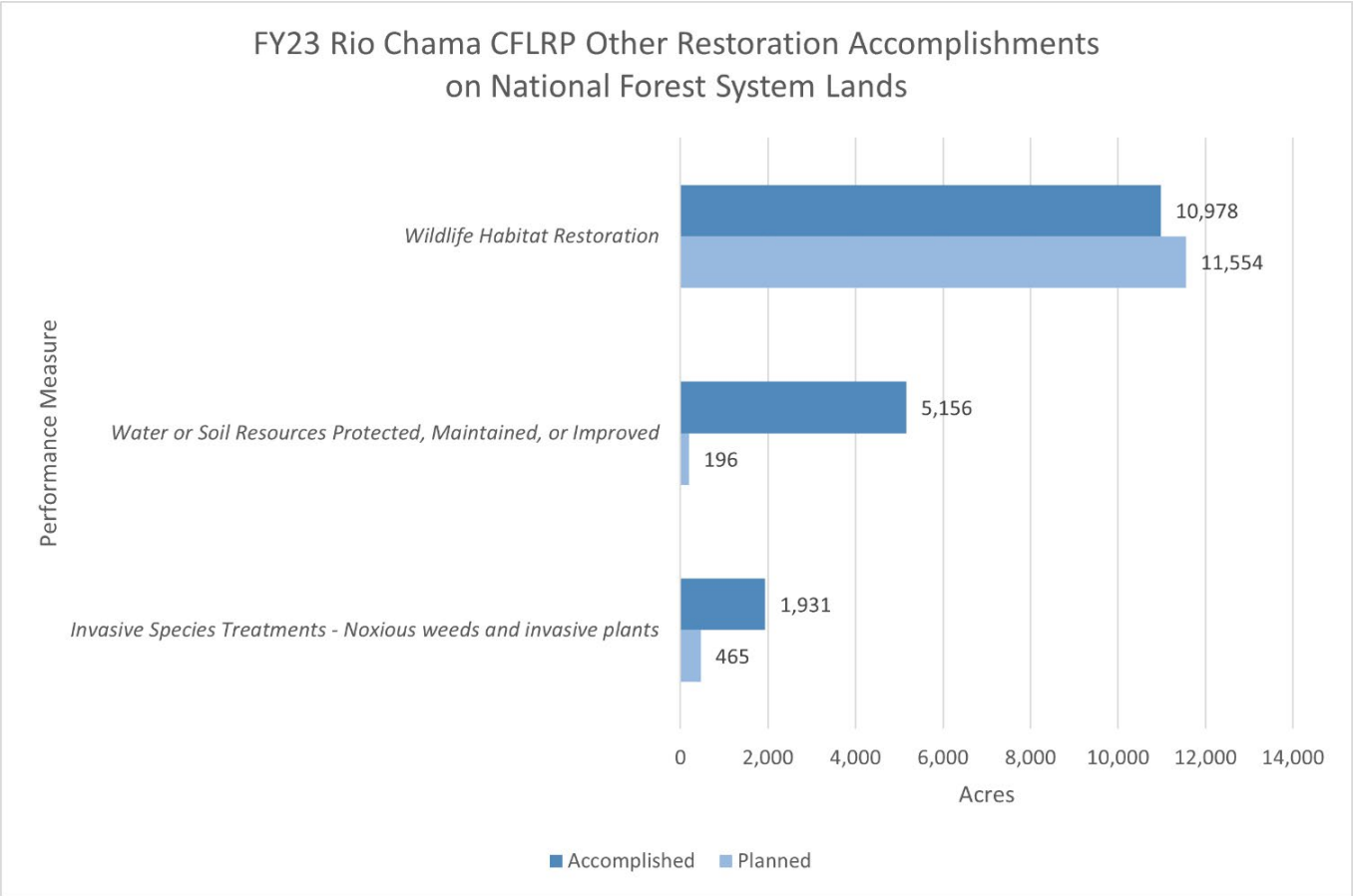


Figure 6 Rio Chama CFLRP Other Restoration Accomplishments on National Forest System Lands for FY 2023.

Non-NFS acres in these categories are harder to measure and define in the Rio Chama landscape. For example, it is challenging to report a specific number of acres of water or soil resources protected, maintained, or improved when FY23 activities in this category on non-NFS lands were completed in the cultural context of acequia systems, communal irrigation systems managed as commons by traditional communities in northern New Mexico and southern Colorado. While this work is hard to quantify using CFLRP measures, the structural improvement conducted by the East Rio Arriba SWCD to improve irrigation efficiency contributes to overall improvement of environmental features that could limit the biological capacity of rivers and streams associated with acequia systems. For more context, see non-NFS acres/miles context below the activities on the ground table in question 3.

1.4 miles of stream enhancement were completed in the Turkey Creek area by Santa Clara Pueblo. This work included planting of native wetland species in an upper watershed.

250 acres of wildlife habitat restoration in the form of invasive weed removal were completed on non-NFS lands through a noxious weed cost share also managed by the East Rio Arriba SWCD. While this fell short of our anticipated 422 acres of activities, over 400 of those anticipated acres were associated with prescribed fire targets on BLM and state land that were not implemented in FY23 but are slated for implementation in future years. The 250 acres of invasive weed removal work occurred in a priority area for the East Rio Arriba SWCD and contributes to the overall habitat restoration goals of the Rio Chama CFLRP.

The 2-3-2 Partnership multi-party monitoring plan also defines additional ecological goals on all-lands in the 2-3-2 and Rio Chama footprints including capturing change related to desired conditions on ~1.7 million acres of non-NFS lands.

These metrics, in addition to those identified in the CFLRP common monitoring strategy (CMS), will be used to inform land management partners and to inform adaptive management over time.
In addition to the Washington Office (WO) common monitoring questions, the Regions and the 2-3-2 Partnership are interested in:

- Reducing wildfire risk to communities, water, and habitat;
- Supporting forest diversity and old growth characteristics;
- Reducing effects of forest pests and disease;
- Maintaining large trees and snags;
- Understanding population trends for species of collaborative concern;
- Tracking carbon carrying capacity; and
- Promoting forest resilience.

Addressing watershed resilience continued to be an emphasis of the Rio Chama CFLRP this year as partners continued to build working relationships with the SJCPCA, Reclamation, key legislative staff, CPLA, private landowners, and decision makers on the SJNF. These partners manage and/or implement treatments on portions of the source watersheds for the San Juan Chama Project, a cross-basin diversion that delivers water to the Rio Grande system from the Colorado River system. This critical infrastructure and the ability to deliver quality water resources to downstream water users from this headwaters region connects many partners and communities in the landscape. In late August of this year, the 2-3-2 worked with CPLA and SJCPCA leadership to organize and host a multi-day tour of these source watersheds with the aim of growing partnerships, increasing readiness to act in pre-planning, immediate response, and post-fire recovery scenarios, and discussing the challenges and opportunities associated with land management activities in this ~115 square mile area.

Forest managers, watershed planners, researchers and those that deliver water to end users gather on private land in southern Colorado to learn about mastication treatments. (photo: Dana Guinn)

The San Juan Chama Project Contractors Association tour group gather at the headwaters of the Navajo River in southern Colorado (photo: Dana Guinn).

Leading up to this tour, partners worked to develop a briefing paper that describes the importance of this area, land management opportunities, partners dedicated to working here, and next steps for comprehensive planning. Additionally, partners supported an internal Bureau of Reclamation proposal that could fund a planning effort specifically for this landscape that includes treatment prioritization, implementation, immediate response to a landscape disturbance, and outlined steps for post-fire response. Partners will know if this proposal was successful in early 2024. Similarly, TNC New Mexico submitted a CWDG proposal to fund on the groundwork in this region, and the USFS is considering ways to move forward with a cross-boundary planning effort that ties a relatively small portion of NFS land (~5,000 acres) to management objectives and applications on adjacent private lands. This planning process is also slated to begin in 2024.

Additional ecological goals and associated metrics including understanding native bee habitat, building a more robust data set of stream temperature data, and capturing data from both high- and low-tech methods of measuring snow accumulation, ablation, and retention in association with forest treatments are further discussed in the monitoring portion of this report.

Two watershed projects and an invasive species treatment project across two forests that helped achieve ecological goals are the Rio San Antonio and Rito Penas Negras projects:

Constructed log jam on the Rio San Antonio splitting the river's flow between current channel and abandoned side channel, providing increased sinuosity and floodplain connectivity *Photos by Craig Sponholz*

Large woody debris structures on Lagunitas Creek. The structures, combined with channel shaping and point bar above work to stabilize eroding banks, dramatically increasing pool depth and habitat in the reach.

Upper Rio San Antonio Watershed Restoration

Carson National Forest

- Restoration efforts were guided by the Watershed Based Plan (WBP) created through the New Mexico Environment Department Surface Water Quality Bureau (NMED SWQB) for the Rio San Antonio Watershed. This plan had been sitting since 2016 waiting for execution.
- We were able to utilize the CFLRP program to gain momentum and implement the plan.
- Phase 1 implementation includes six work areas from confluence of Lagunitas Creek and Rio San Antonio and extending downstream on the Rio San Antonio across two miles of stream.
- Includes instream, side channel, and floodplain projects that seek to reverse channel incision, increase floodplain access and deposition.
- Approximately 1.5 miles was completed of the two-mile planned Phase 1 in FY 2023
- Partners include Trout Unlimited, NM Department of Fish and Game and contracted with a local contractor Watershed Artisans.

Rito Peñas Negras Project

Santa Fe National Forest

- Multi-phase project designed to stabilize the degrading channel and meadow, improve meadow and riparian function and reestablish and protect vegetation. Joint effort with NFF, Rio Grande Return and National Fish and Wildlife Federation and USFS.
- Initial phases installed beaver dam analogues (BDA) and post assisted log structures (PALS) designed to restore the processes of wood accumulated, stream and floodplain connectivity and to mimic beaver dam activity to support fish habitat and increase natural water storage capacity and riparian wetland function.
- Installed 300+ structures across 5.5 miles of stream and planted over 4,k willows. With thousands more over the next few years and 16 existing riparian enclosures maintained and modified to protect the recovering stream, riparian and meadow system.
- SFNF hosted workday to continue the instream restoration work. An additional 9 instream structures were constructed by a team of a 20 individuals including members of the public, Rio Grande Return employees, SFNF employees, RO employees and individuals from the Rio Chama Collaborative Forest Landscape Restoration Project Team.
- Additional funds have been awarded through a National Fish and Wildlife Federation Grant
- additional opportunities exist to leverage funds and resources such as utilizing the IYSCC crew to perform hand work associated with project-based restoration is in the works for FY 2024

Invasives Projects

Rio Grande and San Juan National Forests

- **RGNF**- FY23 survey inventory focused on areas where future vegetation management actions will occur. A total of 12,600 acres were surveyed for noxious weeds under two separate contracts in the summer of 2023.
- Contractors mapped 259 acres of noxious weeds. These 1,144 infestations will be prioritized for treatment in FY24.
- In addition to the inventory, approximately 100 acres were treated under Interagency Agreement with the San Luis Valley BLM Field Office.
- Treatments were prioritized along roadways leading to future vegetation management projects authorized under the Trail Gulch Vegetation Management Project Decision.
- **SJNF**-Weed treatments focused on pretreating Rio Chama CFLR project areas.
- In FY 2023, 96 miles of roadsides were treated for invasive species for a total of 1721 acres.
- Aims to reduce the spread of invasives along designated transport routes for future timber and fuels treatments.
- Outyear planning will treat invasives behind timber sales and mastication units within the Rio Chama CFLRP landscape.
- Contract was awarded to a locally Veteran owned business

6. Socioeconomic Goals

Narrative overview of <u>activities completed in FY23</u> to achieve socioeconomic goals outlined in your CFLRP proposal and work plan.

Examples may include activities related to community wildfire protection, contribution to the local recreation/tourism economy, volunteer and outreach opportunities, job training, expanding market access, public input and involvement, cultural heritage, subsistence uses, etc.

Rio Chama CFLRP partners provided socioeconomic expertise in support of collaborative coordination, monitoring plan development, and coordinated planning and implementation of restoration treatments on non-NFS lands. Key work and accomplishments are displayed in the table below:

Partner Deliverable	Accomplishments
Lead industry engagement	Developed a contractor list for the project landscape and identified 59 contractors that have expressed interest in timber sales in the project boundary in recent years Discussed strategy for 2023 industry engagement related to wood innovations grants in December 2023. This strategy will continue to be refined and implemented in 2024 and beyond. Some implementation steps include: - Met with Carmen Austin from New Mexico EMNRD State Forestry to discuss the State of New Mexico's wood innovations priorities for 2023-24. - Shared grant opportunities related to Wood Innovations with project partners of the 2-3-2 - Attended 2 "Consistency of Forest Work in New Mexico" calls to help identify and ameliorate barriers to consistent forest work in the State of New Mexico. - Obtained funding through the "Community Navigators" program to provide technical support to industry partners that are interested in applying for the USDA Wood Innovations grants and other IRA/IIJA funding programs. Worked to re-engage the Biomass Utilization Committee of the 2-3-2, identifying specific projects and initiatives for the committee to work on.
Identify and track emerging technologies (e.g., biochar pilot program) and markets for forest restoration products	Completed informational interviews with key informants from the 2-3-2's wood processing and utilization committee, including a professor and biomass representative from Northern New Mexico College, and a key informant from Wildfire Adapted Partners. Acquired a list of wood processing firms in New Mexico from the New Mexico State Forestry wood utilization lead Carmen Austin. Attended Northern New Mexico fuelwood working group meetings to support tracking and alignment between the Wood for Life program and Rio Chama CFLRP socioeconomic monitoring. Reviewed materials on Northern Arizona Universities Forest Operations and Biomass Utilization webpage to account for regional development initiatives related to wood processing. Attended Fire Adapted Learning Network wood utilization working group calls, including one focused on Dr. Han Sup Han's ThinCost 1.0 model and the potential for use in the Rio Chama landscape.
Support exploration of innovative technologies	Met with Naomi Engelman to discuss wood utilization within the Rio Chama landscape in the context of her feasibility study of biomass utilization in the Enchanted Circle landscape. Tracked and established a plan for sharing grant opportunities related to Wood Innovations with project partners of the 2-3-2. Participated in a presentation from Grace Sorenson of the USFS related to Wood Innovations grant programming. Tracked and worked to identify a proposal for private lands emerging market access funding through the IRA.

Identify and address challenges to cross-boundary harvesting	The 2-3-2 Partnership developed focal areas within the project landscape to support treatment coordination between project partners at a finer spatial scale. The 2-3-2 Partnership Biomass committee continued conversations to problem solve the differing haul weight limits across the CO-NM State Line. Within the 2-3-2 Partnership, stakeholders worked to bring land managers, timber sale administrators on public land, and forest management planners for private land together with contractors and industry partners to better understand capacity, wood utilization capabilities, profitability, effective communication strategies, and relevant timing. These conversations and planning activities are ongoing and ever evolving. The Guild worked with Colorado State Forest Service and the Rio Grande Headwaters Restoration Project to evaluate the potential to obtain CWDG funding to pay for up to 6 CWPP updates in Southwestern Colorado.
Identify and account for values at risk to place-based communities in project landscape	The Rio Chama team worked with the Geospatial Technologies and Applications Center (GTAC) to complete an analysis of environmental justice communities within the project landscape at the census block group level. The Guild has received a grant from New Mexico Counties to update the Rio Arriba County CWPP. The CWPP update is underway and will provide information about community values at risk and will support future funding proposals for all lands fuel reduction work within the project landscape. The Guild and MSI partners have met to discuss our plan to inform Forest Service decision-making and treatment prioritization. These conversations center on how socioeconomic data will be integrated into spatial decision support tools and ultimately into project prioritization and implementation.
Identify opportunities to increase the availability and/or access to medicinal, food, heating, or building materials for traditional use communities.	Entered into conversations with Santa Clara Pueblo leadership around management of medicinal plants on the SJNF. Partners and forest managers continue to follow up on these conversations through appropriate channels. Planned for fuelwood programming in the Chama, NM Area is ongoing. - Developed a history of fuelwood programming and identified needs project document - Met with project contacts, USFS representatives and NFF partners to explore programming options Created a socioeconomic work group (SE work group) with project partners to inform monitoring. Tribal relations and heritage staff have been engaged and continue to provide input to this area of the monitoring program. A smaller subgroup meeting with Tribal relations staff is scheduled to improve alignment between Rio Chama socioeconomic monitoring and broader Tribal outreach and engagement at the Regional and forest-level. Began developing an outreach protocol to account for the focal watersheds of concern for Tribal and traditional communities within the project landscape. This tool was reviewed by key partners and still needs work before it is applied in this context.

	Met with Archeologist and Tribal relations subject matter expert from Ecosystem Workforce Program to discuss outreach and engagement of Tribal partners within the project landscape. Met with subject matter expert Mary Huffman from TNC related to cultural burning and the potential role of the Indigenous People's Burning Network in the Rio Chama Landscape. Re-connected with and built new working partnerships with Jicarilla Apache Nation leadership and natural resource staff - Attended two legislative council meetings to start new conversations about the ongoing connectivity between USFS partners, non-profit entities and the Jicarilla Apache Nation in the land management space. - TNC and Guild members are growing partnerships with the Jicarilla Apache Nation and considering ways to work together effectively and in service to the Nation's goals. These considerations include planning and completing treatments on the Jicarilla Apache Nation, growing forestry and restoration activities, and engaging tribal youth. - Santa Fe NF tribal relations staff led an effort to establish and MOU between the Santa Fe and Carson National Forests and the Jicarilla Apache Nation for quarterly meetings.
Identify opportunities for citizen science engagement including youth engagement	Partners are exploring opportunities to expand community science bird monitoring successfully conducted by Weminuche Audubon on the SJNF to other portions of the 2-3-2 and Rio Chama landscape. Photo point monitoring design and public participation capabilities are being evaluated for incorporation into the monitoring strategy and field activities for the Rio Chama CFLRP project in FY24. Some of these capabilities would focus on wild bee, insect and disease, and vegetation monitoring and could also include school group plot collections. Rio Chama staff submitted a request for Hispanic Association of Colleges and Universities interns to work on the Rio Chama project in 2023.

In addition to socioeconomic expertise provided by external partners, the Rio Chama CFLRP team has worked on environmental justice mapping to support goals outlined in our CFLRP proposal and work plan. Goals for the Rio Chama include the provision of specific socioeconomic benefits in the form of jobs, forest products, and access to the forest for traditional purposes. It also includes reducing fire risk to communities and avoiding disproportionate impacts to environmental justice communities. In the arid southwest, watershed restoration is also included for the protection of drinking water and irrigation water needed to sustain rural lifeways.

To help achieve these goals, the Rio Chama CFLRP project team formed a SE work group under the leadership of Gabe Kohler from The Guild. The team worked with the Southwest and Rocky Mountain Regional Offices social scientists (Brian Ratcliffe and Sarah Weiner) to conduct a county scale analysis of the Rio Chama CFLRP landscape. This confirmed through data what was generally understood about the project area – that there is a wide range of socioeconomic conditions within the Rio Chama CFLRP landscape including concentrations of environmental justice communities defined by income, age, workforce, ethnicity, and race. Next, a subset of the SE work group formed a steering committee to partner with Mark Adams from the Forest Service's GTAC Social Sciences Team to undertake community level environmental justice mapping in FY23. Most of these detailed mapping deliverables arrived right at the end of FY23 and beginning of FY24, so we are still learning what this data means to our project and how to use it.

We also highlighted the importance of environmental justice to the Rio Chama CFLRP project with a poster presentation at the Southwest Ecological Research Institute's Cross-Boundary Landscape Restoration meeting in Fort Collins, CO in May 2023. Additional highlights of these analyses in a 508 compliant format can be found in Appendix A. We anticipate future updates to how we are using this data to inform decision making and community engagement for the Rio Chama CFLRP.

Additional socioeconomic goals are informed and met by supporting and participating in partner led tours, meetings, workshops and events. Key events from FY23 include:

- Team and partner attendance at the 2023 SWERI Cross-Boundary Workshop in Fort Collins. This workshop hosted 266 participants from 97 organizations to explore collaborative efforts that restore and reimagine fire adapted forest landscapes. Rio Chama partners and leadership were featured at this event as speakers, small group facilitators, and experts.
- Team and partner attendance of the 2023 Rio Chama Congreso. This is the flagship event of the San Juan-Chama Watershed Partnership and brings partners from across the Rio Chama to discuss pertinent watershed issues. Various entities such as the New Mexico Acequia Association are present, and this event provides an opportunity to connect with partners and audiences that may not otherwise attend 2-3-2 partner meetings.
- Dana Guinn of The Guild attended Secretary of Agriculture Tom Vilsack's visit to Durango, CO and presented briefly about cross-boundary planning, implementation, and the power of collaborative partnerships in the region.
- USFS national, regional, and forest leadership along with partners at The Guild and BIA personnel attended a fall 2022 tour of the Santa Clara Watershed hosted by Santa Clara leadership and staff to learn about the progression of post fire recovery work in Santa Clara Canyon.
- USFS employees, together with partners at The Guild and TNC NM have begun to meet a few times per year with Jicarilla Apache Nation Tribal Council, arranged by Ruben Montes, Santa Fe and Cibola National Forest Tribal Relations. Partners are also actively working with the director and specialists at the Jicarilla Apache Nation Department of Game and Fish.
- Local and regional partners attended an Aspen management workshop in July 2023. The event brought together researchers, practitioners, and landowners in discussion of localized and landscape scale implications of applied aspen management tools and the relationship of the species to habitat and landscape-scale mosaic objectives, among others.

Left: Partners gather in Durango, CO to visit with Secretary of Agriculture Tom Vilsack in May 2023 (Photo Lorena Williams) Right: Tour attendees enjoying lunch near the top of the Santa Clara watershed in October 2022

The following two projects are additional efforts in support of Rio Chama socioeconomic goals:

Santa Clara Tribal Forest Protection Act (TFPA) Project

- Funding for workforce development in watershed and forest restoration on NFS and Tribal lands.
- Provides $713k now with options of additional funding in the following 2 years for a total of $1.3M.
- The funding sets the stage for a successful long-term training program providing skilled labor for forest and watershed restoration treatments on both NFS and Tribal lands.
- Project leverages partnerships between 2-3-2, Santa Clara Pueblo and Forest Service to increase crew and professional workforce capacity for the Santa Clara Pueblo.
- In the first year, a multi-year strategy for capacity building to support outyear CFLRP forest and watershed restoration efforts will be created and will include the request for technical expertise to support the development of a Tribal nursery program.
- Capacity has been a challenge for Santa Clara Pueblo; this funding source may help provide planning and expertise to support restoration efforts.
- Timing in receiving FS funding has been a challenge as the contract wasn't awarded until 9/28/23, however we were able to pivot and use the money to support ALCC work in October (FY 2024).

Seed Tree Re-inventory Project

Santa Fe National Forest

- Project in partnership between the Santa Fe NF and Rocky Mountain Youth Corps-New Mexico (RMYC-NM), to help meet the increasing demand for trees for reforestation efforts and to make use of the expanded tree nursery capacity in the southwest while also providing for workforce development.
- The project re-inventoried superior seed trees and stands that were originally documented by map and compass and tagged in the 1970s and 1980s as part of a statewide tree improvement program.
- The project uses information from the paper records to re-inventory previously mapped superior seed trees and stands, record GPS coordinates, conduct a preliminary condition assessment, take photos, and update records.
- Information will be validated by a forester to determine suitability of the trees and stands for cone collection, for the forest's reforestation projects and may also provide seeds for nurseries such as the Santa Clara Tribal nursery.
- RMYC-NM was able to find one crew member from local indigenous youth and a retired Tribal forester for the project.
- The project model is planned to be expanded to the Carson NF in 2024 and potentially other Tribal communities in New Mexico to re-inventory other superior seed trees while providing opportunities for Tribal youth in the Rio Chama CFLRP landscape.

Results from the Treatment for Restoration Economic Analysis Toolkit (TREAT). For guidance, training, and resources, see materials on Restoration Economics SharePoint.[4] After submitting your data entry form to the Forest Service Washington Office Economist Team, they will provide the analysis results needed to respond to the following prompts.

Contract Funding Distributions Table ("Full Project Details" Tab):

Description	Project Percent
Equipment intensive work	16
Labor-intensive work	56
Material-intensive work	2
Technical services	10
Professional services	12
Contracted Monitoring	3
TOTALS:	100%

Modelled Jobs Supported/Maintained (CFLRP and matching funding):

Timber harvesting component	122	168	$6,439,529	$8,656,470
Forest and watershed restoration component	80	116	$3,754,332	$5,681,859
Mill processing component	104	215	$3,869,906	$8,316,290
Implementation and monitoring	22	26	$900,839	$1,032,405

[4] Addresses Core Monitoring Question #7

Other Project Activities	4	6	$176,476	$301,262
TOTALS:	331	531	$15,141,082	$23,988,285

- **Were there any assumptions you needed to make in your TREAT data entry you would like to note here? To what extent do the TREAT results align with your observations or other monitoring on the ground**?

TREAT results and tracking employment in terms of the abstract metric of full-time equivalent jobs (FTE) may not accurately capture how this employment is distributed in context. In context, many people may share 1 FTE in rural communities where part-time employment is favored as part of seasonal, subsistence lifestyle that includes the provision of goods that are not brought to market, but are consumed within the household (e.g. firewood collection, grazing cattle, hunting, small-scale agriculture). On the ground, one FTE may support a number of people's employment. TREAT does not account for how this economic effect is spread throughout communities by stabilizing multiple households. Furthermore, by framing employment in terms of full-time jobs, TREAT may support the implicit assumption that full-time employment is the goal for workers in rural communities. In reality, the goal for many of these individuals may not be to get closer to full-time employment, but rather to supplement subsistence lifestyles with cash that can be used for market goods.

Please provide a brief description of the local businesses that benefited from CFLRP related contracts and agreements, including characteristics such as tribally-owned firms, veteran-owned firms, women-owned firms, minority-owned firms, and business size.[5] *For resources, see materials here (external Box folder).*

Direct Forest Service CFLRP expenditures included $713,000 in TFPA funding to the Santa Clara Pueblo for Workforce Development to support the restoration economy, a $54,000 contract was awarded to a local veteran-owned small business to conduct an invasive plant inventory on the Rio Grande NF, and $39,000 in reforestation funding awarded to Rocky Mountain Youth Corps through the Indian Youth Service Corps to conduct a Seed Tree Re-inventory Project.

1. Local contract capture (% of sales, contracts, agreements captured by local entities vs leakage outside local area) (from TREAT)
    - Of the $3,095,898 of CFLN funds spent in FY 23, 76% was captured by local entities.
    - Of the $11,099,804 in Forest Service and partner investments in the project landscape, 72% was captured by local entities.
2. Type of work captured locally (technical, equipment intensive, labor-intensive, supplies) (from TREAT)

Contract Funding Distributions for CFLRP-CFLN Funds

Description	Project Percent
Equipment intensive work	39%
Labor-intensive work	2%
Material-intensive work	5%
Technical services	24%
Professional services	21%

[5] Addresses Core Monitoring Question #8

Contracted Monitoring (Does not include in-kind and volunteer contributions)	9%
	100%

Contract Funding Distributions for Full Project including Leveraged Funds

Description	**Project Percent**
Equipment intensive work	16%
Labor-intensive work	56%
Material-intensive work	2%
Technical services	10%
Professional services	12%
Contracted Monitoring (Does not include in-kind and volunteer contributions)	3%
	100%

Business Demographics for Contracts and Agreements within Rio Chama CFLRP area from the 8 contracts identified in USAspending.gov that were awarded within ranger districts of the Rio Chama CFLRP

Recipients (text from reported categories)	**Contracts** (Total amount obligated)	**Contracts** (% of total amount of CFLRP funding obligated)	**Agreements** (Total amount obligated)	**Agreements** (% of total amount of CFLRP funding obligated)
Alaska Native Corporation Owned Firm				
American Indian Owned Business				
Indian Tribe Federally Recognized				
Native Hawaiian Organization Owned Firm				
Tribally Owned Firm				
Veteran Owned Business				
Service-Disabled Veteran Owned Business				
Woman Owned Business	$410,451	20%		
Woman Owned Small Business	$410,451	20%		
Economically Disadvantaged Women Owned Small Business	$223,736	11%		
Joint Venture Women Owned Small Business				
Minority Owned Business	$1,121,111	56%		
Subcontinent Asian Indian American Owned Business				
Asian Pacific American Owned Business				
Black American Owned Business				
Hispanic American Owned Business	$1,084,090	54%		
Native American Owned Business				
Other Minority Owned Business				

Federal Agency				
State Government				
Local Government				
County Government				
Municipal Government				
School District				
US Tribal Government				
Corporate Entity (not tax exempt)				
Corporate Entity (tax exempt)				
Limited Liability Partnership				
Sole Proprietorship				
US Government Entity				
Community Development Corporation				
Educational Institution				
Foundation				
Manufacturer of Goods				
For Profit Organization				
Nonprofit Organization				
1862 Land Grant College				
DOT Certified Disadvantaged				
Self-Certified Small Disadvantaged Business	$410,451	20%		
Small Disadvantaged Business				
C8a Program Participant	$223,736	11%		
Historically Underutilized Business Zone	$223,736	11%		

7. Wood Products Utilization

Timber & Biomass Volume Table[6]

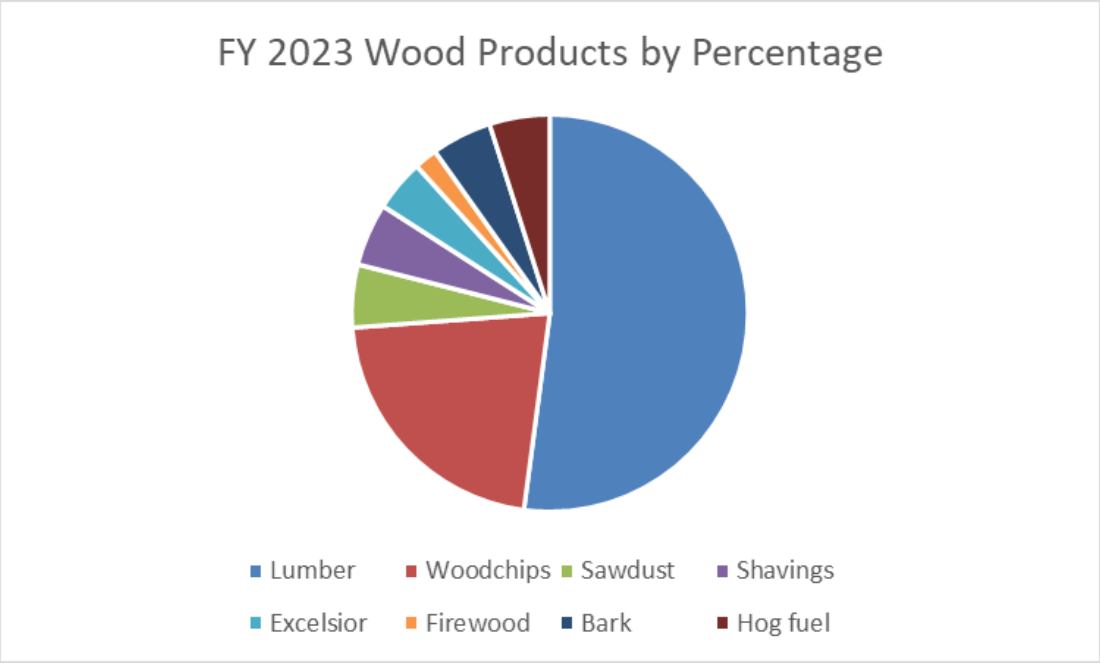
Performance Measure	Unit of measure	Total Units Accomplished
Volume of Timber Harvested TMBR-VOL-HVST	CCF	N/A
Volume of timber sold TMBR-VOL-SLD (from FACTs)	CCF	47,921
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG (from FACTs)	Green tons	95,470

- Reviewing the data above, do you have additional data sources or description to add in terms of wood product utilization (for example, work on non-NFS lands not included in the table)?

During the Fall of FY 2023, The Guild completed key informant interviews with four of the largest sawmills in the Rio Chama CFLRP landscape to understand their businesses and to capture qualitative data about how they may support utilization of restoration by-products from the Rio Chama CFLRP. Additionally, the interviews provided important information for future socioeconomic analysis, such as the units that these mills use to track the wood coming into the

[6] Addresses Core Monitoring Question #10

sawmill (e.g. green tons, board feet, truck loads, etc.). We also captured information about the product lines of the four biggest sawmills in the project landscape (see below). Useful information about active small business, niche, and cottage industries including those that purchase and re-sell aspen transplants to landscapers, Christmas tree lots, furniture makers, and interior design support businesses also came through in these interviews. While these small-scale activities often are hard to capture in databases, they play an important role in the social milieu and economic makeup of communities in the Rio Chama area and may connect them to larger and occasionally unexpected markets outside of the landscape. The importance of fuelwood for heating and cooking within and adjacent to the Rio Chama landscape also cannot be understated. The growth of community fuelwood programming across the project area including replications of the leñero model that has been successful in the Taos area on the East Zone of the Carson NF, Wood for Life Programming, and community fuelwood initiatives. The expansion of these initiatives in particular are connecting project partners at the landscape scale through practice and learning exchange regionally and nationally. The Northern New Mexico Fuelwood Working Group, which 2-3-2 and Rio Chama partners participate in regularly and which is currently convened by the NFF is an important venue for fuelwood source and identified community need matchmaking in addition to creative problem solving around project set up, contracting, transportation, and processing of fuelwood.



8. Collaboration

The organizations represented in Appendix D of the Tier II Rio Chama proposal have remained largely unchanged, although the individuals that represent those organizations have changed a fair amount and there have been some additions, especially as the 2-3-2 Partnership MPM plan has been developed and implemented in the past two fiscal years. Changes are documented in Attachment D to this report. A list of partners can also be found on the 2-3-2 website, though it is updated only a couple of times a year. In addition to the updates in Appendix D, Agency partners continue to fund The Guild $600k annually to develop and operationalize an agreement that supports collaboration and monitoring functions for the Rio Chama CFLRP and 2-3-2 Partnership.

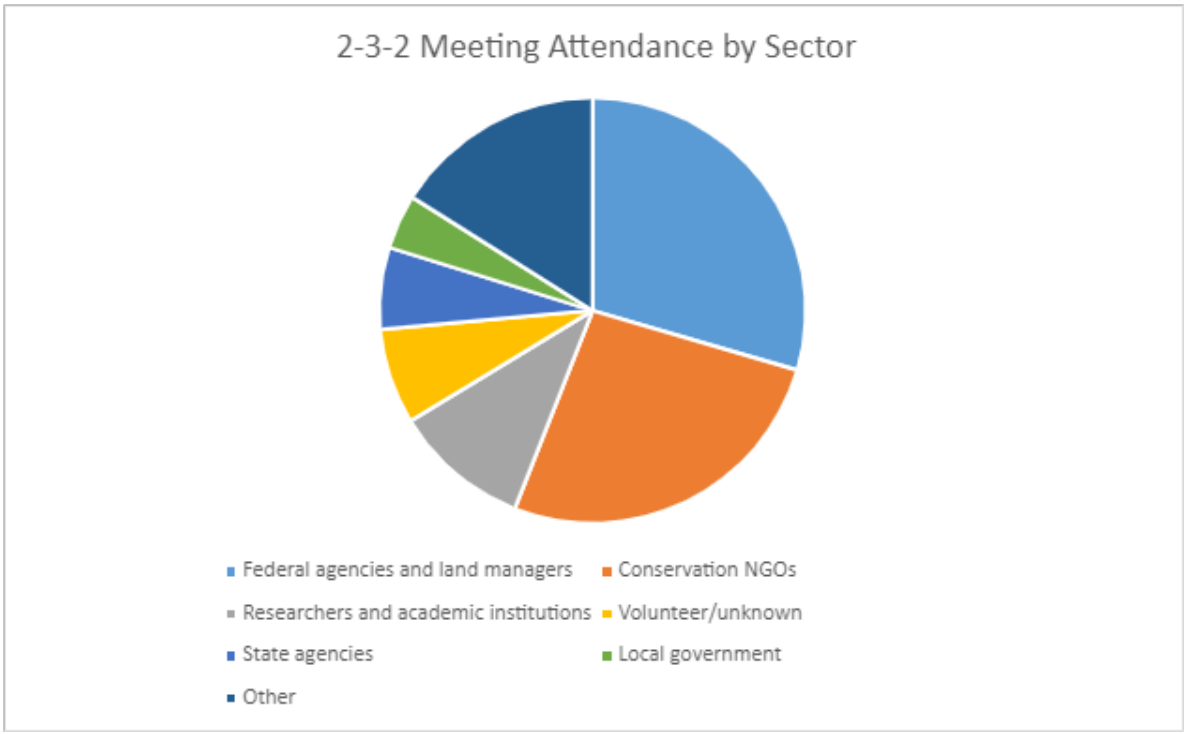
Through the agreement, funding is transferred from the USFS to collaborators to achieve the goals of the project. It also outlines specific objectives that are being accomplished under the leadership of our partners:

- Support the collaboration and coordination of stakeholders
- Support implementation of forest restoration treatments on non-Forest Service lands
- Develop and implement an effective and transparent monitoring program

- Provide socioeconomic expertise to improve the outcomes of objectives 1-3

Another key set of partners, many, but not all, of whom appear on Appendix D is the 2-3-2 Partnership Executive Committee, a group of active members who support basic functions and advancement of the 2-3-2 by serving as the strategic and decision-making body for the Partnership. A list of current Executive Committee Members, Past Executive Committee members and paid staff at The Guild and MSI that support Executive Committee functions can be found in Appendix C.

The diversity and quantity of partners and participants in 2-3-2 Partnership activities increased in FY23. Full participant lists and meetings notes can be found on the 2-3-2 Website, and it is important to note that, when possible, 2-3-2 Partnership events are being hosted in a hybrid format. Moving into FY24, 2-3-2 leadership is focusing on engaging specifically with the Jicarilla Apache Nation, communities and entities in the San Luis Valley in the northeastern portion of the project geography, Spanish speaking communities (with hopeful support from IIJA and/or IRA funds), the SJCPCA, the New Mexico Department of Game and Fish, and emergency responders and planners in Archuleta County, CO. Stipend dollars have also been secured to encourage diverse participation in and access to leadership positions within the Partnership. A system for strategic and equitable dispersal of these funds is being developed.



List of Participants in the 2-3-2

	Organization, agency or sector	Total number of individual participants	Number of Partnership meetings attended
FOR-PROFIT AND OTHER CONSERVATION ORGS	Christ of the Desert Monastery	1	2
	Land Life	1	1
	Ecotone Landscape Planning	2	1
	Animas Environmental Services	1	1
STATE AGENCIES	Colorado State Forest Service	1	2

	New Mexico Department of Game and Fish	2	1
	New Mexico Department of Forestry	9	3
LANDOWNERS	North Star Ranch New Mexico	2	1
TRIBES AND LAND GRANTS	Jicarilla Apache Game and Fish	1	1
	Las Trampas Land Grant Board	1	1
	Santa Barbara Land Grant	1	1
	Santa Clara Pueblo	3	3
	Taos Pueblo	1	1
CONSERVATION NGOS	Environmental Defense Fund	2	1
	National Forest Foundation	2	2
	National Wild Turkey Federation	1	2
	Rio de Las Trampas Forest Council	2	1
	Pheasants Forever	1	3
	Rio Grande Return	2	1
	New Mexico Rural Water Association	1	1
	Rocky Mountain Ecology	1	1
	Rocky Mountain Youth Corps	4	3
	Sangre de Cristo Initiative	1	2
	The Nature Conservancy	5	4
	Trees Water People	1	2
	Trout Unlimited	3	4
	Wildfire Adapted Partnership	1	4
	Cerro Negro Forest Council	1	1
	Forest Stewards Guild	10	4
	Mountain Studies Institute	7	4
	Chama Peak Land Alliance	3	2
	Dolores Watershed Resilient Forest Collaborative	1	1
	Amigos Bravos	1	1
	Ancestral Lands Conservation Corps	1	1
MEDIA	filmmaker	1	1
	High Country News	1	1
	MoxieCran Media	1	1
RESEARCHERS AND ACADEMIC INSTITUTIONS	Colorado State University	1	1
	Bees	1	1
	Fort Lewis College	1	1
	New Mexico Water Resources Research Institute	1	1
	University of Montana	2	1
	New Mexico Highlands University	2	1

	Southwest Ecological Restoration Institutes	1	1
	Rocky Mountain Research Station	4	1
	New Mexico Forest and Watershed Restoration Institute	4	3
	Colorado Forest Restoration Institute	2	2
	Adams State University	1	1
LOCAL GOVERNMENT	Local government	1	1
	City of Santa Fe	2	4
	Chama Valley Chamber of Commerce	1	1
	Colorado Water Conservation Board	1	1
	Taos County	1	2
	San Juan Water Conservancy District	1	1
	Montezuma County Natural Resources	1	1
LEGISLATIVE REPS	Senator Hickenlooper's Office	2	2
	Senator Lujan's office	1	2
	Senator Michael Bennet's office	1	2
	Representative Leger Fernandez	1	1
	Congresswoman Fernandez's office	2	2
CONTRACTORS/WORKFORCE	Forest Fitness	1	1
	Forrester and Associates	1	1
	Mark!t Forestry Management	3	1
	North American Wood Products	1	1
	Trollworks	1	1
FEDERAL AGENCIES AND LAND MANAGERS	USGS	1	1
	USDA	1	1
	USFS	14	4
	Santa Fe NF	13	6
	San Juan NF	8	3
	Rio Grande NF	4	4
	Carson NF	10	4
	Bureau of Land Management	3	2
	Bureau of Reclamation	1	3
	Natural Resources Conservation Service	1	2
Volunteers/ Unknown Affiliation		15	18

Tribal Governments and Land Grant Communities within the Project Area of Interest

State	Tribal, Pueblo, or land grant affiliation
CO	Southern Ute
CO	Ute Mountain Ute
CO	Conejos Land Grant
NM/CO	Sangre De Cristo Land Grant
NM/CO	Navajo
NM	Taos Pueblo
NM	Picuris Pueblo
NM	Jicarilla Apache
NM	Pueblo of Tesuque
NM	Pueblo of Santa Clara
NM	Ohkay Owingeh
NM	Pueblo of Jemez
NM	Pueblo of Cochiti
NM	Pueblo of Santa Ana
NM	Pueblo of San Felipe
NM	Pueblo of Zia
NM	Pueblo of Santo Domingo
NM	Pueblo of Nambe
NM	Pueblo of Pojoaque
NM	Pueblo of San Ildefonso
NM	Petaca Land Grant
NM	Santa Barbara Land Grant
NM	Tierra Amarilla Land Grant
NM	Maxwell Land Grant

2-3-2 Quarterly Meeting Highlight

November 2022 – Horca, CO

- Rio Grande National Forest project highlights and pre-implementation discussion including field tour of Trail Gulch project
- Test drive 2-3-2 Landscape-scale desired conditions
- Introduction of 2-3-2 governance survey
- Cross-boundary planning on Federal lands and across public-private boundaries
- Landscape scale prioritization and optimization

February 2023 – Taos, NM

- Multiparty Monitoring Plan development
- Identification of "watch outs" associated with project goals and monitoring questions
- Landscape learning exchange with community members, experts, and practitioners in the Taos area with specific focus on community forestry and watershed management
- Partner updates

May 2023 – Santa Fe, NM

- 2-3-2 governance survey initial results and discussion
- Overview of finalized 2-3-2 Multiparty Monitoring Plan
- 2-3-2 Partnership updates and processes
- Tours of the Santa Fe Watershed and Santa Fe Canyon Preserve

August 2023 – Chama, NM

- Fire and human history in the Chama, NM area
- Landscape connectivity related to wildlife migration, landscape disturbances, and watershed values
- Management jurisdictions, management opportunities, and tools to meeting management objectives
- Build relationships and identify ways to work together towards community and landscape goals

9. Monitoring Process

Briefly describe your current status in terms of developing, refining, implementing, and/or reevaluating your CFLRP monitoring plan and multiparty monitoring process.

Monitoring is led by The Guild and MSI, with guidance and support from the 2-3-2 Partnership's Monitoring Committee, USFS forest and regional staff, and CFLRP adjacent subject matter experts.

- The 2-3-2 Partnership Monitoring Committee is open forum and repeatedly attended by individuals from Chama Peak Land Alliance (CPLA), The Nature Conservancy (TNC), Trout Unlimited, New Mexico State University, University of New Mexico, New Mexico Highlands University, New Mexico EMNRD State Forestry, the Colorado Forest Service, Carson NF, Rio Grande NF, San Juan NF, Santa Fe NF, USFS Regions 2 and 3, MSI, and The Guild.
  - The name of this committee was changed from the Technology, Research, Adaptation and Monitoring (TRAM) Committee to just the Monitoring Committee this year to simplify and clarify the committee's role and the way that role is communicated to partners and 2-3-2 participants. Within this context, committee members and partners understand that monitoring is not a static accomplishment, but rather a process and that the committee will pay an ongoing and important role in interpreting monitoring data and supporting adaptive management.

- MPM Plan development was guided by the 2-3-2 Partnership Monitoring Committee with support from the Jicarilla Apache Nation, Santa Clara Pueblo, Amigos Bravos, Rio Grande Return, Christ of the Desert

Monastery, Banded Peak Ranch, Rancho Oso Del Pardo, Keystone Restoration Ecology, Upper Chama SWCD, Taos SWCD, CO Parks and Wildlife, NM Department of Game and Fish, NM Environment Department, NM Natural Heritage, NM Water Resources Research Institute, SWERIs, NFF, TNC, Rocky Mountain Research Station, USFS Forest Inventory and Analysis Program, USFS Forest Health Protection Program, USFS GTAC, USFS WO CFLRP Program, US Bureau of Land Management, US National Park Service, and Reclamation.

- On-the-ground data collection was conducted by a Forest Stewards Youth Corp crew, technicians with The Guild and MSI, staff from CPLA and New Mexico Department of Game and Fish, and drone flights by Dolecek Enterprises Inc.
- Data analysis was conducted by the USFS Rio Chama GIS/Data Manager and Guild and MSI staff
- The adaptive management process is outlined in the 2-3-2 MPM Plan. During spring 2023, 2-3-2 Partners identified adaptive management "watchouts" that correspond with 2-3-2 monitoring questions. When a watchout is met, the 2-3-2 Monitoring Committee and 2-3-2 Partnership will take a concerted look at the monitoring data and implementation strategies to determine what tweaks should be considered (i.e., changes to monitoring approach and/or treatment implementation). The 2-3-2 Partnership's first review of adaptive management watchouts will occur at the February 2024 partnership meeting.

Describe any changes to your multi-party monitoring and adaptive management process that have occurred in the past year based on stakeholder feedback (e.g., change in how and when participants engage, interaction between FS and collaborative, shared learning opportunities, sequencing of events, etc.)

- There have not been any large changes to the multiparty monitoring and adaptive management process over the past year. This is largely due to the recency of a collaborative plan and a focus on piloting the proposed actions. In conjunction with the 2-3-2 Partnership meeting in February 2024, there will be a Monitoring Committee Workshop to review plan implementation, data, adaptive management (and adaptive monitoring) needs, and determine appropriate scheduling and events for participants to engage long-term.
- During Winter of 2023, a SE work group was formed. The SE work group was established to support socioeconomic monitoring plan development as part of the 2-3-2 monitoring committee. The group included existing members of the 2-3-2 Partnership as well as agency and non-profit representatives that were not yet engaged with the 2-3-2, such as Forest Service regional economists. The SE working group focusses broadly on CFLRP jobs and labor income, wood utilization, and collaborative governance. The SE working group is a general forum for information sharing and SE monitoring process development. The group agreed that specific subgroups or "task teams" would be created to address specific items, as needed. For example, to address important goals related to Tribal and traditional community engagement, the SE working group established a Tribal and Traditional communities engagement subgroup in the Spring and Summer of FY 2023.

Reflecting on the monitoring process, what has been working well? What challenges have you experienced, especially in terms of alignment with the Common Monitoring Strategy? How might the process be improved?

Working well:

- Development of the 2-3-2 Partnership MPM Plan and implementation of year-one monitoring pilot have served as an effective means of engaging new partners and garnering interest in CFLRP efforts.
- USFS and Partner support for implementing on-the-ground monitoring (i.e. ensuring site access, sharing local knowledge, and providing staff time to support data collection).
- Support from, and open communication channels with, Region 2 and Region 3 Ecologists and WO CFLRP Leadership.
- CFLRP CMS ensures holistic, multi-discipline, monitoring approach is considered.
- Cross-CFLRP modeling support, guidance, and sharing (IFTDSS, TREAT, Collaborative Governance Survey)

for specific CMS questions provides clarity, standardization, and additional capacity to local efforts.

- Partners have added key capacity to multi-party monitoring activities, like the expertise provided by Dr. Olivia Carril in designing and completing wild bee field monitoring.

Challenges:

- Tracking treatment planning and implementation stages (i.e. NEPA approved, funded, contract signed, project work initiated, project work complete) requires case-by-case follow-up to coordinate monitoring timelines. A project tracking database with consistent cross-forest use would help streamline coordination and logistics with partners.
- Determining the "best" approach for measuring landscape resilience and addressing CMS question 2. Some of the complexity we are navigating includes -
  - Aligning cross-regional vegetation datasets to conduct regionally developed vegetation analyses and address CMS in-line with Region 3 direction. These conversations are ongoing.
  - Learning about, understanding, and comparing the various remote sensing and modeling options, and keeping up with their rapid evolution. This can be overwhelming and a CFLRP focused "short-list" would help narrow in on appropriate and timely tools.
  - Expanding our resilience-focused thinking to account for the uncertainty of climate change. Vegetation departure is often determined by comparing current vegetation to moments in the past, but interpreting "historic range of variability" as it pertains to the present and future is challenging to communicate and measure. Tapping the SWERIs or other research institutes to provide CFLRP-wide guidance and/or analysis could support a broader conversation and limit duplicative efforts (i.e. comparing the same tools) at the individual CFLRP scale.
- Establishing wildlife habitat and population target ranges. A future CFLRP Monitoring Community of Practice conversation and/or associated "one-pager" would be helpful.
- Communicating complex/robust monitoring data back to collaborative for review, comprehension, and incorporation. The 2-3-2 Partnership will hold its first Monitoring Committee Workshop in early February 2024 to pilot data review and tweak the collaborative monitoring process for the Rio Chama CFLRP.

New Mexico Department of Game and Fish riparian treatment monitoring Ed Sargent Wildlife Area

- The Guild is leading monitoring efforts on an elk exclosure installed by New Mexico Department of Game and Fish on state land. (Also working with CPLA on the monitoring effort)
- Increased grazing pressure by the elk has decreased ripari-an vegetation leading to higher rates of erosion and in-creased water temperature.
- This area is historical Rio Grande Cutthroat Trout habitat.
- Four HOBO stream temperature loggers were installed both inside and outside of the exclosure to monitor potential treatment effect on stream temperature.
- Two game cameras were installed to pilot a USGS remote water level monitoring program.

10. Conclusion

Describe any reasons that the FY 2023 annual report does not reflect your proposal or work plan. Are there expected changes to your FY 2023 plans you would like to highlight?

Optional Prompts

Media Recap (Brandy/Alex)

Program brings together agencies, tribal nations to restore fire resilience in Southwest
$30 Million Forest Restoration Project Getting Underway
Rio Chama Collaborative Forest Landscape Restoration Program aims to achieve partnership goals
Rio Chama Collaborative Forest Landscape Restoration Project
Cross-boundary partnership brings together lands and people to prevent future wildlfires
Three National Forests in CO receive nearly $47 million for wildfire barriers

Other media:

- Radio interviews with Taos Radio and Chama Radio, in the Western Collaborative Conservation Network Newsletter in July
- Dirt and Dust Podcast part 1 of a podcast series that highlights the 2-3-2 and the Rio Chama CFLRP played on Taos Radio
- Rio Chama highlights every other month in the 2-3-2 Newsletter

Rio Chama CFLRP Mentions:

https://www.kob.com/new-mexico/newly-announced-federal-wildfire-prevention-funding-where-in-new-mexico-will-it-impact/
https://www.bennet.senate.gov/public/index.cfm/press-releases?id=188C4386-26A9-422F-88DC-0B42EA9C9F98
https://www.krqe.com/news/new-mexico/prescribed-burns-planned-in-santa-fe-national-forest-during-february/
https://ladailypost.com/prescribed-fire-planned-on-santa-fe-national-forest/

RC Reporter Sept 2023.pdf

Signatures

Recommended by (Project Coordinator(s)): **/s/Jeremy Marshall**
Approved by (Forest Supervisor(s)): **/s/ Shaun Sanchez, /s/Dave Neely, /s/Kris Sexton, /s/Jack Lewis**
Draft reviewed by (collaborative representative): **/s/ Dana Quinn**

Attachment: CFLRP Common Monitoring Strategy Core Questions

The 2022 cohort will complete the Common Monitoring Strategy questions in FY23. The 2022 cohort includes: Lakeview, Missouri Pine Oak Woodlands, North Yuba, North Central Washington, Northeast Washington, Rio Chama, Rogue Basin, Shortleaf Bluestem, Southern Blues, Southwest Colorado, Western Klamath, Zuni

2021 funded projects (Deschutes, Dinkey, Northern Blues) will only need to address the annual questions (Q1, Q5, Q7, Q10, Q11, Q13). For CFLRP projects awarded (or extended) in FY23, the Attachment is NOT required. However, please note it will be required in FY24.

The CFLRP CMS is designed to reflect lessons learned from the first ten years of the program, expand monitoring capacity, and improve landscape-scale monitoring. It is intended to strike a balance between standardization and local flexibility and to be responsive to feedback that more guidance and capacity are needed. Questions are standardized nationally and indicators are standardized regionally. Many CFLRP projects have been implementing restoration treatments and monitoring progress prior to the CMS. This effort may not capture the progress of every project over its lifetime but provides an opportunity for all projects to take a step together in a unified monitoring approach.

Question 1: "What is the reduction in fuel hazard based on our treatments?"
Question 2: "What is the effect of the treatments on moving the forest landscape toward a more sustainable condition?"
Question 3: "What are the specific effects of restoration treatments on the habitat of at-risk species and/or the habitat of species of collaborative concern across the CFLRP project area"
Question 4: "What is the status and trend of watershed conditions in the CFLRP area, with a focus on the physical and biological conditions that support key soil, hydrologic and aquatic processes?"
Question 5: "What is the trend in invasive species within the CFLRP project area?"
Question 6: "How has the social and economic context changed, if at all?"
Question 7: "How have CFLRP activities supported local jobs and labor income?"
Question 8: "How do sales, contracts, and agreements associated with the CFLRP affect local communities?"
Question 9: "Did CFLRP maintain or increase the number and/or diversity of wood products that can be processed locally?"
Question 10: "Did CFLRP increase economic utilization of restoration byproducts?"
Question 11: "Who is involved in the collaborative and if/how does that change over time?"
Question 12: "How well is CFLRP encouraging an effective and meaningful collaborative approach?"
Question 13: "If and to what extent have CFLRP investments attracted partner investments across the landscapes?"

The tables in the section below are copy/pasted from the suggested monitoring tracking templates to help organize data across CFLRP projects. Adapt the reporting tables as needed to align with regional monitoring indicators.

Summary

The 2-3-2 finalized Edition 1 of a multiparty monitoring (MPM) plan for the Rio Chama CFLRP in April, 2023 – available online at https://232partnership.org/monitoring/. The 2-3-2 MPM plan includes 23 monitoring questions (13 from CMS, 1 from USFS Region 3, and 9 from 2-3-2 Partnership). To address these questions, the 2-3-2 Partnership's MPM plan proposed a combination of models, data collection, and database review. These approaches were (and in some cases, continue to be) piloted – of the 30 methods proposed in the 2-3-2 MPM plan, 19 were piloted in 2023 and 6 are in progress. The 2-3-2 Partnership's Monitoring Committee will review 2023 baseline data and make tweaks to the MPM

plan and protocols as needed – just as adaptive management is an important process for learning and improving outcomes, so too, is adaptive monitoring.

***This monitoring report focuses on providing initial data for the CMS and 2-3-2 Partnership's questions but withholds in-depth data narrative and interpretation until meaningful collaborative review takes place. Due to the limited time between MPM plan finalization, pilot implementation, and report preparation, an in-depth review of current data by the 2-3-2 Partnership Monitoring Committee has not occurred, and data narratives and interpretation will be provided following a February 2024 Monitoring Committee Workshop. The February workshop will incorporate data in this report and Adaptive Management Watchouts (as defined in the 2-3-2 MPM Plan) to review baseline conditions, monitoring plan implementation, and determine next steps.

Delineation Units

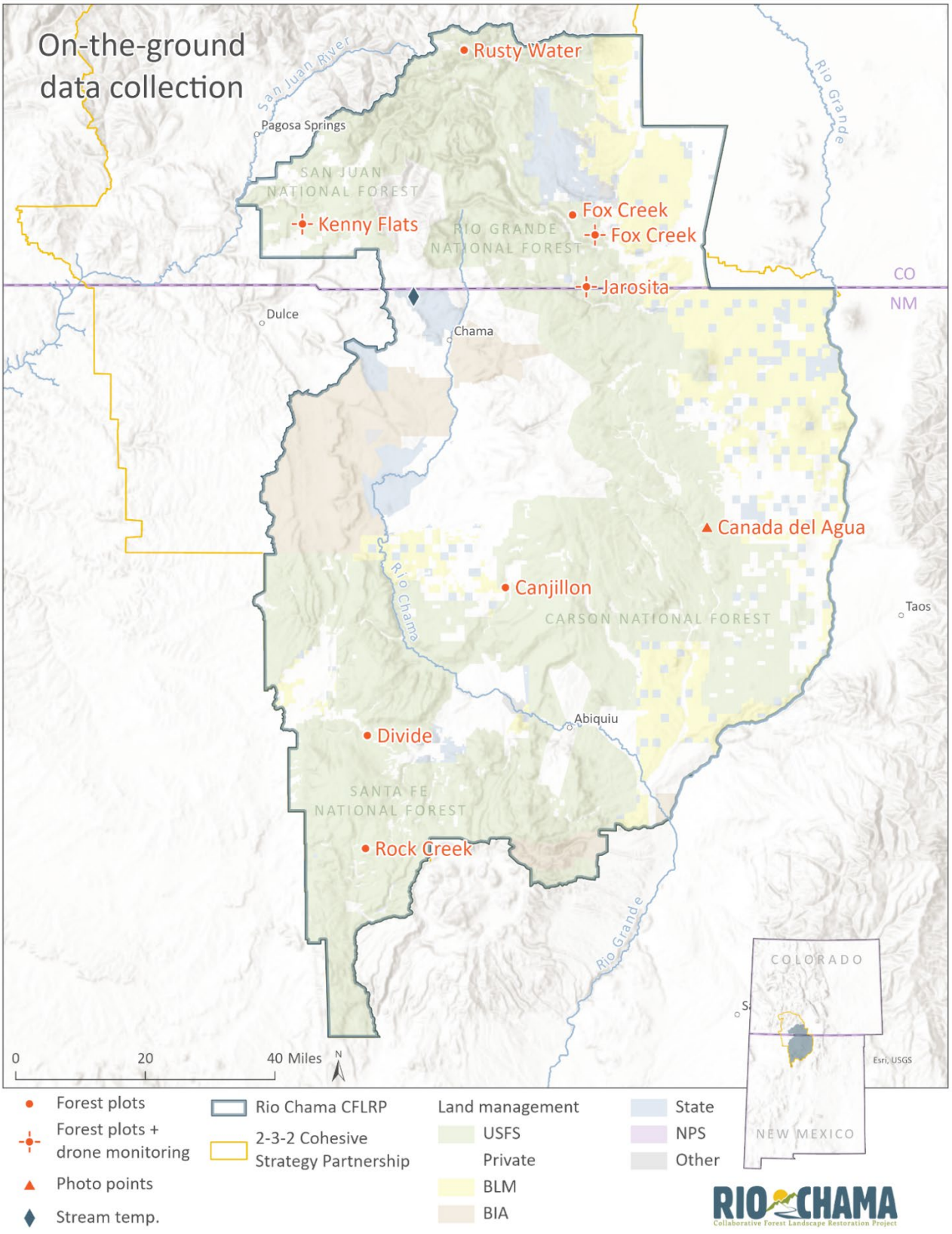
Subwatersheds (HUC12s) were selected as preferred delineation units in the 2-3-2 Partnership's MPM Plan for the Rio Chama CFLRP. There are 203 HUC12s partially or fully contained in the CFLRP footprint. HUC12s provide consistent delineation for multiple monitoring questions and land management processes.

Overview of On-The-Ground Data Collection

The Rio Chama CFLRP monitoring effort incorporated a series of on the ground data collection methods to supplement and validate landscape models, as well as track site-specific changes. In 2023, the 2-3-2 Partnership piloted forest plots, drone imagery, and stream temperature measures (Insert 0.1) to be expanded upon in future years.

The Rio Chama CFLRP landscape contains other field data sources (such as common stand exams, water temperature monitoring, wildlife monitoring, etc.) that are not included in Insert 0.1. These existing sources collect data at varying frequencies, following different protocols, and with variable consistency. One goal of CFLRP monitoring is to align cross-jurisdictional efforts, and the included map highlights year one of a standardized CFLRP approach.

Insert 0.1. Map of 2023 Rio Chama CFLRP driven field monitoring – The forest plots, drone monitoring, and stream temperature measures noted in this map were initiated by 2-3-2 Partners to support the 2-3-2 Partnership's MPM Plan.



Forest Plots

2-3-2 Forest Plots were piloted across the Rio Chama CFLRP in July and August 2023. Data collection was conducted by participants in the Forest Stewards Youth Corp program and field technicians from The Guild and MSI. Protocols (Field Manual with protocols were designed to capture site-specific stand characteristics, inform multiple monitoring questions, expand cross-jurisdictional wild bee monitoring, and be straightforward enough for people with varying levels of expertise to participate in data collection.

Forest plot locations were determined through a three-step process:

1. Create an intensified Forest Inventory and Analysis (FIA) hexagon grid with one point per 2,000 acres.
2. Overlay intensified FIA grid with proposed forest treatments to identify monitoring sites.
3. At each monitoring site, map a 3x3 plot grid (with one plot per 10 acres).

This strategy was meant to randomize the forest plots in treatment areas across the 3.81 million acre landscape, while clustering plots for data collection efficiency and to standardize the amount of data collected from each site.

In addition to the CFLRP supported 2-3-2 Forest Plots, a baseline FIA report summarized pre-CFLRP forest conditions. The FIA report included data from 2010-2019 across 603 FIA plots within 3.77 million acres of the Rio Chama CFLRP landscape. In the time since the FIA report creation, the Rio Chama CLFR boundary expanded to 3.81 million acres. An updated FIA summary will be run after new FIA data is collected and stored.

Although 2-3-2 Forest Plots and FIA data are not statistically comparable, FIA data are included to monitor overall landscape trends and provide descriptive validation of 2-3-2 plot data (Insert 0.2).

Forest type classification methods differed for FIA and 2-3-2 plot summaries:

FIA – "follows the forest cover types published by Eyre (1980) for the Society of American Foresters (Hansen and Hahn 1992). For each condition sampled on an FIA plot, forest types are determined using a computer algorithm that uses data from individual trees to calculate stocking by species (O'Connell et al. 2016)." (Goeking and Menlove 2017[7]).

2-3-2 – Informed by *Plant associations of Arizona and New Mexico* (USDA Forest Service, 2023[8]). Classification system based upon current vegetation and the following guidance:

- Pinyon-Juniper: Stand is predominantly PIED, JUMO, and JUSC2, and JUDE2. There may be PIPO present in this system but is not a dominant component.
- Ponderosa Pine: Overstory is ≥70% PIPO.
- Dry Mixed Conifer: Overstory is ≥1% and ≤69% PIPO. Stand composed primarily of PIPO, PSME, PIST3, ABCO, and POTR5.
- Wet Mixed Conifer: Overstory contains no PIPO. Stand is primarily composed of spruce (PIPU, PIEN) and fir (ABCO, ABLA) species, and may contain POTR5 and PSME.

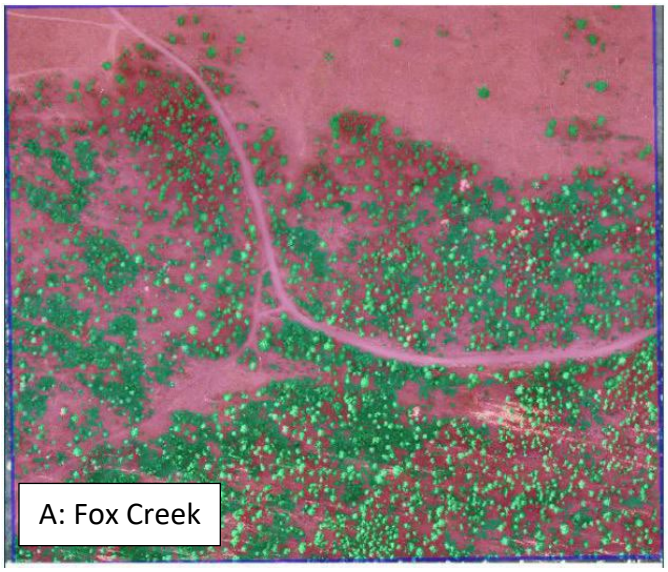
Insert 0.2. Average Forest Stand Characteristics – Means calculated from 2023 data across 72 2-3-2 Forest Plots, and from 2010-2019 data across 603 FIA plots. CFLRP plot means document all trees ≥5" DBH or ≥3" DRC (*Juniperus, Quercus,* and *Pinus* spp.), unless otherwise noted. FIA plot means document all trees ≥5" DBH, unless otherwise noted.

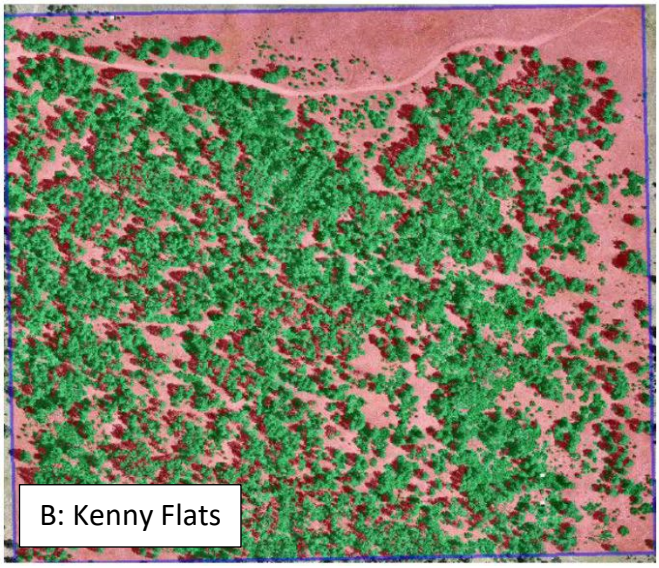
[7] Goeking, S.A., and J. Menlove. 2017. New Mexico's forest resources, 2008-2014. Resource Bulletin RMRS-RB-24. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 68 p.

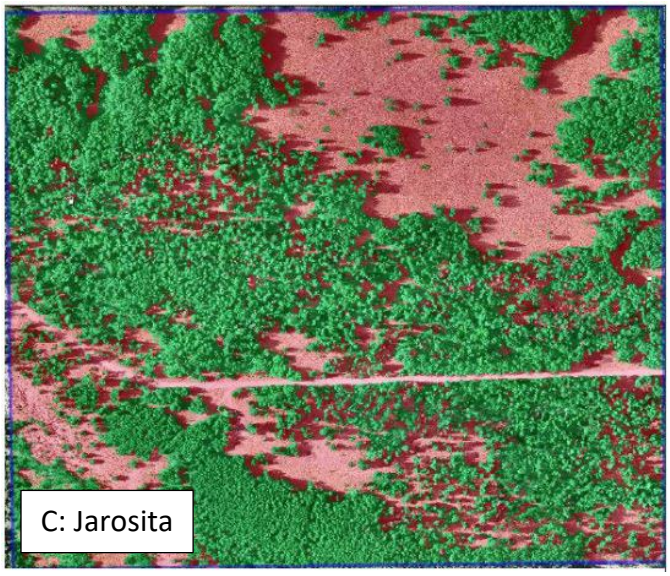
[8] USDA Forest Service. 2023. Plant associations of Arizona and New Mexico: Volumes 1-3. Edition 4. Forestry Report FR-R3-16-04 a,b,c. Southwestern Region, Albuquerque, NM. Available online at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1126342.pdf

Forest Type	**Basal Area (ft^2/acre) 2-3-2 Plots FIA**	**Basal Area (ft^2/acre) 2-3-2 Plots FIA**	**Trees Per Acre 2-3-2 Plots FIA**	**Trees Per Acre 2-3-2 Plots FIA**	**Quadratic Mean Diameter (in) 2-3-2 Plots FIA**	**Quadratic Mean Diameter (in) 2-3-2 Plots FIA**	**Standing Dead (≥8”) Trees Per Acre 2-3-2 Plots FIA**	**Standing Dead (≥8”) Trees Per Acre 2-3-2 Plots FIA**
Pinyon-Juniper	63.94	75.95	217	7	7.36	44.60	1	6
Ponderosa Pine	119.93	92.54	124	91	13.32	13.65	3	3
Dry Mixed Conifer	114.47	104.07	120	133	13.23	11.989	6	16
Wet Mixed Conifer	149.90	131.16	269	182	10.10	11.49	47	41
All	**122.80**	**100.93**	**189**	**103**	**10.91**	**13.40**	**20**	**17**

Insert 0.3. Drone Imagery and Comparison with Plot Data – Drone images and plots measured the same 90-acre sites.







TPA % Canopy Cover

Site	*Drone*	*Plots*	*Drone*	*Plots*
A	65	62	37	41
B	73	129	51	53
C	170	228	59	49

NOTE: Plot protocols direct field crews to move plots (based on pre-determined direction and distance) if the plot location is not representative of forest stand (i.e., plot falls within meadow, on road, etc.). This likely accounts for some differences between drone and plot measures.

Drones

The 2-3-2 Partnership and Rio Chama CFLRP are exploring the potential use of drones to inform multiple monitoring questions. During summer 2023, a contractor captured pre-treatment aerial imagery and analysis (TPA and % crown cover) for three CFLRP forest plot monitoring sites (90 acres each) and will capture post-treatment after project completion. Drone imagery can support qualitative review of treatment effects and provide TPA and canopy cover analysis over larger treatment areas than can be accomplished with forest plots alone (see Insert 0.3 for comparison of pre-treatment values).

In addition, the 2-3-2 Partnership is considering how drones complement various remote sensing opportunities (such as LiDAR and vegetation indices).

Water Temperature

The 2-3-2 Partnership identified water temperature monitoring as an important metric for informing water quality (Dunbar et al., 2022[9]) and cutthroat trout habitat (RGCT Conservation Team, 2013[10]) changes. Data from the existing network of water temperature loggers within the Rio Chama CFLRP were pulled from the Rocky Mountain Research Station's regional stream temperature database (NorWeST) which includes USFS, US Environmental Protection Agency WQX, and some New Mexico Energy, Minerals and Natural Resources Department data. This dataset included data from 1995-2014 for 104 sampling sites. Of these, 36 sites have multi-year data (ranging from 2-5 years). At this time, the NorWeST data has not been analyzed to inform Rio Chama CFLRP monitoring. The data is sporadic and its spatial relationship to forest and riparian treatments is unclear. There is opportunity for the 2-3-2 Partnership and the Rio Chama CFLRP to strategically build upon the NorWeST network to collect, store, and analyze landscape-scale restoration effects.

In Summer 2023, the 2-3-2 Partnership installed four water temperature loggers on non-NFS managed land to supplement the network of existing temperature loggers and pilot riparian treatment-focused logger installation. The 2-3-2 Monitoring Committee and 2-3-2 Partners are preparing for additional temperature logger installation in 2024.

Overview of Vegetation Models

Insert 0.4. Overview of Available Geospatial Monitoring Options

Potential Option	Overview	Considerations
LANDFIRE	A shared program between the wildland fire management programs of the U.S. Department of Agriculture Forest Service and U.S. Department of the Interior, providing landscape-scale geospatial products to support cross-boundary planning, management, and operations.[11]	- DOES include "wall-to-wall" coverage of CFLRP, including non-NFS managed lands and cross- state and USFS regional boundaries. - DOES have fire regime and vegetation departure indicators. - DOES have consistent national use. - DOES have easily accessible data. - DOES NOT directly account for desired future conditions. - DOES NOT accurately map dry ends of southwestern ponderosa pine forests.
R3 Analysis Framework	A system for the consistent assessment, monitoring, and management of landscapes for ecological integrity, climate adaptation, and the continued delivery of services to communities. The framework is built upon a set of upland, riparian, aquatic, climate, and socioeconomic indicators. State-and-transition models assist in analysis and monitoring along with standard map products for landscape stratification mapping (Ecological Response Units or	- DOES include multiple indicators that align with 2-3-2 Partnership's MMP plan (i.e. specific habitat characteristics). - DOES address Region 3 CFLRP question about carbon carrying capacity. - DOES incorporate southwest focused vegetation data. - DOES NOT have "wall-to-wall" CFLRP vegetation input layer. - DOES NOT have existing workflow for CFLRP implementation. - DOES NOT provide comparability across national CFLRPs.

[9] Dunbar, N.W., D.S. Gutzler, K.S. Pearthree, and F.M. Phillips. 2022. *Climate Change in New Mexico over the next 50 years: Impacts on water resources*. New Mexico Bureau of Geology and Mineral Resources, Bulletin 164.

[10] RGCT Conservation Team. 2013. Rio Grande cutthroat trout (*Oncorhynchus clarkia virginalis)* Conservation Strategy. Colorado Parks and Wildlife, Denver, Co.

[11] LANDFIRE. n.d. *About LANDFIRE.* Retrieved November 22, 2022, from https://landfire.gov/about.php

	LANDFIRE Biophysical Settings) and existing vegetation mapping (INREV). By applying coefficients, the models can be augmented for some indicators including snag density, coarse woody debris, and carbon stocks.[12]	
Terrestrial Condition Assessment (TCA)	Evaluates effects of uncharacteristic stressors and disturbance agents in land-type associations to identify restoration opportunities on NFS lands.[13]	- DOES have national support team. - DOES provide comparability across national CFLRPs. - DOES NOT include non-NFS managed lands (approx. 50% of Rio Chama CFLRP).
USDA Forest Service Geospatial Monitoring Guide for Southwest Colorado and Rio Chama CFLRP	Reports on various datasets, methods, and training materials available for CFLRP monitoring, and includes demonstrations of select remote sensing methods. The intent is to illustrate the application of remote sensing and corporate geospatial datasets for analysis at treatment and landscape levels relevant to addressing CLFRP monitoring and adaptive management.[14]	- DOES outline multiple datasets and methods to address landscape-scale vegetative change. - DOES highlight emerging resources. - DOES NOT select "top" resource(s) for monitoring plan integration.

R3 Analysis Framework

The R3 Analysis Framework (Framework) is a component of the regional CMS to address questions about landscape resilience, wildlife habitat, and carbon carrying capacity. The Framework incorporates potential and current vegetation maps to produce multiple indicators related to terrestrial, riparian, and aquatic systems. The Framework was, and still is, considered for CFLRP monitoring, however the process for aligning vegetation datasets across state and USFS regional boundaries is not complete. In the past year, multiple conversations have prepared for cross-boundary alignment, but contracting costs for updated vegetation maps are limiting.

Monitoring Question #1: "What is the reduction in fuel hazard based on our treatments?"

For detailed guidance, training, and resources, see corresponding reporting template here. Use it to respond to the following prompts:

[12] J. Triepke, personal communications, January 26, 2023

[13] Cleland, D., K. Reynolds, R. Vaghan, B. Schrader, H. Li, and L. Laing. 2017. Terrestrial Condition Assessment for National Forests of the USDA Forest Service in the Continental US. *Sustainability 9(2144).*

[14] Chastain, R., E. Rounds, J. Holgerson, P. Millikan, H. Fisk, S. Dingman, T. Mellin, and S. del Favero. 2023. Geospatial Monitoring Guide for the Southwest Colorado and Rio Chama Collaborative Forest Landscape Restoration Program Project. GTAC-10246-RPT1. Salt Lake City, UT. U.S. Department of Agriculture, Forest Service, Geospatial Technology and Applications Center. 49p.

Table 1.1. Fire intensity (predicted flame lengths) from IFTDSS

IFTDSS Auto-97th percentile flame length output (see Insert 1.1 for IFTDSS adjustments)	*Non-burnable*	*0 – 1ft. flame lengths*	*1 - 4 ft. flame lengths*	*>4 - 8 ft. flame lengths*	*>8 - 11 ft. flame lengths*	*>11 - 25 ft. flame lengths*	*>25 ft. flame lengths*
Initial landscape model (Baseline under CMS)	99,701 (3%)	2,018,458 (53%)	663,824 (17%)	97,579 (3%)	88,969 (2%)	537,876 (14%)	304,690 (8%)
Landscape model 2 (Second year of CMS) N/A in first reporting year	-	-	-	-	-	-	-

- **Briefly describe monitoring results in table above – include an interpretation of the data provided and whether the indicator is trending toward or away from desired conditions for your landscape.** If the data above does not accurately reflect fire and fuel hazard on your landscape please note and provide context. While generally smaller flame lengths are desirable, this isn't the case in all ecosystems – please note if this applies.

IFTDSS model results are based upon unedited LANDFIRE 2022 data. The IFTDSS Auto-97th Fire Behavior model was found to use extreme weather conditions not representative of the entire CFLRP landscape. Instead, these modeling results are based on the average 97th percentile weather conditions as calculated from the eight RAWS stations located within CFLRP (see Insert 1.1).

Average IFTDSS predicted flame lengths are mapped by HUC12 subwatershed in Insert 1.2.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

Insert 1.1. Table of RAWS data used to calibrate IFTDSS

				Fuel Moistures				
Name	Elevation	WindSpeed	WindDirection	1hr	10hr	100hr	Herb	Woody
Big Horn	8,651	26	225	2	3	5	109	128
Buckles	9,230	14	135	2	3	4	101	121
Coyote	8,695	14	225	2	3	5	111	129
Deadman Pk	8,389	14	270	2	2	4	118	135
Jarita Mesa (Auto97th)	8,816	9	270	3	3	5	134	150
NMJIA Portable	7,902	20	270	2	3	5	120	137
Santa Fe Portable	8,622	14	270	2	2	4	118	135
StoneLake	7,385	20	270	2	3	5	120	137
Average	8,434	16.4	241.9	2.1	2.8	4.6	116.4	134.0
Model Inputs Used		16	270	2	3	5	118	136

Insert 1.2. Map of IFTDSS Predicted Flame Lengths by HUC12

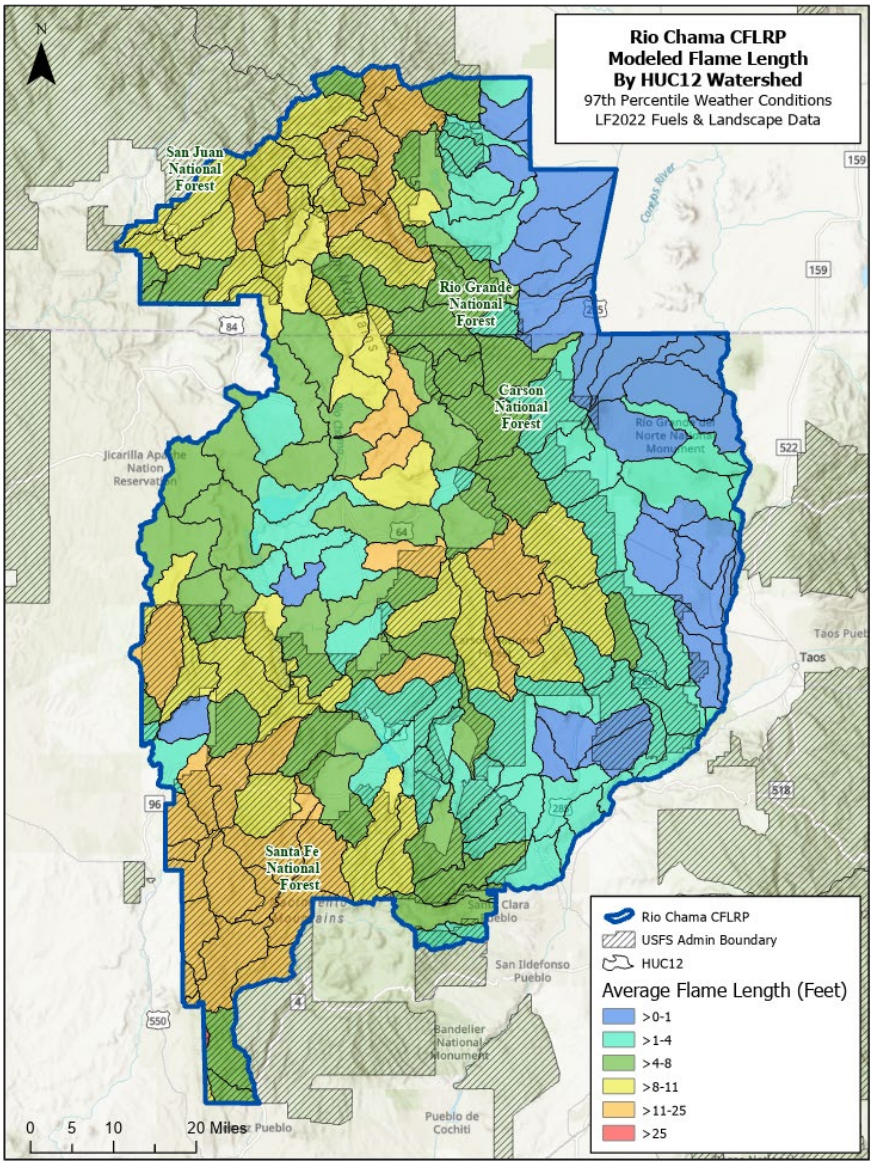


Table 1.2. Crown fire activity from IFTDSS - Crown fire activity reported by subwatershed and sorted by combined crown fire (highest to lowest). * indicates HUC12s that extend beyond CFLRP footprint - Crown fire acreage and percentages only reported for sections of HUC12 within CFLRP. P indicates subwatershed is one of three priority watersheds as determined through the Watershed Condition Framework. F indicates subwatershed is one of 12 focal watersheds as determined by the Rio Chama CFLRP (see CMS question 4).

IFTDSS Auto-97th crown fire activity output by full CFLRP

Unburnable	Surface Fire	Passive Crown Fire	Active Crown Fire	Total Crown Fire
99,701	2,643,647	1,039,981	27,767	1,067,748 Ac 28.0 %

IFTDSS Auto-97th crown fire activity output by watershed - Initial landscape model (Baseline under CMS)

Subwatershed Name	Unburnable	Surface Fire	Passive Crown Fire	Active Crown Fire	Total Crown Fire Ac.	Total Crown Fire %
Arroyo Lopez*	-	82	785	13	798	90.7
Headwaters Rio Cebolla*F	63	2,938	17,835	373	18,207	85.8
Upper Rio Salado*	-	4	12	-	12	82.1
Headwaters Rio de las VacasF	243	5,140	23,875	471	24,347	81.9
Outlet Rio de las Vacas*F	215	6,736	30,020	440	30,460	81.4
Rito Penas Negras	33	2,212	8,538	99	8,637	79.4
Rito de los Pinos-Arroyo San Jose*	84	1,064	3,696	352	4,048	77.9
Arroyo San Jose-Rio Puerco*	28	3,184	9,324	483	9,807	75.4
Outlet Rio Cebolla*F	289	4,006	10,895	212	11,107	72.1
Rito Olguin-Rio Puerco*	2	431	1,016	76	1,091	72.0
Canada Gurule	81	5,220	10,944	133	11,077	67.6
Headwaters Arroyo San Jose*	41	4,536	8,622	684	9,306	67.1
Canada Alamosa-Rio Vallecitos	25	12,383	22,367	93	22,460	64.4
Canada del Agua-Rio Vallecitos	50	11,118	19,059	213	19,273	63.3
Daggett Canyon-Canones Creek	97	5,583	9,134	280	9,414	62.4
Headwaters El RitoF	61	14,389	21,286	323	21,609	59.9
San Pablo Canyon*	322	7,043	10,542	454	10,996	59.9
Coyote Creek	118	11,550	16,720	465	17,185	59.6
Arroyo de Los Pinos-Rio Puerco*	10	1,692	2,136	117	2,253	57.0
Lake Fork	216	2,468	3,331	214	3,546	57.0
Rio Capulin	318	8,707	11,422	334	11,755	56.5
Canada del Aqua-Rio Tusas	262	16,463	21,546	42	21,588	56.3
Martinez Canyon	48	6,990	8,580	70	8,650	55.1
Headwaters Rio Puerco	110	15,866	18,960	469	19,429	54.9
Bear Canyon-Tapicito Creek*	32	1,225	1,389	-	1,389	52.7

Headwaters Canoncito de las Lleguas	28	15,386	16,787	271	17,058	52.5
Upper Rio Gallina	271	8,846	8,986	312	9,298	50.5
Chavez Creek	197	7,612	7,744	143	7,888	50.2
Fish Creek	1,302	4,265	4,756	817	5,572	50.0
Lower Rio Gallina	212	16,313	15,968	508	16,476	49.9
West Fork Rio Brazos	24	5,600	5,297	205	5,502	49.5
Canada del Abrevadero-Rio Tusas	50	13,680	13,028	404	13,432	49.4
Huckbay Canyon-Rio Chama	355	13,460	12,919	455	13,373	49.2
Stock Driveway Canyon	258	5,542	5,603	-	5,603	49.2
Rio Guadalupe*	19	12,271	11,509	98	11,607	48.6
Rough Creek-Conejos River	618	8,830	7,838	608	8,445	47.2
Poleo Creek	716	15,110	13,636	91	13,727	46.5
Arroyo Seco	29	5,676	4,549	313	4,862	46.1
Saddle Creek	415	2,163	2,142	29	2,171	45.8
French Creek-Alamosa River	779	11,972	9,804	600	10,404	44.9
Middle Rio Salado*	-	856	640	52	692	44.5
Middle Rio Gallina	99	12,877	10,025	333	10,358	44.4
Outlet South Fork Conejos River	663	6,269	5,016	239	5,255	43.1
Headwaters Arroyo del Puerto Chiquito	86	13,229	9,941	76	10,016	42.9
Polvadera Creek	9	12,678	9,052	411	9,463	42.7
Trail Creek-Conejos River	830	11,387	7,978	997	8,976	42.3
Canones Creek*	446	20,455	15,132	79	15,211	42.1
Encinado Creek-Rio Brazos	532	16,933	12,341	283	12,624	42.0
Canada del Rancho-Rio Vallecitos	68	14,865	9,808	689	10,497	41.3
Hansen Creek	312	4,063	2,748	285	3,032	40.9
Adams Fork Conejos River	254	3,745	2,662	61	2,724	40.5
Headwaters Rio Blanco	1,832	6,877	5,529	387	5,915	40.4
Canada de la Presa-Rio Chama	281	13,223	8,713	415	9,128	40.3
Upper Rio Blanco	793	9,226	6,068	654	6,721	40.1
Squaw Canyon-San Juan River*	90	4,003	2,735	12	2,747	40.1
Canada Biscara-Rio Tusas	287	19,197	12,979	20	13,000	40.0
Rio del Oso	62	15,999	10,350	368	10,718	40.0
Outlet Canoncito de las Lleguas	181	12,174	7,371	624	7,995	39.3
North Fork Conejos River-Conejos River	533	7,227	4,897	121	5,018	39.3
Platoro Reservoir-Conejos River	1,192	2,902	2,388	216	2,605	38.9
Upper Rio Nutrias	390	12,949	8,316	145	8,461	38.8
Jasper Creek-Alamosa River	1,173	5,843	3,965	296	4,261	37.7

Stinking Lake	802	21,153	12,984	-	12,984	37.1
Headwaters San Antonio Creek*	-	651	367	18	385	37.1
Elk Creek	1,024	16,401	9,660	501	10,161	36.8
Peterson Creek-Navajo River	876	9,786	5,915	295	6,210	36.8
Stone Lake-Boulder Creek	366	17,016	9,803	11	9,813	36.1
Headwaters Alamosa River*	1,749	14,050	8,204	177	8,381	34.6
Headwaters South Fork Conejos River	367	4,454	2,379	155	2,533	34.5
Headwaters Rio Cebolla	690	18,800	10,248	11	10,259	34.5
Tecolote Canyon-Jemez River*	29	5,460	2,855	28	2,882	34.4
Jaroso Creek-Rio Vallecitos	223	20,187	10,626	41	10,667	34.3
Canada Jaquez-Canada Larga*	1	1,919	995	-	995	34.3
Little Willow Creek-Rio Chama	697	18,626	9,530	196	9,725	33.5
East Fork Navajo River	1,173	7,776	4,169	102	4,272	32.3
Headwaters Amargo Canyon*	62	2,809	1,356	-	1,356	32.1
Oso Canyon*	4	3,087	1,454	13	1,468	32.1
Wolf Creek	238	12,096	5,447	230	5,676	31.5
Rito de Tierra Amarilla	1,234	25,636	12,278	29	12,307	31.4
Outlet Arroyo del Puerto Chiquito	334	12,105	5,605	83	5,688	31.4
Lower Rio Blanco*	191	9,965	4,630	14	4,644	31.4
Archuleta Creek[P]	236	6,128	2,549	226	2,774	30.4
Canon de los Alamos-Rio Tusas	18	10,151	4,229	98	4,327	29.8
Coyote Creek*	205	13,432	5,754	2	5,756	29.7
Jarosa Creek	94	10,489	4,133	277	4,409	29.4
Boulder Creek-El Vado Reservoir	1,788	25,366	11,225	59	11,284	29.4
Middle Rio Blanco[P]	89	13,880	5,698	69	5,768	29.2
Upper Rio Ojo Caliente	245	12,307	5,073	5	5,078	28.8
Canada de la Laguna-Willow Creek	118	17,153	6,873	-	6,873	28.5
Montoya Canyon-Canjilon Creek[F]	927	15,569	6,286	211	6,496	28.2
West Fork Navajo River	1,565	14,764	5,932	457	6,389	28.1
Arroyo de la Plaza Larga*	7	3,894	1,489	29	1,518	28.0
Headwaters La Jara Creek	367	18,369	6,924	325	7,249	27.9
Brazos Creek-Rio Chama	705	17,009	6,802	2	6,804	27.8
Canada Tio Grande-Rio San Antonio[F]	20	24,599	9,038	44	9,081	26.9
Fox Creek	38	15,448	5,489	207	5,696	26.9
Headwaters Cat Creek	27	14,001	4,886	240	5,126	26.8
Lola Creek-Rio de los Pinos	291	24,221	8,729	77	8,807	26.4

East Fork Rio Brazos	20	9,274	3,212	51	3,263	26.0
Abiquiu Creek	129	21,723	7,446	171	7,617	25.9
Hidden Lake-Rio Brazos	91	20,821	7,157	81	7,238	25.7
Wightman Fork	739	7,022	2,340	143	2,483	24.2
Weisel Flat-Navajo River*	154	10,644	3,376	41	3,417	24.1
Madera Canon	150	14,928	4,763	13	4,776	24.0
Outlet Rio Puerco	528	27,168	8,363	400	8,763	24.0
Arroyo Hondo-Rio Grande*	383	10,015	3,258	-	3,258	23.9
Toltec Creek-Rio de Los Pinos[F]	297	24,684	7,660	144	7,804	23.8
Comanche Rim	55	10,798	3,245	46	3,291	23.3
Headwaters Hot Creek	25	8,941	2,681	32	2,713	23.2
Lopez Canyon-Canjilon Creek	19	13,173	3,951	22	3,974	23.1
Gavilan Creek	220	7,785	2,399	5	2,404	23.1
Headwaters Rio Chama[P]	1,166	13,961	4,090	379	4,469	22.8
Sheep Creek-Conejos River[F]	694	21,416	6,238	236	6,473	22.6
Valle Secu*	-	4,379	1,270	4	1,274	22.5
Beaver Creek	32	12,797	3,675	33	3,708	22.4
Santa Clara Creek*	186	17,867	5,030	144	5,174	22.3
Horse Lake Creek	117	22,176	6,322	4	6,326	22.1
Outlet Rio Cebolla	54	27,868	7,769	94	7,864	22.0
Gavilan Canyon*	1	354	91	10	101	22.0
Terrace Reservoir-Alamosa River	488	7,894	2,238	57	2,295	21.5
Canada de la Fuertes-Rio Chama	1,428	26,288	7,038	392	7,430	21.1
Canada Comanche	43	7,944	2,100	-	2,100	20.8
Canada la Lemitas	21	15,821	4,088	-	4,088	20.5
Arroyo de la Presa-Rio Chama*	1,655	15,568	4,367	12	4,378	20.3
Abiquiu Reservoir-Rio Chama	2,448	26,587	6,956	40	6,996	19.4
Los Alamos Canyon	125	5,664	1,373	9	1,382	19.3
Scott Arroyo-Arroyo Aguaje de la Petaca	247	19,556	4,557	5	4,562	18.7
Heron Reservoir-Willow Creek	3,420	10,618	3,212	-	3,212	18.6
Canon de Tio Gordito-Arroyo Aguaje de la Petaca	547	30,044	6,814	93	6,906	18.4
Navajo Canyon-Canjilon Creek	220	12,994	2,722	215	2,937	18.2
Little Navajo River*	323	11,470	2,103	466	2,569	17.9
Arroyo de los Frijoles-Rio Chama	1,111	15,456	3,564	1	3,564	17.7
Rito Blanco	585	23,477	4,495	628	5,123	17.6
Montezuma Creek*	3	2,938	618	4	623	17.4
Headwaters Rio de los Pinos[F]	423	13,224	2,573	150	2,724	16.6
Canada de Tio Roque	187	22,044	4,403	-	4,403	16.5
Arroyo de los Chavez-Rio Grande*	455	4,196	908	-	908	16.3

Bighorn Creek[F]	75	9,380	1,830	6	1,836	16.3
Arroyo del Yeso-Arroyo Seco	1,272	25,346	4,825	140	4,965	15.7
Canada de la Entranas-Rio Grande*	250	4,138	806	-	806	15.5
Trujillo Canyon-La Jara Creek	199	25,438	4,517	73	4,590	15.2
Rio Chamita	376	25,233	4,178	154	4,332	14.5
Martinez Canyon-Arroyo Aguaje de la Petaca	715	23,555	4,020	69	4,089	14.4
Cedar Grove Cemetery-Arroyo Blanco	201	16,839	2,762	10	2,772	14.0
Echo Canyon Reservoir-San Juan River*	-	671	108	1	109	13.7
Arroyo Alamo-Rio Grande*	38	4,403	670	2	672	13.1
Rito de los Ojas	235	12,568	1,906	7	1,913	13.0
Bluebird Reservoir	1	9,950	1,434	1	1,435	12.6
El Vado Reservoir-Rio Chama	2,483	20,957	3,285	34	3,319	12.4
Lamy Canyon-Arroyo Aguaje de la Petaca	1	16,619	2,311	2	2,313	12.2
Poso Creek	7	15,663	2,131	20	2,151	12.1
Canada de los Ranchos-Rio San Antonio	52	35,547	4,764	43	4,806	11.9
Headwaters Willow Creek	231	23,288	3,081	4	3,086	11.6
Arroyo del Palacio-Rio Grande*	451	9,311	1,280	-	1,280	11.6
Middle Rio Nutrias	554	20,766	2,706	2	2,708	11.3
Canada de los Comanches	199	15,896	1,961	-	1,961	10.9
Mesa de Abiquiu-Rio Chama	1,975	17,647	1,933	-	1,933	9.0
Canada de Tio Alfonso-Rio Chama	500	12,198	1,188	1	1,188	8.6
Arroyo del Cobre	282	11,601	1,078	-	1,078	8.3
Outlet El Rito	1,300	35,267	3,296	8	3,304	8.3
Arroyo del Palacio-Rio Chama	816	23,605	1,953	12	1,965	7.5
Lower Rio Ojo Caliente	615	20,445	1,564	-	1,564	6.9
Carson Reservoir-Arroyo Aguaje de la Petaca	149	36,221	2,212	6	2,219	5.7
Middle Rio Ojo Caliente	814	27,513	1,694	-	1,694	5.6
Spring Creek*	447	8,966	559	4	563	5.6
Almagre Arroyo	452	14,228	738	61	800	5.2
Cooper Arroyo-Rio Chama	342	10,000	507	9	516	4.8
Rito Primero-Rio Grande*	145	7,278	141	133	275	3.6
Cerrito Negro	310	37,440	1,113	234	1,347	3.4
Town of Guadalupe-Conejos River	1,888	12,455	471	5	476	3.2
Pine Squirrel Reservoir-Cat Creek*	196	13,938	372	25	397	2.7

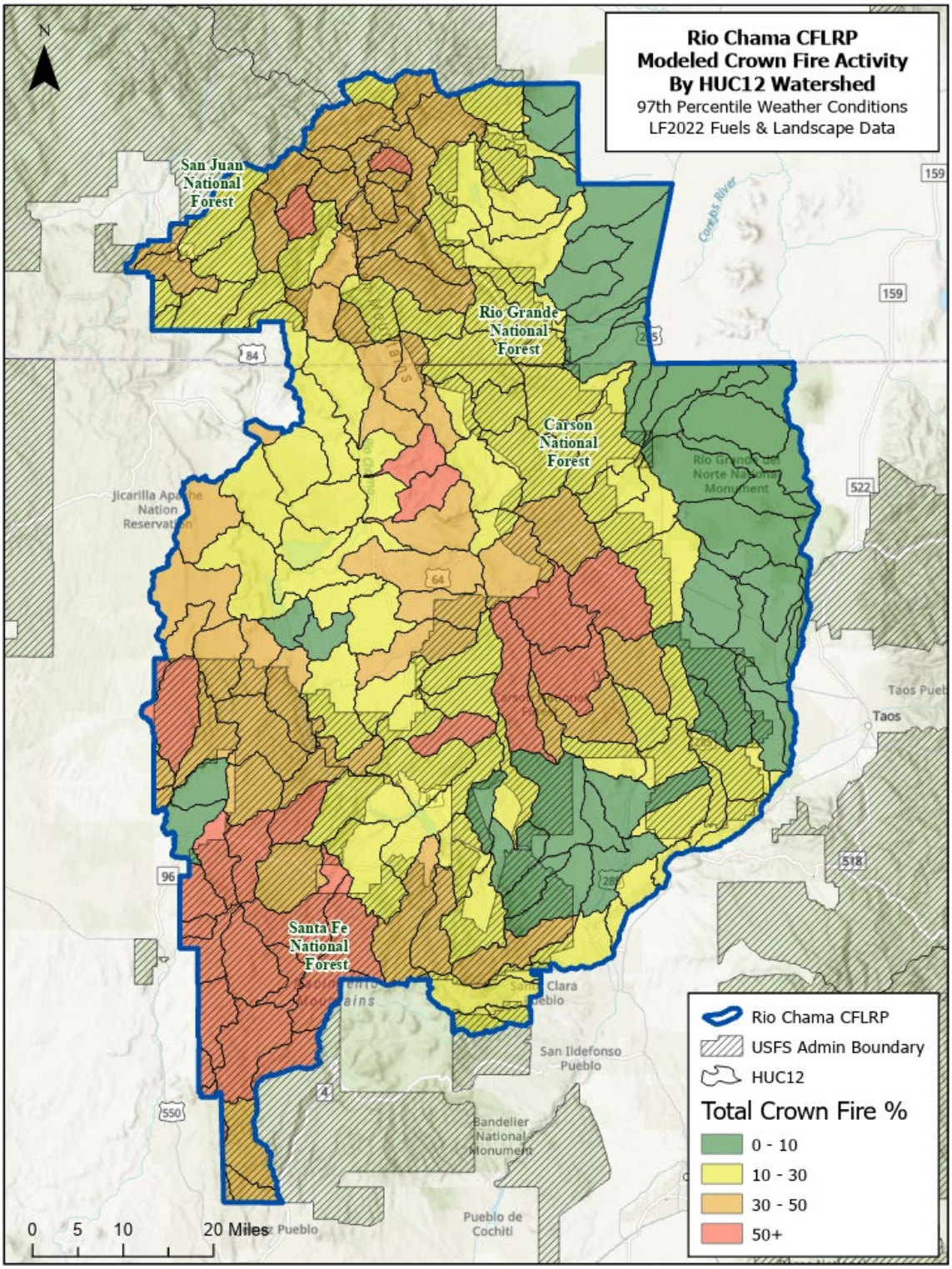
Cove Lake Reservoir-Punche Arroyo*	83	11,189	305	-	305	2.6
Canada Ancha	14	11,199	276	-	276	2.4
Outlet Arroyo Punche	12	25,057	472	107	579	2.3
Indian Lake	196	10,391	240	-	240	2.2
Arroyo Blanco	427	14,687	261	73	334	2.2
Wilson Lake	1	11,287	207	10	217	1.9
Lower Rio Nutrias	20	12,041	210	10	220	1.8
Cerro Montoso	50	19,958	226	87	313	1.5
Headwaters Arroyo Punche	112	35,224	443	8	451	1.3
San Cristobal Creek-Rio Grande	99	3,279	18	15	33	1.0
San Antonio Cemetery-Rio San Antonio*	1,959	22,655	230	-	230	0.9
San Antonio Mountain*	65	13,682	109	2	110	0.8
Twin Lakes-Punche Arroyo*	70	20,922	85	-	85	0.4
Outlet Hot Creek*	521	11,715	37	4	41	0.3
Outlet Rio San Antonio*	1,725	1,798	6	-	6	0.2
Mesita Hill-Rio Grande*	14	512	1	-	1	0.2
The Poso	58	18,079	30	-	30	0.2
Cerros de Taos Ranch	221	27,165	29	-	29	0.1
130201010704 - Unnamed	309	27,232	28	-	28	0.1
Outlet La Jara Creek*	13,519	21,090	21	-	21	0.1
Town of Carson	85	17,597	8	-	8	0.0
Manby Hot Springs-Rio Grande*	127	12,128	4	1	5	0.0
Ute Mountain-Rio Grande*	99	13,552	4	1	4	0.0
Sunset Rapids-Rio Grande*	133	5,325	1	-	1	0.0
130201010204-Rio Grande*	92	13,685	1	-	1	0.0
La Jara Arroyo-La Jara Creek*	7,411	17,765	1	-	1	0.0
130100020410-Flat Top	20	15,413	-	-	-	0.0
Garcia Tank-Rio Grande*	-	209	-	-	-	0.0
North Branch Conejos River-Conejos River*	848	874	-	-	-	0.0
Outlet Alamosa River*	63	1,310	-	-	-	0.0
Outlet Rock Creek*	48	2,735	-	-	-	0.0
Pinabetoso Peaks	4	36,455	-	-	-	0.0

- **Briefly describe monitoring results in table above – include an interpretation of the data provided, and whether the indicator is trending toward or away from desired conditions for your landscape.** If the data above does not accurately reflect fire and fuel hazard on your landscape please note and provide context.

Of the 203 HUC12s in the CFLRP, 29 have over 50% or more crown fire probability (see Insert 1.3 for visual of distribution).

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

Insert 1.3. Map of Crown Fire Probability by HUC12



- **Does your CFLRP project have additional hazardous-fuels related monitoring results to summarize and interpret?** If so, please provide that here.

The 2-3-2 piloted 72 forest plots during summer 2023 (see Forest Plots section, *above*). A summary of pre-treatment plot data is contained in Insert 1.4 and example photos are included in Insert 1.5.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

Insert 1.4. Average Pre-Treatment Forest Fuels (CFLRP Forest Plot Data) – For plot details, see *Forest Plots* section at beginning of report.

Forest Type	**Fuels (tons/acre) -** *1000 hr*	**Fuels (tons/acre) -** *100 hr*	**Fuels (tons/acre) -** *10 hr*	**Fuels (tons/acre) -** *1 hr*	**Ladder Fuels -** *Saplings (TPA)*	**Ladder Fuels -** *Seedlings (TPA)*	**Ladder Fuels -** *Crown Base Height (ft)*
Pinyon-Juniper	3.72	0.63	0.22	0.31	222	122	0.60
Ponderosa Pine	2.33	0.70	0.22	0.10	261	50	13.70
Dry Mixed Conifer	5.39	0.40	0.13	0.22	122	317	16.20
Wet Mixed Conifer	6.50	0.32	0.15	0.16	448	930	9.80

Insert 1.5. Example Plot Photos and Forest Types

- **Based on the information in this section, (and any other relevant monitoring information and discussion), what (if any) actions or changes are you considering?**

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

Monitoring Question #2: "What is the effect of the treatments on moving the forest landscape toward a more sustainable condition?"

For detailed guidance, training, and resources, see corresponding reporting template here. Use it to respond to the following prompts:

Regions have standardized on one of the four following metrics to address Indicator 1 for ecological departure. For your region's chosen metric, please insert the matching table that corresponds with your indicator from the reporting template (abbreviated examples below).

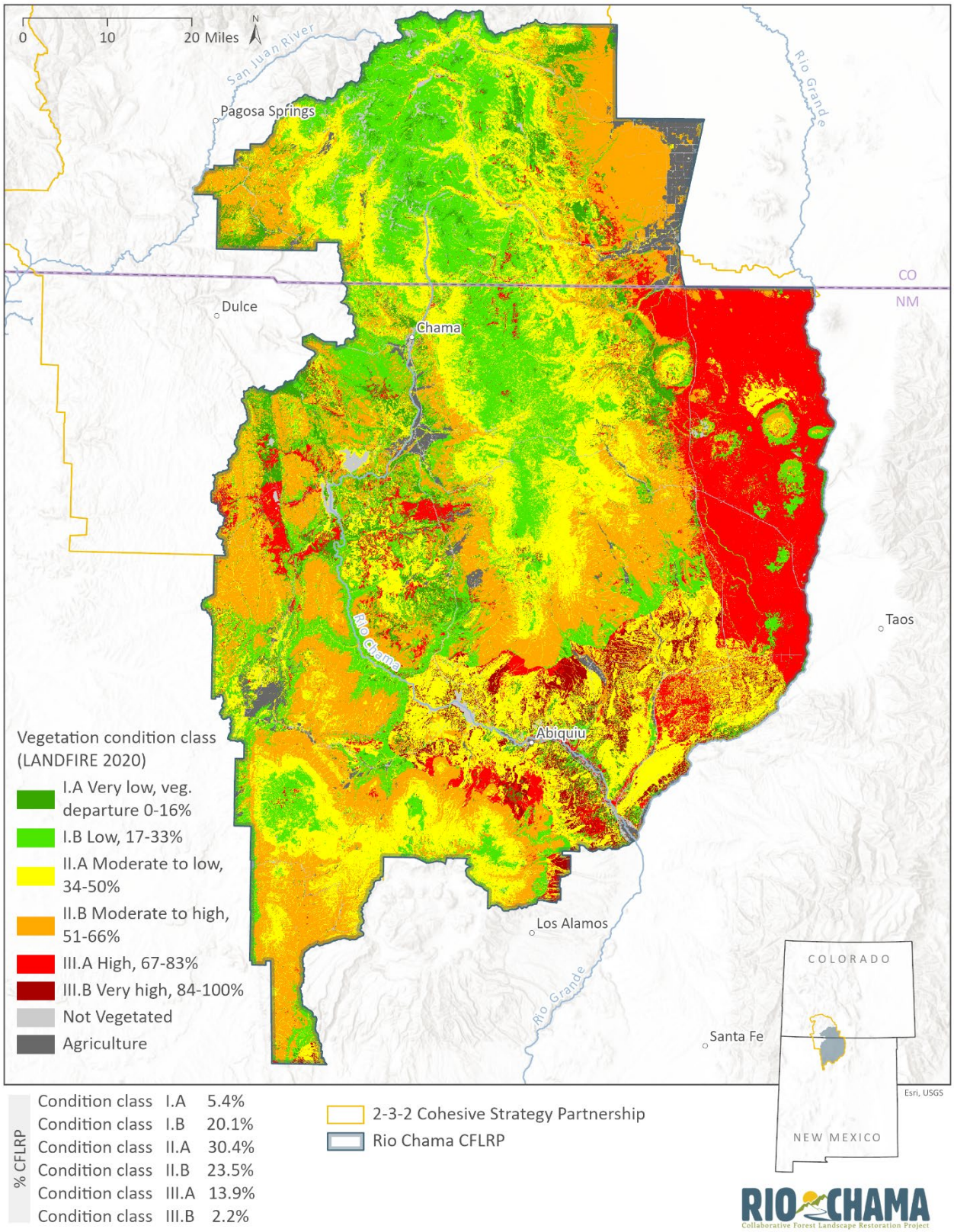
There are multiple resources, approaches, and models available to address CMS Q2 and the Rio Chama CFLRP is exploring the options for a meaningful, consistent, long-term analysis that covers all-lands within the CLFR and incorporates climate change, up-to-date vegetation, is low-cost, and easy to communicate to partners and managers.

For year one reporting, the Rio Chama CFLRP, in partnership with Region 2 and Region 3, selected LANDFIRE Vegetation Condition Class (VCC) as the departure metric (Table 2.1 provides CFLRP summary, Insert 2.1 provides visual representation, and Insert 2.2 provides VCC summary by HUC12). VCC is a "discrete metric that quantifies the amount that current vegetation has departed from the simulated historical vegetation reference conditions" (Accessed October 23, 2023: https://landfire.gov/fireregime.php). Although VCC provides baseline numbers for the CLFR, it is likely that different approaches, models, and/or analysis will be used for CFLRP landscape modeling in the future (and run with 2022 data to summarize comparable baseline data). Additional approaches being considered are summarized in Overview of Vegetation Models section *above.* Overall, remote sensing tools are rapidly advancing and based on current momentum, the CFLRP anticipates a monitoring approach for CMS Q2 becoming more clear over the next 1-2 years.

Table 2.1. Vegetation Departure – LANDFIRE 2022 Vegetation Condition Class (VCC)

Vegetation Condition Class	Description	Acres	% of CFLRP
I.A	Very Low (0-16% Vegetation Departure)	205,596	5.4
I.B	Low (17-33% Vegetation Departure)	766,443	20.1
II.A	Moderate to Low (34-50% Vegetation Departure)	1,157,403	30.4
II.B	Moderate to High (51-66% Vegetation Departure)	893,453	23.5
III.A	High (67-83% Vegetation Departure)	528,102	13.9
III.B	Very High (84-100% Vegetation Departure)	85,276	2.2
Water		17,334	0.5
Snow/Ice		19	0.0
Developed		44,763	1.2
Barren/Sparse		23,471	0.6
Agriculture		87,743	2.3

Insert 2.1. Map of Vegetation Condition Class across Rio Chama CFLRP



Insert 2.2. Vegetation Departure by HUC12 – LANDFIRE 2022 Vegetation Condition Class (VCC) summarized by subwatershed (HUC12). * indicates HUC12s that extend beyond CFLRP footprint – Vegetation Condition Class percentages only reported for sections of HUC12 within CFLRP. P indicates subwatershed is one of three priority watersheds as determined through the Watershed Condition Framework. F indicates subwatershed is one of 12 focal watersheds as determined by the Rio Chama CFLRP (see CMS question 4).

Subwatershed names	**Percent of subwatershed by Vegetation Condition Class** Class I – Low VDEP	**Percent of subwatershed by Vegetation Condition Class** Class II – Moderate VDEP	**Percent of subwatershed by Vegetation Condition Class** Class III – High VDEP	**Percent of subwatershed by Vegetation Condition Class** Not Vegetated	**Percent of subwatershed by Vegetation Condition Class** Agriculture
Archuleta Creek[P]	66.9	29.5	1.0	2.5	0.0
Bighorn Creek[F]	16.0	77.9	4.9	0.6	0.7
Canada Tio Grande-Rio San Antonio[F]	35.3	63.8	0.7	0.0	0.1
Headwaters El Rito[F]	18.1	79.4	1.5	0.2	0.8
Headwaters Rio Cebolla*[F]	2.7	96.2	0.1	0.5	0.6
Headwaters Rio Chama[P]	59.7	33.0	1.1	5.9	0.3
Headwaters Rio de las Vacas[F]	27.1	70.6	1.0	1.0	0.3
Headwaters Rio de los Pinos[F]	81.6	14.1	1.4	2.9	0.0
Middle Rio Blanco[P]	14.5	84.3	0.2	0.6	0.3
Montoya Canyon-Canjilon Creek[F]	26.9	61.4	2.4	0.8	8.5
Outlet Rio Cebolla*[F]	1.3	94.8	0.5	2.5	0.9
Outlet Rio de las Vacas*[F]	0.8	97.5	0.4	0.8	0.5
Rito Penas Negras[F]	5.7	92.2	0.2	0.5	1.4
Sheep Creek-Conejos River[F]	26.2	66.2	3.6	3.1	0.8
Toltec Creek-Rio de Los Pinos[F]	51.1	41.3	6.5	1.1	0.0
130201010704	2.5	2.6	93.0	1.9	0.0
130100020410-Flat Top	1.2	97.5	1.1	0.1	0.0
130201010204-Rio Grande*	2.1	1.2	96.3	0.4	0.0
Abiquiu Creek	9.7	54.7	34.8	0.5	0.2
Abiquiu Reservoir-Rio Chama	3.1	62.3	27.0	7.5	0.1
Adams Fork Conejos River	88.2	7.6	0.3	3.9	0.0
Almagre Arroyo	28.5	39.9	0.2	3.6	27.7
Arroyo Alamo-Rio Grande*	17.7	52.2	29.3	0.7	0.1
Arroyo Blanco	29.0	44.8	1.5	3.1	21.6
Arroyo de la Plaza Larga*	27.4	50.6	21.6	0.1	0.3
Arroyo de la Presa-Rio Chama*	15.2	39.6	28.8	9.9	6.5
Arroyo de los Chavez-Rio Grande*	14.8	41.0	26.4	9.9	7.9
Arroyo de los Frijoles-Rio Chama	8.9	66.8	16.3	5.9	2.3
Arroyo de Los Pinos-Rio Puerco*	28.1	71.4	0.3	0.2	0.0
Arroyo del Cobre	7.6	75.4	14.6	2.4	0.0
Arroyo del Palacio-Rio Chama	17.5	49.9	25.2	4.2	3.2

Arroyo del Palacio-Rio Grande*	5.2	73.9	14.7	4.3	1.9
Arroyo del Yeso-Arroyo Seco	20.8	63.0	10.8	5.2	0.2
Arroyo Hondo-Rio Grande*	14.5	61.0	22.1	2.1	0.3
Arroyo Lopez*	2.1	97.8	0.0	0.1	0.0
Arroyo San Jose-Rio Puerco*	40.8	57.2	1.5	0.2	0.3
Arroyo Seco	24.5	71.7	3.0	0.1	0.8
Bear Canyon-Tapicito Creek*	8.2	86.2	4.0	1.6	0.0
Beaver Creek	51.5	46.7	1.6	0.2	0.0
Bluebird Reservoir	33.1	60.4	6.5	0.0	0.0
Boulder Creek-El Vado Reservoir	26.3	55.3	13.2	4.9	0.4
Brazos Creek-Rio Chama	30.9	51.5	0.2	4.0	13.3
Canada Alamosa-Rio Vallecitos	3.1	95.6	0.1	0.1	1.1
Canada Ancha	6.4	63.3	30.2	0.1	0.0
Canada Biscara-Rio Tusas	17.0	79.0	0.9	1.5	1.6
Canada Comanche	8.2	72.0	19.2	0.5	0.0
Canada de la Entranas-Rio Grande*	4.7	52.3	37.6	4.4	1.1
Canada de la Fuertes-Rio Chama	25.3	64.9	5.7	4.0	0.1
Canada de la Laguna-Willow Creek	42.5	53.8	2.8	0.5	0.3
Canada de la Presa-Rio Chama	34.5	57.5	6.6	1.3	0.0
Canada de los Comanches	2.2	68.4	27.7	1.8	0.0
Canada de los Ranchos-Rio San Antonio	29.5	56.9	13.4	0.1	0.1
Canada de Tio Alfonso-Rio Chama	19.6	46.3	27.8	3.7	2.6
Canada de Tio Roque	62.3	31.7	4.4	1.3	0.3
Canada del Abrevadero-Rio Tusas	27.1	65.2	6.1	0.2	1.4
Canada del Agua-Rio Vallecitos	7.6	89.1	0.9	0.2	2.2
Canada del Aqua-Rio Tusas	6.8	90.3	0.2	1.3	1.3
Canada del Rancho-Rio Vallecitos	24.6	63.3	10.3	0.3	1.5
Canada Gurule	16.2	83.0	0.2	0.5	0.1
Canada Jaquez-Canada Larga*	33.0	64.9	2.1	0.0	0.0
Canada la Lemitas	1.4	49.8	48.6	0.2	0.0
Canon de los Alamos-Rio Tusas	10.5	63.1	25.3	0.2	1.0
Canon de Tio Gordito-Arroyo Aguaje de la Petaca	6.1	42.1	48.7	3.0	0.0
Canones Creek*	8.0	80.5	9.6	0.8	1.0
Carson Reservoir-Arroyo Aguaje de la Petaca	5.3	11.5	82.1	1.0	0.0
Cedar Grove Cemetery-Arroyo Blanco	48.8	38.8	8.8	1.6	2.0
Cerrito Negro	17.0	13.3	68.9	0.8	0.0
Cerro Montoso	19.9	4.2	75.4	0.5	0.0
Cerros de Taos Ranch	9.0	2.0	87.0	1.9	0.1
Chavez Creek	39.8	56.5	0.5	1.1	2.1
Comanche Rim	24.7	60.0	14.8	0.4	0.1
Cooper Arroyo-Rio Chama	49.9	32.2	13.8	4.1	0.0
Cove Lake Reservoir-Punche Arroyo*	11.3	29.5	57.3	1.8	0.0
Coyote Creek*	28.7	67.5	0.0	2.3	1.5
Coyote Creek	18.6	78.5	1.1	0.5	1.4
Daggett Canyon-Canones Creek	44.7	52.2	0.9	0.7	1.4
East Fork Navajo River	63.5	27.2	0.4	8.8	0.1

East Fork Rio Brazos	77.8	12.0	10.0	0.1	0.0
Echo Canyon Reservoir-San Juan River*	7.3	92.2	0.0	0.0	0.5
El Vado Reservoir-Rio Chama	34.1	38.2	5.2	9.0	13.6
Elk Creek	71.1	24.1	0.8	3.9	0.0
Encinado Creek-Rio Brazos	36.2	56.7	0.6	2.1	4.4
Fish Creek	55.4	32.7	0.1	11.8	0.0
Fox Creek	28.8	65.2	5.7	0.3	0.0
French Creek-Alamosa River	46.4	49.1	0.7	3.7	0.2
Garcia Tank-Rio Grande*	0.0	19.8	80.2	0.0	0.0
Gavilan Canyon*	69.8	29.5	0.2	0.5	0.0
Gavilan Creek	66.2	29.6	0.2	3.5	0.4
Hansen Creek	81.9	13.5	0.4	4.1	0.1
Headwaters Alamosa River*	77.6	13.8	0.9	7.7	0.0
Headwaters Amargo Canyon*	39.1	57.0	0.2	3.6	0.1
Headwaters Arroyo del Puerto Chiquito	21.4	51.4	26.6	0.4	0.1
Headwaters Arroyo Punche	5.1	30.2	63.8	0.9	0.0
Headwaters Arroyo San Jose*	39.2	57.2	1.2	0.2	2.3
Headwaters Canoncito de las Lleguas	17.0	80.0	2.4	0.2	0.5
Headwaters Cat Creek	33.9	65.5	0.5	0.2	0.0
Headwaters Hot Creek	27.1	70.2	2.4	0.2	0.2
Headwaters La Jara Creek	60.0	37.2	1.4	1.4	0.0
Headwaters Rio Blanco	56.4	30.7	0.3	12.3	0.2
Headwaters Rio Cebolla	20.6	68.8	2.5	1.0	7.0
Headwaters Rio Puerco	23.1	73.8	1.6	0.5	1.0
Headwaters San Antonio Creek*	22.1	76.8	1.0	0.1	0.0
Headwaters South Fork Conejos River	83.2	11.4	0.4	5.1	0.0
Headwaters Willow Creek	53.9	41.0	1.6	1.2	2.2
Heron Reservoir-Willow Creek	20.6	53.6	2.2	20.8	2.9
Hidden Lake-Rio Brazos	73.5	25.7	0.4	0.3	0.1
Horse Lake Creek	46.5	47.3	5.2	0.4	0.6
Huckbay Canyon-Rio Chama	35.7	61.4	1.5	1.3	0.1
Indian Lake	1.2	10.5	84.5	3.7	0.0
Jarosa Creek	45.5	50.0	3.8	0.6	0.1
Jaroso Creek-Rio Vallecitos	44.2	54.6	0.0	1.0	0.2
Jasper Creek-Alamosa River	58.4	30.2	0.5	10.8	0.0
La Jara Arroyo-La Jara Creek*	0.4	62.1	0.0	3.5	34.0
Lake Fork	65.7	28.5	2.3	3.5	0.0
Lamy Canyon-Arroyo Aguaje de la Petaca	40.6	51.4	8.1	0.0	0.0
Little Navajo River*	29.9	63.9	0.6	2.2	3.4
Little Willow Creek-Rio Chama	27.5	67.4	0.9	2.9	1.3
Lola Creek-Rio de los Pinos	23.1	68.7	5.4	0.8	2.0
Lopez Canyon-Canjilon Creek	14.8	79.2	5.3	0.1	0.6
Los Alamos Canyon*	6.5	91.4	0.2	1.7	0.3
Lower Rio Blanco*	14.3	82.7	0.1	2.8	0.2
Lower Rio Gallina	34.8	61.3	1.8	0.8	1.4
Lower Rio Nutrias	34.8	42.6	22.4	0.2	0.0
Lower Rio Ojo Caliente	8.9	66.0	19.9	4.4	0.9

Madera Canon	5.4	62.2	31.5	0.9	0.0
Manby Hot Springs-Rio Grande*	4.5	1.2	92.8	1.4	0.0
Martinez Canyon	19.3	78.2	2.1	0.3	0.0
Martinez Canyon-Arroyo Aguaje de la Petaca	15.9	43.7	37.2	3.1	0.0
Mesa de Abiquiu-Rio Chama	16.1	47.3	22.2	9.8	4.6
Mesita Hill-Rio Grande*	5.3	30.2	63.5	1.0	0.0
Middle Rio Gallina	19.8	71.2	1.9	0.5	6.7
Middle Rio Nutrias	33.2	29.3	33.2	1.8	2.5
Middle Rio Ojo Caliente	4.2	55.1	35.5	3.5	1.8
Middle Rio Salado*	23.0	63.9	13.1	0.0	0.0
Montezuma Creek*	52.6	46.5	0.7	0.1	0.1
Navajo Canyon-Canjilon Creek	63.0	29.6	4.1	2.5	0.8
North Branch Conejos River-Conejos River*	0.0	11.6	0.0	7.6	80.8
North Fork Conejos River-Conejos River	87.3	7.7	0.7	4.3	0.0
Oso Canyon*	35.2	64.0	0.7	0.1	0.0
Outlet Alamosa River*	0.0	93.5	0.0	5.4	1.2
Outlet Arroyo del Puerto Chiquito	35.2	46.7	15.7	2.4	0.0
Outlet Arroyo Punche	10.2	27.0	62.8	0.0	0.0
Outlet Canoncito de las Lleguas	31.3	62.5	0.8	1.3	4.2
Outlet El Rito	10.9	48.4	33.0	2.9	4.9
Outlet Hot Creek*	5.4	87.0	0.0	2.4	5.2
Outlet La Jara Creek*	2.5	46.2	3.2	5.3	42.8
Outlet Rio Cebolla	26.6	61.0	12.2	0.1	0.1
Outlet Rio Puerco	19.3	66.7	12.0	1.6	0.4
Outlet Rio San Antonio*	2.0	21.9	0.0	17.9	58.1
Outlet Rock Creek*	0.0	97.6	0.0	2.4	0.0
Outlet South Fork Conejos River	65.6	28.5	0.3	5.5	0.0
Peterson Creek-Navajo River	31.9	61.6	0.4	5.2	0.9
Pinabetoso Peaks	0.1	0.3	99.6	0.0	0.0
Pine Squirrel Reservoir-Cat Creek*	26.4	71.6	0.0	0.9	1.0
Platoro Reservoir-Conejos River	67.4	13.2	1.7	17.7	0.0
Poleo Creek	15.1	75.6	3.7	2.4	3.2
Polvadera Creek	9.5	72.6	17.6	0.1	0.2
Poso Creek	26.9	72.0	1.1	0.0	0.1
Rio Capulin	13.5	79.9	0.6	2.1	3.9
Rio Chamita	35.8	59.6	0.6	1.7	2.4
Rio del Oso	21.2	61.6	16.8	0.3	0.2
Rio Guadalupe*	22.2	75.6	1.4	0.3	0.5
Rito Blanco	28.3	69.1	0.2	1.8	0.6
Rito de los Ojas	43.1	42.6	11.5	2.2	0.6
Rito de los Pinos-Arroyo San Jose*	34.1	62.1	0.3	0.3	3.2
Rito de Tierra Amarilla	27.4	63.2	1.0	4.4	3.9
Rito Olguin-Rio Puerco*	22.0	77.9	0.1	0.1	0.0
Rito Primero-Rio Grande*	27.8	1.9	69.1	1.3	0.0
Rough Creek-Conejos River	40.3	53.6	1.1	4.3	0.7
Saddle Creek	77.1	13.9	0.2	8.7	0.0

San Antonio Cemetery-Rio San Antonio*	10.5	39.9	34.6	3.5	11.4
San Antonio Mountain*	4.0	12.2	82.7	1.1	0.0
San Cristobal Creek-Rio Grande	30.1	2.2	66.2	1.5	0.0
San Pablo Canyon*	17.3	80.1	0.3	2.3	0.1
Santa Clara Creek*	15.6	73.2	10.2	0.7	0.2
Scott Arroyo-Arroyo Aguaje de la Petaca	4.4	55.9	37.7	2.1	0.0
Spring Creek*	30.8	64.2	0.0	1.2	3.9
Squaw Canyon-San Juan River*	12.4	80.7	0.0	3.5	3.4
Stinking Lake	12.2	57.0	27.5	2.4	0.9
Stock Driveway Canyon	7.1	78.1	11.3	2.8	0.6
Stone Lake-Boulder Creek	36.5	58.6	3.4	1.4	0.2
Sunset Rapids-Rio Grande*	15.4	1.7	80.7	2.3	0.0
Tecolote Canyon-Jemez River*	17.1	70.0	11.8	0.4	0.7
Terrace Reservoir-Alamosa River	26.2	67.9	0.3	5.0	0.6
The Poso	19.9	71.2	8.6	0.3	0.0
Town of Carson	8.5	0.5	90.0	1.0	0.0
Town of Guadalupe-Conejos River	10.7	43.4	14.5	4.9	26.5
Trail Creek-Conejos River	58.6	34.1	2.4	4.9	0.0
Trujillo Canyon-La Jara Creek	21.8	72.9	4.0	0.1	1.2
Twin Lakes-Punche Arroyo*	2.4	13.9	82.8	0.8	0.0
Upper Rio Blanco	28.1	61.4	0.6	4.5	5.4
Upper Rio Gallina	26.4	63.1	0.4	1.5	8.5
Upper Rio Nutrias	26.0	59.3	9.1	0.7	5.1
Upper Rio Ojo Caliente	6.2	56.3	34.5	1.9	1.1
Upper Rio Salado*	0.0	100.0	0.0	0.0	0.0
Ute Mountain-Rio Grande*	3.9	3.4	92.2	0.5	0.0
Valle Secu*	30.1	69.9	0.0	0.0	0.0
Weisel Flat-Navajo River*	25.9	72.2	0.4	1.2	0.3
West Fork Navajo River	51.2	39.7	0.7	6.8	1.7
West Fork Rio Brazos	84.2	13.9	1.7	0.2	0.0
Wightman Fork	77.5	12.8	0.8	8.8	0.0
Wilson Lake	10.6	7.3	82.1	0.0	0.1
Wolf Creek	44.9	50.4	2.6	1.8	0.3

- **Briefly describe monitoring results – include an interpretation of the data provided above, and whether the indicator is trending toward or away from desired conditions for your landscape** (including resiliency to future disturbances and climate projections). If the data above does not accurately reflect condition on your landscape, please note and provide context.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

If Region is reporting on indicator 2 (acres burned by wildfire and by prescribed burning annually), fill in this table:

See next page.

Table 2.2. Acres burned by fire and fire regime – Fire regimes based upon LANDFIRE 202 Biophysical Settings. Fire data is from FY23.

8606.60 acres 0.2% of CLFRP	**Fire Regime *I*** (acres)	**Fire Regime *II*** (acres)	**Fire Regime *III*** (acres)	**Fire Regime *IV*** (acres)	**Fire Regime *V*** (acres)
Suppression only fires	211.71	0.22	20.68	5.56	-
Fires managed for multiple resource objectives	2700.89	0.44	239.07	991.85	56.04
Prescribed Fire	3750.11	-	298.00	331.58	0.44
Total Acres Burned	6662.71	0.67	557.75	1328.98	56.49

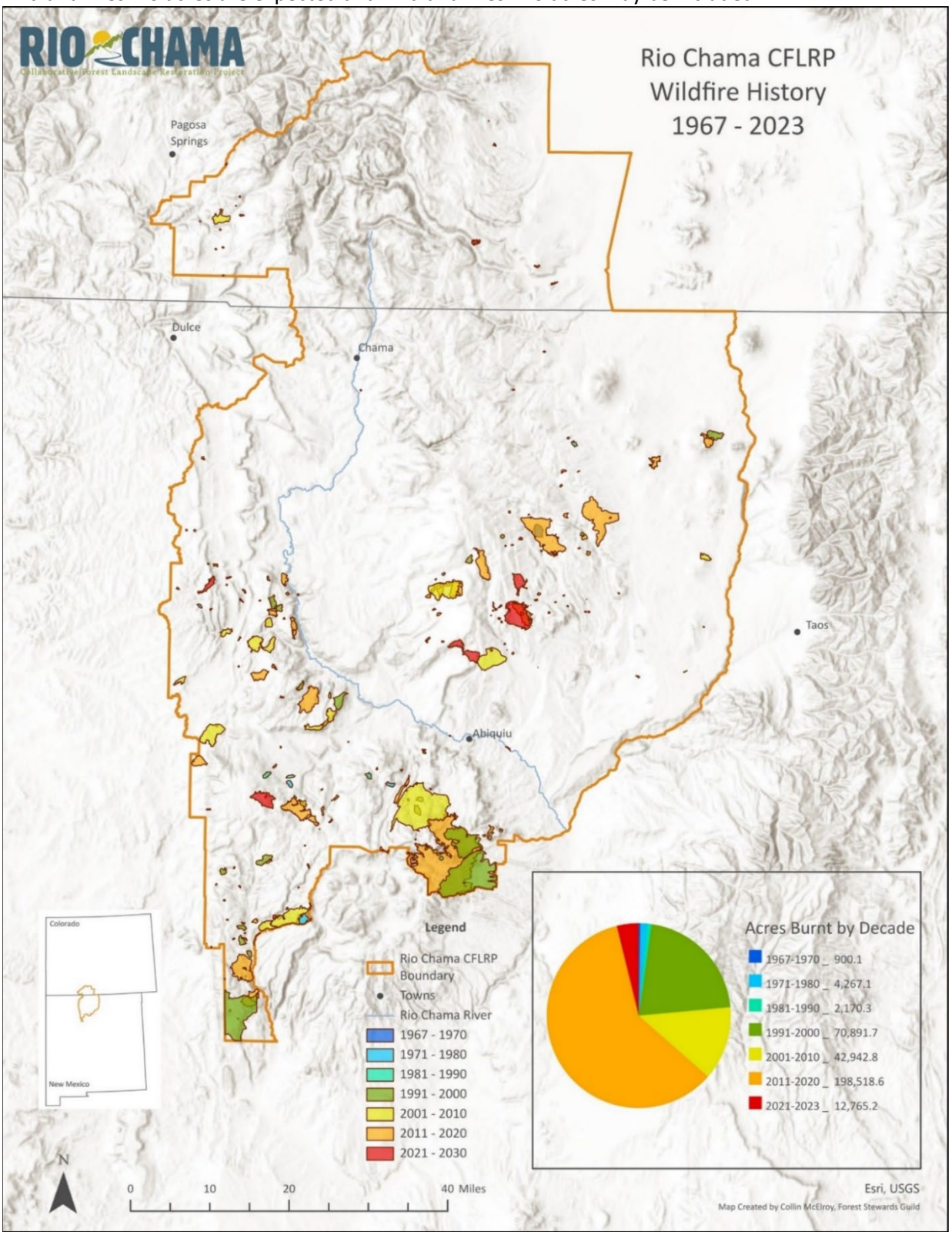
- **Briefly summarize how your landscape has departed from historic ecological conditions including disturbance**.

Identifying and defining historic ecological conditions requires complex discussion and review of Traditional and Western sources of knowledge. The Rio Chama CFLRP landscape has a rich history of human-vegetation interaction and while historic ecological conditions inform our understanding of potential vegetation, they do not provide a perfect reference for a healthy system. The complexities of a rapidly changing climate, shifting weather patterns, policy legacies, and expanded development suggest that tracking change against desired future conditions can better inform current management actions. The 2-3-2 Partnership Monitoring Committee will continue to review model and monitoring tools to best incorporate desired future conditions and understand levels of vegetation departure in relation to those.

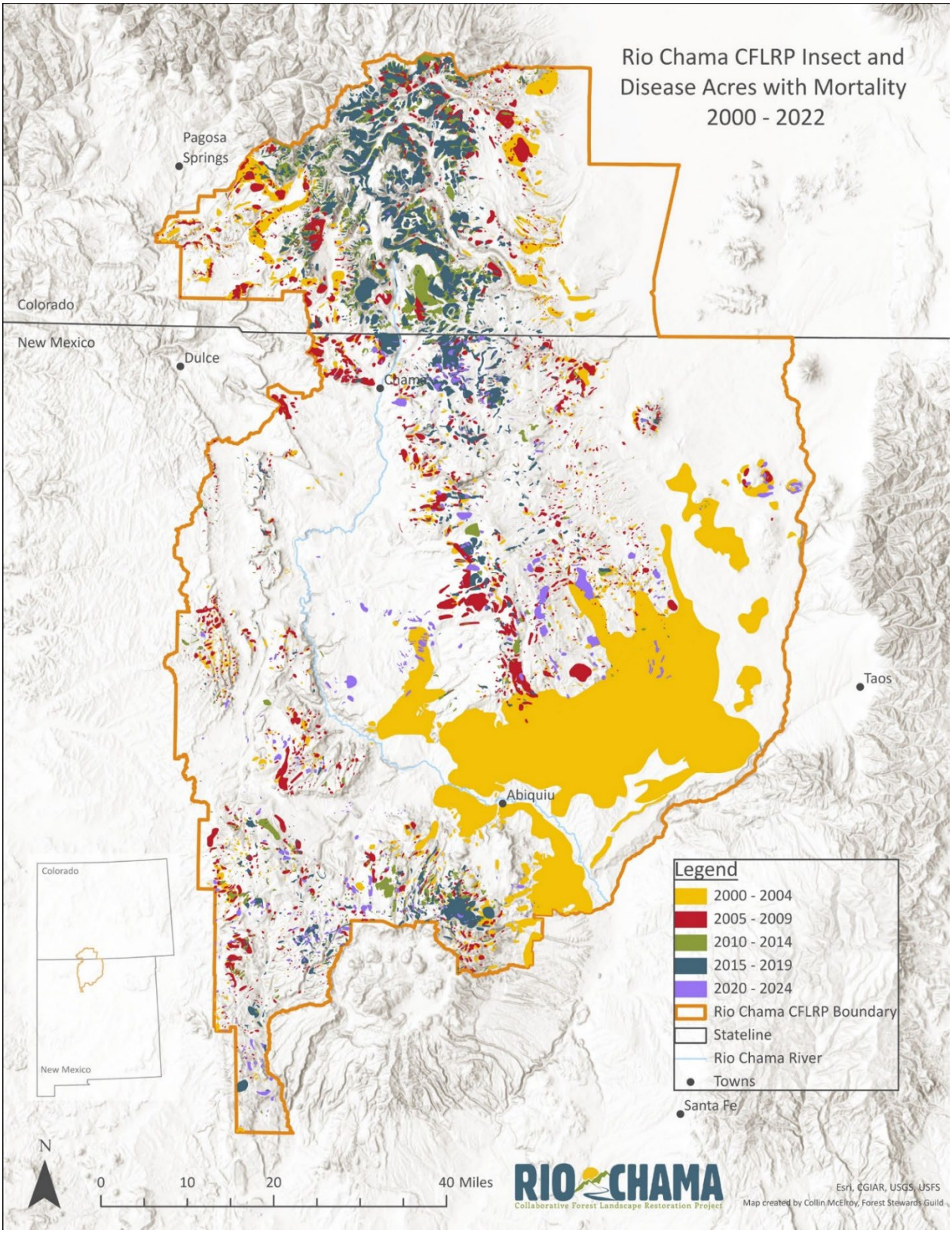
This year, the Rio Chama CFLRP relied on LANDFIRE Vegetation Condition Class to understand modeled departure from historic ecological conditions. In addition, Insert 2.3 summarizes all wildfires since 1967 and Insert 2.4 visualizes tree mortality from insect/disease since 2000. These maps characterize the spatial extent and spread of recent historical disturbances. In addition, Insert 2.5 summarizes the acres of tree mortality by causal agent.

In future years, the Rio Chama CFLRP will analyze change in carbon carrying capacity (in-line with Region 3's CFLRP CMS) using the R3 Analysis Framework (see R3 Analysis Framework section *above*) and/or USDA Forest Service BIGMAP.

Insert 2.3. Map of Wildfires in the Rio Chama CFLRP from 1967-2023- Data represents final mapped wildland fire perimeters as reported in the USDA Forest Service Fire Statistics System (FIRESTAT), Wildland Fire Decision Support System (WFDSS), and the Wildland Fire Interagency Geospatial Service (WFIGS). Map does not detail all fire ignitions; wildland fires>10 acres are expected and wildland fires <10 acres may be included.



Insert 2.4. Map of Insect and Disease Induced Tree Mortality within the Rio Chama CFLRP between 2000 and 2022 – Data collected by USDA Forest Service annual insect and disease aerial detection surveys. Note: acres WITH mortality, not acres OF mortality.



Insert 2.5. Summary of 2022 acres with tree mortality (by host) within the Rio Chama CFLRP – Data collected by USDA Forest Service annual insect and disease aerial detection surveys. Note: acres WITH mortality, not acres OF mortality.

Host Species	Causal Agent	Sum of acres with Mortality
Pinyon species (*Pinus spp.*)	Pinyon ips (*Ips confuses*)	7615
Douglas fir (*Pseudotsuga menziesii*)	Douglas fir beetle (*Dendroctonus pseudotsugae*)	5244
Quaking aspen (*Populus tremuloides*)	Unknown	2252
White fir (*Abies concolor*)	Fir engraver (*Scolytus ventralis*)	2025
Ponderosa pine (*Pinus ponderosa*)	Unknown Bark Beetle	2017
Engelmann spruce (*Picea engelmannii*)	Spruce beetle (*Dendroctonus rufipennis*)	484
Subalpine fir (*Abies lasiocarpa*)	Western balsam bark beetle (*Dryocoetes confuses*)	20
TOTAL		**19657**

- **Briefly describe monitoring results – include an interpretation of the data provided above, and whether the indicator is trending toward or away from desired conditions for your landscape** (including resiliency to future disturbances and climate projections). If the data above does not accurately reflect condition on your landscape, please note and provide context.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

Monitoring Questions #3: "What are the specific effects of restoration treatments on the habitat of at-risk species and/or the habitat of species of collaborative concern across the CFLRP project area?"

For detailed guidance, training, and resources, see corresponding reporting template here. Use it to respond to the following prompts:

Regional guidance is to monitor 1. Amount of suitable habitat (and acres treated to promote) for select species reported annually and 2. Population status of select species reported biannually. The Rio Chama CFLRP is monitoring five at-risk (selected by USFS panel) and/or species of collaborative concern (determined by 2-3-2 Monitoring Committee) – Abert's squirrel (*Sciurus aberti*); American beaver (*Castor canadensis*); cutthroat trout (*Oncorhynchus clarkii pleuriticus* and *Oncorhynchus clarkii virginalis*); Lewis' woodpecker (*Melanerpes lewis*); and, collectively, wild bees.

If reporting on indicator 1 or 2 (wildlife habitat indicators), fill in this table:

See next page.

Table 3.1. Wildlife Habitat Indicators

Wildlife Habitat Descrip.	Regional or Project-Specific Indicator?	Indicator and Unit of Measure	Target Range	Value in Initial Year of CMS*	Value in Next Reporting Year of CMS* N/A in 2023	Desired or Undesired Change? N/A in 2023	Percent Change N/A in 2023	Acres of Habitat Treated to Improve this Indicator in this Fiscal Year
Riparian and wetland habitat (American beaver)	Project	Miles of stream with potential habitat	TBD[15]	1,569 miles[15]				See Activities on the Ground table in main report –
Small to moderately large, cold, clear, well-oxygenated creeks and rivers (native cutthroat trout)	Project	Miles of stream occupied by conservation populations (<10% introgression) Miles of stream occupied by cutthroat trout AND invasive trout Maximum annual stream temperature	TBD[16] TBD[16] <25°C[18]	TBD[16] TBD[17] Pre-treatment measures to expand in 2024				10,978 acres for terrestrial wildlife habitat 0 stream crossings mitigated 20 miles of stream habitat enhanced 5,156 acres of water or soil resources protected,

[15] A Beaver Restoration Assessment Tool (BRAT: http://etal.joewheaton.org/udwr-beaver-restoration-assessment-tool-brat.html) has been replicated in portions of the Rio Chama CLFRP (CO Natural Heritage state-wide analysis completed 2021; NFF supported Colorado River Basin analysis completed 2023). Collaborative discussions are underway to develop a robust BRAT model that covers the remainder of the CFLRP landscape (Rio Grande Basin) and informs target range and initial values. In the interim, a simplified GIS analysis was conducted following the Rio Grande National Forest's guidance related to Forest Plan Monitoring Question 10.2. The simplified BRAT for the Rio Chama CFLRP identifies perennial streams (USGS National Hydrography Dataset) with <20% slope (USGS Digital Elevation Model) and within 100m of deciduous vegetation (US EPA National Aquatic Resource Surveys and Natural Heritage NM Riparian Habitat Map) as potential beaver habitat.

[16] The management and monitoring of both the Rio Grande (*Oncorhynchus clarkii virginalis*) and Colorado River (*Oncorhynchus clarkii pleuriticus*) cutthroat trout are guided by species focused Conservation Agreements, Strategies, and Teams. The most recent Conservation Strategy for the Colorado River cutthroat trout was published in August 2022 and contains publicly available data through 2015. The Conservation Strategy for the Rio Grande cutthroat trout is in its final stages of review and expected to be publicly available in December 2023, containing data through 2016. These strategies are updated every 5-years and can provide target range (based upon historic distribution analysis), pre-CFLRP (2015-2016), and future data.

[17] Targeted environmental DNA sampling can capture species specific distribution change pre- and post- riparian treatment. See Environmental DNA (eDNA) section *below* for more details.

[18] Zeigler, M.P., S.F. Brinkman, C.A. Caldwell, A.S. Todd, M.S. Recsetar, and S.A. Bonar. 2013. Upper thermal tolerances of Rio Grande sutthroat trout under constant and fluctuating temperatures. *Transactions of the American Fisheries Society* v.142, p.1395-1405. Accessed online at https://afspubs.onlinelibrary.wiley.com/doi/pdf/10.1080/00028487.2013.811104

Mature ponderosa pine patches with abundant foraging (cone crops and above ground fungi) – mature, uneven age structure. Large diameter ponderosa pine trees with interlocking crowns. (Abert's squirrel)	Project	Seral state diversity Average clump size Average # clumps per acre Trees per Acre (TPA) Quadratic Mean Diameter (QMD)	TBD[19] 0.2-1.2ac clumps of various ages[20] >9 clumps per acre[20] >8 TPA w/ 18-24" dbh[20] >50 TPA w/ 12-18" dbh[20] TBD	TBD[19] TBD[19] TBD[19] 18 TPA[21] 31 TPA[21] 13.32 in[21]				maintained or improved *These numbers were reported in WIT but do not necessarily represent beneficial habitat treatments for species of collaborative concern.
Ponderosa pine forest with diverse stand structure and age classes – open forests with large, old trees. (Lewis's woodpecker)	Project	Seral state diversity Snag density TPA with decay features Mature oak density	TBD[19] TBD[22] TBD[22] TBD	TBD[19] 3 snags/acre[21] To be measured in forest plots starting 2024 18 TPA[21]				
Mature cottonwoods (Lewis's woodpecker)	Project	Acres of mature cottonwood – seral state	TBD[22]	TBD[19]				

*CMS

NOTE: The technical reports used to inform Target Ranges for Abert's squirrel and Lewis's woodpecker habitat are over 15 years old and drawn from NFS lands adjacent to, but not within the CFLRP.

[19] Seral State Diversity and clumpiness calculations, for both target range and initial values, are to be determined through the R3 Analysis Framework. See R3 Analysis Framework section *above* for more details.

[20] Speas, C., and T. Holland. 2005. Abert's Squirrel (*Sciurus aberti*) Species Assessment. Prepared for the Grand Mesa, Uncompahgre, and Gunnison National Forest. Accessed online at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5199814.pdf

[21] Calculated using pre-treatment plots. See Forest Plots section *above* for more details.

[22] Informed by: Abele, S.C., V.A. Saab, and E.O Garton. 2004. Lewis's Woodpecker (*Melanerpes lewis*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region.

Table 3.2. Wildlife Population/Diversity Indicators

Wildlife Species Name(s)	Indicator and Unit of Measure	Target Range	Value in Initial Year of CMS	Acres of Habitat Treated to Improve this Indicator
Wild Bees	Diversity and Abundance[23]	N/A, Insufficient published data	TBD[24]	See table 3.1 *above.*
American beaver	% of potential habitat occupied within HUC12	TBD	TBD[25]	See table 3.1 *above.*

For the table or table(s) above:

- **Briefly interpret the monitoring results in the table above, including whether the indicator is trending toward or away from desired conditions for your landscape.** If the data above does not accurately reflect conditions on your landscape, please note that and provide context.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

- **Does your CFLRP project have additional wildlife-related monitoring results to summarize and interpret?** If so, please provide that here.

Environmental DNA (eDNA)

eDNA is an emerging approach for understanding a variety of wildlife related questions and in the Rio Chama CFLRP has the potential to inform how the distribution of cutthroat trout, and invasive rainbow, brown, and Brook trout, changes in response to riparian restoration treatments. Although eDNA cannot determine population size, eDNA samples can be analyzed to note species presence/absence. In addition, eDNA samples can be stored for extensive periods of time and eDNA analyses are rapidly advancing. By collecting baseline samples in the early years of the CFLRP, there is potential to compare future conditions with current ones, and measure the interaction between species movement, treatments, and future disturbances (such as wildfire and post-fire sedimentation or flooding).

2-3-2 Partners are working on a cross-jurisdictional plan to collect and analyze eDNA samples on select pre-treatment streams. Sample collection is slated to occur in summer 2024.

[23] Pollinator population "health" and their environmental resilience is typically understood by analyzing genetic diversity and population density (Lopez-Uribe, M.M., V.A. Ricigliano, and M. Simone-Finstrom. 2020. Defining Pollinator Health: A Holistic Approach Based on Ecological, Genetic, and Physiological Factors. *Annual Review of Animal Biosciences* v. 8, p. 269-294. https://doi.org/10.1146/annurev-animal-020518-115045). Specific diversity and abundance indices are under review to determine which combination of indices best measure change over time, across forest types, and in-line with best available science.

[24] Wild bee diversity and abundance values are currently being analyzed and compared with scientific studies from the Southwest. Wild bee surveys were incorporated into 2-3-2 Forest Plots, see Forest Plot section *above,* following monitoring guidelines of the National Native Bee Monitoring Network (https://www.nativebeemonitoring.org/) and regional bee identification experts are labeling and curating collected specimens.

[25] BRAT analysis will determine areas of potential habitat and field surveys will verify American beaver presence/absence.

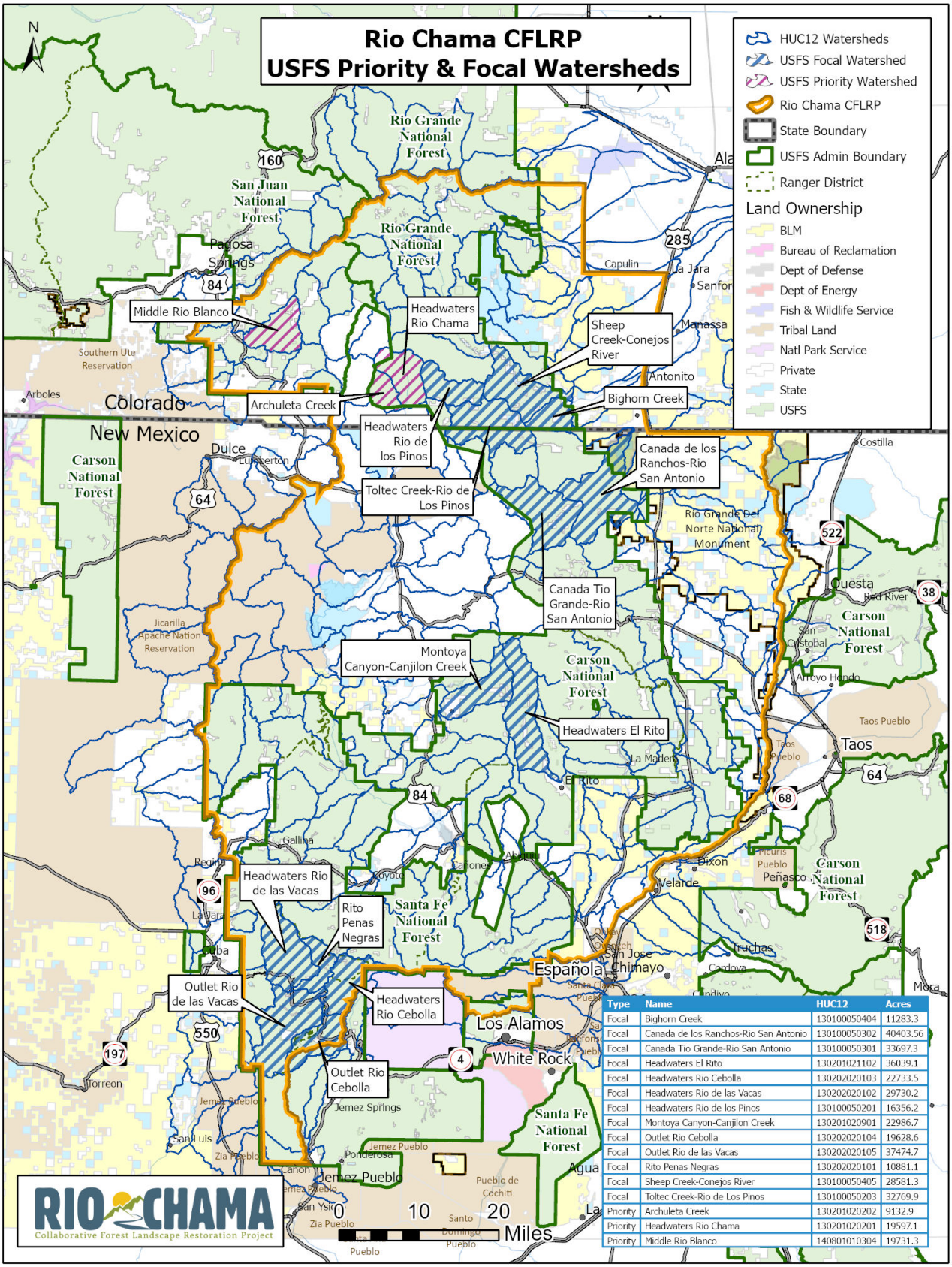
Monitoring Question #4: "What is the status and trend of watershed conditions in the CFLRP area?"

For detailed guidance, training, and resources, see corresponding reporting template here. Use it to respond to the following prompts:

The Rio Chama CFLRP encompasses all, or part of, 203 HUC12 subwatersheds. Of these, three are designated priority watersheds under the Watershed Condition Framework. To supplement and expand Rio Chama CFLRP watershed monitoring, USFS staff from the four forests in the CFLRP selected 12 additional HUC12s to monitor. We are calling these HUC12s "focal subwatersheds". The focal subwatersheds were selected based upon where current projects are underway and/or where future projects are planned. The 2-3-2 Partnership is developing a process for collaborative selection of additional focal subwatersheds that contain non-NFS managed lands and are important to regional water health and other partner values.

This report focuses on the three priority watersheds and designated focal subwatersheds (Insert 4.1).

Insert 4.1. Priority and Focal Subwatersheds (HUC12s) within Rio Chama CFLRP



Type	Name	HUC12	Acres
Focal	Bighorn Creek	130100050404	11283.3
Focal	Canada de los Ranchos-Rio San Antonio	130100050302	40403.56
Focal	Canada Tio Grande-Rio San Antonio	130100050301	33697.3
Focal	Headwaters El Rito	130201021102	36039.1
Focal	Headwaters Rio Cebolla	130202020103	22733.5
Focal	Headwaters Rio de las Vacas	130202020102	29730.2
Focal	Headwaters Rio de los Pinos	130100050201	16356.2
Focal	Montoya Canyon-Canjilon Creek	130201020901	22986.7
Focal	Outlet Rio Cebolla	130202020104	19628.6
Focal	Outlet Rio de las Vacas	130202020105	37474.7
Focal	Rito Penas Negras	130202020101	10881.1
Focal	Sheep Creek-Conejos River	130100050405	28581.3
Focal	Toltec Creek-Rio de Los Pinos	130100050203	32769.9
Priority	Archuleta Creek	130201020202	9132.9
Priority	Headwaters Rio Chama	130201020201	19597.1
Priority	Middle Rio Blanco	140801010304	19731.3

Summary of Watershed Condition Scores for the priority HUC12 watersheds within CFLRP boundary:

Table 4.1. Summary of Watershed Condition Scores for priority and focal HUC12 subwatersheds – Disturbance data incorporates wildfire history data (see Insert 2.3) and USDA Forest Service annual insect and disease aerial surveys (see Insert 2.4). NOTE: Area of HUC12s affected by disturbance may exceed 100% due to overlapping disturbances across years.

HUC12 Status	HUC12 Watershed Name and 12-digit HUC	~~Affected by Treatment, Disturbance Events, or Both?~~ Disturbances since last WCF survey	Area affected by disturbance – Ac.	Area affected by disturbance - % of HUC12	Date Before Treatment and/or Disturbance Event (Date of last WCF survey)	Watershed Condition Score in Initial Year of CMS
Priority	Archuleta Creek (130201020202)	None recorded	0	0	2021	Functioning Properly (1.3)
Focal	Bighorn Creek (130100050404)	Defoliation (‘21, ‘22)	519	5	2021	Functioning at Risk (2.2)
Focal	Canada Tio Grande-Rio San Antonio (130100050301)	Defoliation (‘11-‘22) Mortality (’11-’13, ’15-’22)	110,914	329	2011	Functioning at Risk (1.9)
Focal	Headwaters El Rito (130201020502)	Defoliation (‘11-‘22) Mortality (’11, ’13-’22) Wildfire (’11, ’19, ’20, ’22)	211,479	587	2011	Functioning at Risk (1.7)
Focal	Headwaters Rio Cebolla (130202020103)	Defoliation (‘15-‘22) Mortality (’15-’22)	31,484	138	2015	Impaired Function (2.3)
Priority	Headwaters Rio Chama (130201020201)	Defoliation (’21, ‘22)	16	1	2021	Functioning Properly (1.4)
Focal	Headwaters Rio de Las Vacas (130202020102)	Defoliation (‘15-‘22) Mortality (’15-’22)	108,188	364	2015	Functioning at Risk (2.0)
Focal	Headwaters Rio de Los Pinos (130100050201)	Defoliation (‘18, ‘22) Mortality (’15-’22)	12,999	79	2015	Functioning at Risk (1.8)
Priority	Middle Rio Blanco (140801010304)	Defoliation (‘12-15, ’18, ’19, ’21, ‘22) Mortality (’11-’16, ’21, ’22) Wildfire (’18)	4,964	25	2011	Impaired Functioning (2.4)
Focal	Montoya Canyon-Canjilon Creek (130201020901)	Defoliation (’11-’22) Mortality (’11, ’13-’19, ’21, ’22) Wildfire (’19)	153,382	667	2011	Functioning at Risk (2.1)
Focal	Outlet Rio Cebolla (130202020104)	Defoliation (’15-’21) Mortality (’15-’19) Wildfire (’21)	6,688	34	2015	Functioning at Risk (2.1)
Focal	Outlet Rio de Las Vacas (130202020105)	Defoliation (’15-’22) Mortality (’15-’22) Wildfire (’18)	63,202	169	2015	Functioning at Risk (2.0)

Focal	Rito Penas Negras (130202020101)	Defoliation ('15-'22) Mortality ('15-'22)	57,156	252	2015	Impaired Function (2.3)
Focal	Sheep Creek-Conejos River (130100050405)	Defoliation ('21, '22) Mortality ('21, '22) Wildfire ('22)	443	0	2021	Functioning at Risk (1.7)
Focal	Toltec Creek-Rio de Los Pinos (130100050203)	Defoliation ('21, '22) Mortality ('21, '22)	217	1	2021	Functioning Properly (1.6)

Watershed Condition Score averaged across all affected identified subwatersheds within CFLRP boundary:

Table 4.2. Average Watershed Condition Indicator Scores across all priority and focal HUC12 subwatersheds

Indicator Number	Indicator Name	Avg. Indicator Value	Date[26]
	Aquatic Physical (Weighted 30%)	**1.9**	
1	Water Quality	2.0	-
2	Water Quantity	2.0	-
3	Aquatic Habitat	1.7	-
	Aquatic Biological (Weighted 30%)	**2.0**	
4	Aquatic Biota	2.2	-
5	Riparian/Wetland Vegetation	1.7	-
	Terrestrial Physical (Weighted 30%)	**2.0**	
6	Roads & Trails	2.2	-
7	Soils	2.0	-
	Terrestrial Biological (Weighted 10%)	**1.5**	
8	Fire Regime or Wildfire	2.1	-
9	Forest Cover	1.2	-
10	Rangeland Vegetation	1.6	-
11	Terrestrial Invasive Species	1.2	-
12	Forest Health	1.3	-
	Avg. Watershed Condition Score	**1.9**	

- **Briefly interpret the monitoring results in the table above, including whether the indicator is trending toward or away from desired conditions for your landscape.** If the data above does not accurately reflect watershed condition on your landscape, please note that and provide context.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

- **Does your CFLRP project have additional watershed condition-related monitoring results to summarize and interpret?** If so, please provide that here.

In addition to focal and priority subwatershed Watershed Condition scores, the 2-3-2 Partnership is working towards a coordinated stream temperature measurement effort (see Water Temperature section *above*) and piloting the use of the USGS Flow Photo Explorer (https://www.usgs.gov/apps/ecosheds/fpe/#/) to understand riparian treatment effects.

[26] See Table 4.1 for most recent WCF measurement date by subwatershed. Average Watershed Condition Indicator Scores calculated November, 2023.

As of 2020 (the most recent published data) there are 68 bodies of water within the Rio Chama CFLRP, totaling 1317.23 miles, included on the New Mexico Environment Department and Colorado Department of Health and Environment 303d lists of "impaired waterways".

Monitoring Question #5: "What is the trend in invasive species within the CFLRP project area?"

For detailed guidance, training, and resources, see corresponding reporting template here. Use it to respond to the following prompts:

Treatment data for priority invasive species:

Table 5.1. Treatment data for priority invasive species – numbers pulled from FACTS

Common Name	Treatment Action	Acres Treated[1]	Acres Monitored	Avg. "Percent Efficacy"	Acres Restored[2]	Response of Desirable Species[3]
Not reported	Not reported	1930.5	Not reported	N/A in 2023	Not Reported	N/A
	Totals/Avgs	1930.5	Not reported		Not reported	

[1] "Treated" is defined as prevented, controlled or eradicated.

[2] Agency performance accomplishment code INVPLT-INVSPE-REST-FED-AC, which is calculated in FACTS.

[3] "Desirable Species" includes everything that is not an undesirable species or bare ground. If not monitored, write N/A.

Please insert table 2 from the reporting template if you are using field plots.

Summary of plot-based field monitoring for invasive species

Data source(s):

Rio Chama CFLRP forest plots

Were the plots fixed or in different locations year to year?

Fixed

Were the plots randomly placed?

Yes

If so, how?

Intensified Forest Inventory and Analysis (FIA) grid (see *Forest Plots* section at beginning of report)

What statistical assumptions or models did you use?

None

Were photos taken at each plot?

Yes

Link to full results:

CFLRP is working on data sharing platform/process and link will be shared once complete.

Rio Chama CFLRP plot protocols (see *Forest Plots* section of report) note five invasive plant species of collaborative concern - *Bromus tectorum,* cheatgrass; *Carduus nutans,* musk thistle; *Cirsium arvense,* Canada thistle; *Cirsium vulgare,* bull thistle; and *Verbascum Thapsus,* woolly mullein. Field crews focused on these five plant species when estimating percent cover and Table 2. summarizes this data.

Table 5.2. Summary of plot-based invasive plant species monitoring

Treatment Group Name	Brief Treatment Group Description	Date(s) Surveyed	Number of Plots Sampled (# of plots with invasive species of collaborative concern)	Avg. Percent Canopy Cover of Invasive Species per Plot	"Percent Change"[1] N/A in 2023	Avg. Percent Canopy Cover of Desirable Species per Plot	"Percent Change"[27] N/A in 2023
Treated Areas	N/A in first reporting year	-	-	-	-	-	-
Non-treated Areas	Pre-treatment	07/17/23 - 08/29/23	72 (6)	1%	-	-	-

The five invasive plant species of collaborative concern were selected following conversations with forest and regional invasive plant coordinators, non-USFS land managers, and scientists studying southwestern vegetative response post-fire. By focusing on only five species, field crews with varying levels of botany experience could identify species with more confidence. However, there is potential for under-measuring overall invasive species canopy cover. When able, field crews noted other invasive plant species within plots. These included – *Alyssum simplex,* alyssum; *Bromus inermis,* smooth brome; *Descurainia pinnata,* western tansymustard; *Erodium cicutarium,* redstem storksbill; *Lactuca serriola,* prickly lettuce; *Melilotus officianalis,* yellow sweet clover; *Tragopogon dubius,* yellow salsify.

For reporting on plot-based field monitoring, please include a summary of the results here:

- **Briefly interpret the monitoring results in the table above, including whether the indicator is trending toward or away from desired conditions for your landscape.** If the data above does not accurately reflect the condition on your landscape, please note that and provide context.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

- **Does your CFLRP project have additional invasives-related monitoring results to summarize and interpret?** If so, please provide that here.

Invasive plant species monitoring was incorporated into Rio Chama CFLRP Forest Plots. Plot collection was piloted during summer 2023 and pre-treatment data was collected on 72 plots, across eight project sites (see Table 5.2).

The following questions apply across the topics addressed across Questions 1-5:

- Are there accomplishments towards long-term goals which may not be reflected in short-term monitoring? Are there short-term treatments that work towards long-term goals which may be reflected adversely in short-term monitoring? Briefly summarize short- & long-term tradeoffs of your landscape treatments and goals.

***Discussion of short- and long-term tradeoffs will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop

[27] Important: You must indicate in a footnote the date and source of the baseline data that you are using as a comparison to calculate percent change. In the year(s) you are still collecting baseline data, write N/A for the percent change columns.

Monitoring Questions #6: "How has the social and economic context changed, if at all?"

Describe the current social and economic context for your CFLRP landscape. For detailed guidance, training, and resources, see corresponding reporting template here. Use it to respond to the following prompts:

Rio Chama CFLRP Socioeconomic Area of Interest

Counties--CO: La Plata, Archuleta, Rio Grande, Conejos, Alamosa, Costella, Mineral, Saguache, Hinsdale, San Juan, Ouray, San Miguel; NM: Rio Arriba, Sandoval, Los Alamos, Santa Fe, Taos, Mora, San Miguel, Bernalillo, San Juan; UT: San Juan

- **Provide a brief, narrative context for the data provided below, including any other key socioeconomic conditions to highlight for your landscape.** If the data above does not accurately reflect socioeconomic conditions in/around your landscape please note and provide context.

The Rio Chama Landscape is culturally diverse and includes Pueblo Governments, Native American Tribes, Land Grant Communities, and a variety of rural communities with unique local histories, customs, and traditions that impact how they perceive federal land management. The quantitative data described below does not account for the oral histories and cultural aspects of the communities within and adjacent to our project landscape. These oral histories and cultures have an important influence on our ability to meaningfully co-manage natural resources in the Rio Chama CFLRP area.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

- **Would you expect CFLRP activities to directly or indirectly impact any of these social and/or economic conditions?** If so, how?

It is unlikely that we would be able to discern and correlation between CFLRP investments and changes in county-level socioeconomic data. However, based on the TREAT economic model, the All Lands work of the CFLRP will contribute an estimated ~$23 million in labor income and 531 Full-time jobs from CFLN and leveraged funding in the landscape across the Rio Chama AOI. In the small, rural economies of Northern New Mexico and Southern Colorado, this is a substantial investment. Although we may not see the effects of this investment in the county-level quantitative data displayed above, we know that these wages and full-time jobs have an important impact on the social and economic conditions of small, rural economies through first-hand accounts of project partners working across the Rio Chama CFLRP landscape.

- **Based on the information reported, (and any other relevant monitoring information and discussion), what (if any) actions or changes are you considering?**

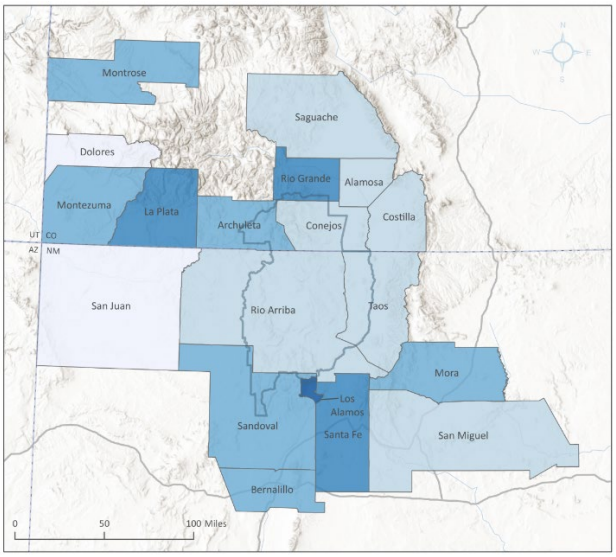
Based on the environmental justice (EJ) analysis completed by GTAC (Inserts 4.5 - 4.9) we are considering evaluating the proximity of treatments to EJ communities throughout the life of the project. Wildfire risk reduction and watershed health treatments within the Rio Chama CFLRP require significant investment and confer benefits to surrounding communities. Based on federal environmental justice initiatives, we need to make sure that these benefits and investment are prioritized near communities that may be more vulnerable to the effects of natural disasters, such as those that exhibit high proportion of low-income or racial and ethnic minorities.

***Data narrative, interpretation, and next steps will be provided after collaborative review and input following the 2-3-2 Partnership's February 2024 Monitoring Committee Workshop.

Indicators		Colorado										New Mexico								
		Montrose	Dolores	Montezuma	La Plata	Archuleta	Saguache	Rio Grande	Conejos	Alamosa	Costilla	San Juan	Rio Arriba	Taos	Sandoval	Los Alamos	Mora	San Miguel	Santa Fe	Bernalillo
Population, most recent year available (tab 1, Forest Service report) **2021**		43,168	2,397	26,175	56,250	13,790	6,471	11,408	7,612	16,547	3,625	120,993	40,179	34,623	151,369	19,330	4,196	27,150	155,201	674,393
Percent of total, race & ethnicity, most recent year available (tab 11, Forest Service report) **Average 2017-2021**	White alone	37,249	1,954	20,520	47,635	10,664	5,436	8,957	5,651	11,965	2,453	57,748	16,699	24,747	96,189	15,587	2,423	15,991	113,828	442,423
	Black or African American	119	0	257	303	41	78	17	37	347	0	1,033	224	50	3,247	211	0	446	1,513	19,666
	American Indian	360	106	3,145	3,204	407	112	262	203	563	165	48,002	6,377	2,093	17,790	157	16	443	4,812	33,028
	Hispanic ethnicity	8,817	282	3,354	7,250	2,467	2,291	5,105	3,918	7,793	2,128	26,308	28,784	19,486	59,319	3,509	3,518	21,300	78,347	341,837
	Non-Hispanic Ethnicity	33,511	2,006	22,562	48,423	10,800	4,078	6,371	3,661	8,584	1,389	96,604	11,563	14,836	88,008	15,660	714	6,057	75,285	333,082
Unemployment rate, most recent year available (tab 1, Fores Service report) **2021**		5.0%	4.7%	5.6%	5.2%	4.9%	5.9%	6.5%	4.8%	5.5%	6.0%	8.0%	7.0%	8.9%	6.6%	3.0%	6.2%	7.3%	6.2%	6.2%
Per capita income, most recent year available (tab 1, Forest Service report) **2021**		$50,789	$39,481	$50,960	$66,944	$52,312	$43,959	$57,350	$45,961	$44,507	$43,239	$41,735	$42,467	$44,709	$51,807	$81,306	$51,939	$44,889	$69,528	$53,616
Wildfire Exposure, % of Total, Homes, most recent year available (see Wildfire Risk report) **2020**	Homes directly exposed	32.0%	56.0%	56.0%	62.0%	82.0%	50.0%	36.0%	40.0%	40.0%	56.0%	48.0%	70.0%	75.0%	49.0%	51.0%	78.0%	60.0%	59.0%	20.0%
	Homes indirectly exposed	44.0%	44.0%	44.0%	38.0%	18.0%	13.0%	59.0%	57.0%	60.0%	44.0%	49.0%	30.0%	25.0%	50.0%	49.0%	22.0%	40.0%	38.0%	38.0%
	Homes not exposed	24.0%	0.0%	0.0%	0.0%	0.0%	37.0%	5.0%	3.0%	0.0%	0.0%	3.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	3.0%	42.0%
Timber % of private employment, most recent year available (tab 2, Forest Service report) for some counties. If not available, simply list "N/A") **2020**		1.1%	0.0%	1.4%	0.1%	0.3%	0.6%	0.5%	1.1%	0.1%	0.6%	0.1%	0.5%	0.2%	0.4%	0.0%	0.0%	0.4%	0.1%	0.3%
Travel and Tourism % of private employment, most recent year available (tab 2, Forest Service report) for some counties. If not available, simply list "N/A") **2020**		13.0%	24.3%	19.4%	19.7%	24.0%	7.1%	14.4%	10.3%	12.4%	7.3%	14.8%	17.4%	27.0%	16.3%	3.0%	6.7%	14.4%	20.7%	13.8%
Government % of Jobs, most recent year available (tab 1, Forest Service report) **2021**		13.4%	18.2%	17.5%	14.1%	10.2%	17.2%	14.7%	15.3%	20.1%	20.4%	19.2%	28.9%	11.8%	16.0%	8.9%	16.8%	30.0%	16.6%	16.9%
Wildland-Urban Interface % developed, 2010 (tab 2, Forest Service report) **2010**		1.5%	5.6%	12.0%	51.4%	11.2%	10.8%	22.9%	35.1%	4.7%	0.7%	17.7%	6.6%	19.3%	20.2%	69.5%	2.6%	7.0%	33.9%	41.6%
Earnings per job, most recent year available (tab 2, Forest Service report) **2021**		$46,108	$27,859	$41,556	$53,024	$36,286	$44,392	$51,826	$39,528	$48,055	$31,955	$54,499	$40,894	$37,633	$48,785	$107,652	$33,341	$39,616	$53,978	$61,890
Fed. Payments % of gov. revenue, most recent year available (tab 2, Forest Service report) **2017**		0.9%	0.2%	0.1%	0.3%	1.3%	3.1%	1.4%	3.1%	0.2%	0.0%	0.5%	1.8%	1.3%	0.5%	0.1%	0.9%	0.9%	0.1%	0.0%
Top employment sectors, see Employment by Industry, most recent year available (tab 5, Forest Service report). *Note: Please list the top 2-3 sectors that make up most of the employment size.* **2021**		For combined counties: government (135,269 jobs), health care and social assistance (98,230 jobs), retail trade (80,087)																		
Total federal land payments, Forest Service payments, most recent year available (tab 12, Forest Service report) **2021**		$3,104,164	$576,624	$406,028	$1,138,305	$1,528,669	$2,753,084	$1,130,798	$1,192,309	$250,556	$1,940	$2,745,315	$4,361,051	$2,475,998	$2,861,774	$106,038	$423,411	$1,377,401	$949,144	$340,166
Percent of total families in poverty, most recent year available (tab 9, Forest Service report) **2021**		7.2%	5.4%	8.6%	5.8%	6.1%	13.5%	6.8%	14.1%	13.9%	18.3%	18.5%	16.5%	12.9%	7.8%	2.5%	6.0%	20.4%	8.6%	11.7%
Percent of total, Food stamps/SNAP, most recent year available (tab 10, Forest Service		10.2%	10.7%	11.7%	5.0%	8.2%	15.7%	13.9%	17.0%	25.3%	31.9%	21.9%	16.1%	12.7%	12.6%	3.2%	31.8%	32.2%	11.3%	15.8%
Percent of total Native American, most recent year available (tab 6, Demographics) **2021**		0.9%	4.6%	12.1%	5.8%	3.1%	1.8%	2.3%	2.7%	3.4%	4.7%	39.1%	15.8%	6.1%	12.1%	0.8%	0.4%	1.6%	3.1%	4.9%
Potentially vulnerable households, % total most recent year available (tab 11, Populations at Risk) **2021**	People >65 living alone	4.0%	0.6%	4.1%	2.6%	2.8%	4.9%	3.1%	1.5%	3.5%	2.1%	2.5%	2.6%	3.3%	2.2%	1.2%	0.1%	6.0%	4.1%	3.9%
	Single female	8.4%	6.2%	9.0%	6.4%	4.6%	11.5%	12.7%	9.3%	10.6%	13.2%	16.8%	14.4%	11.3%	12.6%	5.4%	14.8%	16.3%	10.7%	13.9%
	Households with no car	3.4%	2.4%	4.1%	2.0%	1.9%	3.8%	6.3%	5.7%	8.3%	3.7%	5.9%	4.7%	4.4%	2.8%	1.8%	5.5%	7.0%	3.8%	7.1%
	Total	15.8%	9.2%	17.2%	11.0%	9.3%	20.2%	22.1%	16.5%	22.4%	19.0%	25.2%	21.7%	19.0%	17.6%	8.4%	20.4%	29.3%	18.6%	24.9%

Table 5.3: Socioeconomic Conditions Across Rio Chama Area of Interest

Insert 4.2: Per Capita Income across AOI Counties



2021 per capita income, by county

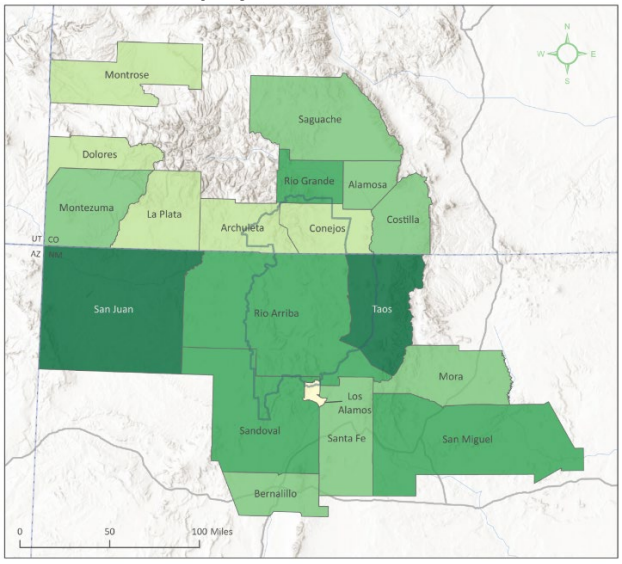
Rio Chama CFLRP area of interest

RIO CHAMA Collaborative Forest Landscape Restoration Project

Data from Headwaters Economic Profile System
Esri, USGS, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS

Rio Chama CFLRP
Per capita income
$39,400 - $42,000
$42,000 - $46,0000
$46,000 - $57,000
$57,000 - $70,000
$70,000 - $82,000

Insert 4.3: Unemployment Rate across AOI Counties



2021 unemployment rate, by county

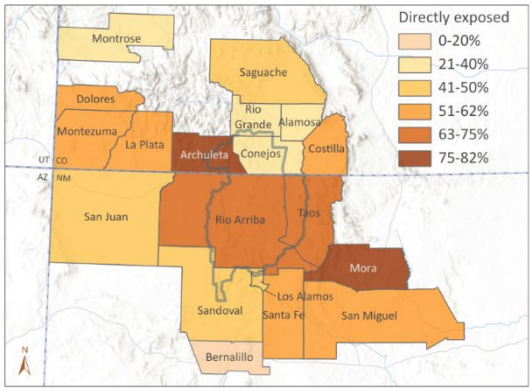
Rio Chama CFLRP area of interest

RIO CHAMA Collaborative Forest Landscape Restoration Project

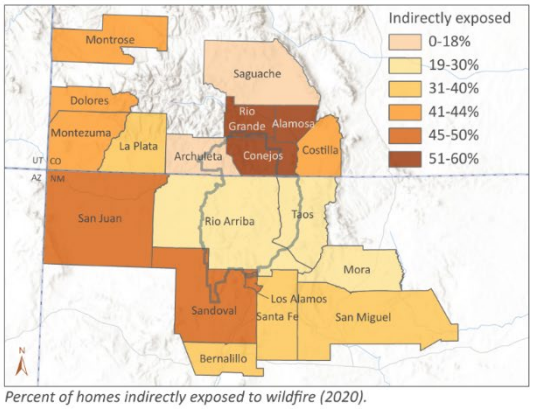
Data from Headwaters Economic Profile System
Esri, USGS, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS

Rio Chama CFLRP
Unemployment rate
0-3%
3 - 5.2%
5.2 - 6.2%
6.2 - 7.3%
7.3 - 8.9%

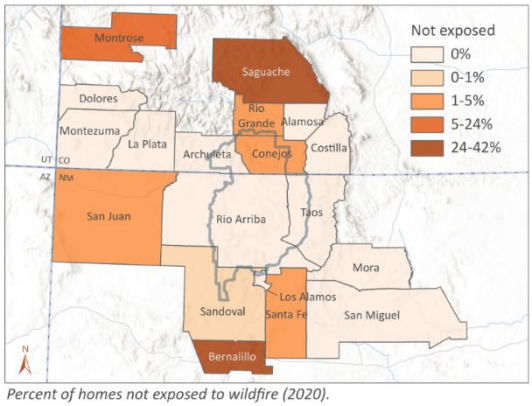
Insert 4.4: Percent of Homes Exposed to Wildfire across AOI Counties



Percent of homes directly exposed to wildfire (2020).



Percent of homes indirectly exposed to wildfire (2020).



Percent of homes not exposed to wildfire (2020).

Percent of homes exposed to wildfire, by county

Rio Chama CFLRP area of interest

Data from Headwaters Economic Profile System

Esri, USGS, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS

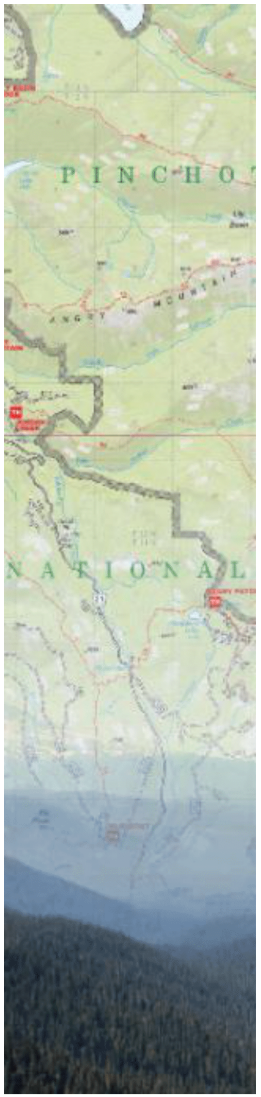
RIO CHAMA Collaborative Forest Landscape Restoration Project

0 25 50 100 150 200 Miles

Rio Chama CFLRP

Environmental Justice Communities in the Rio Chama CFLRP Landscape

Insert 4.5: Concentrations of People 65 years and Older within and adjacent to Rio Chama CFLRP Boundary

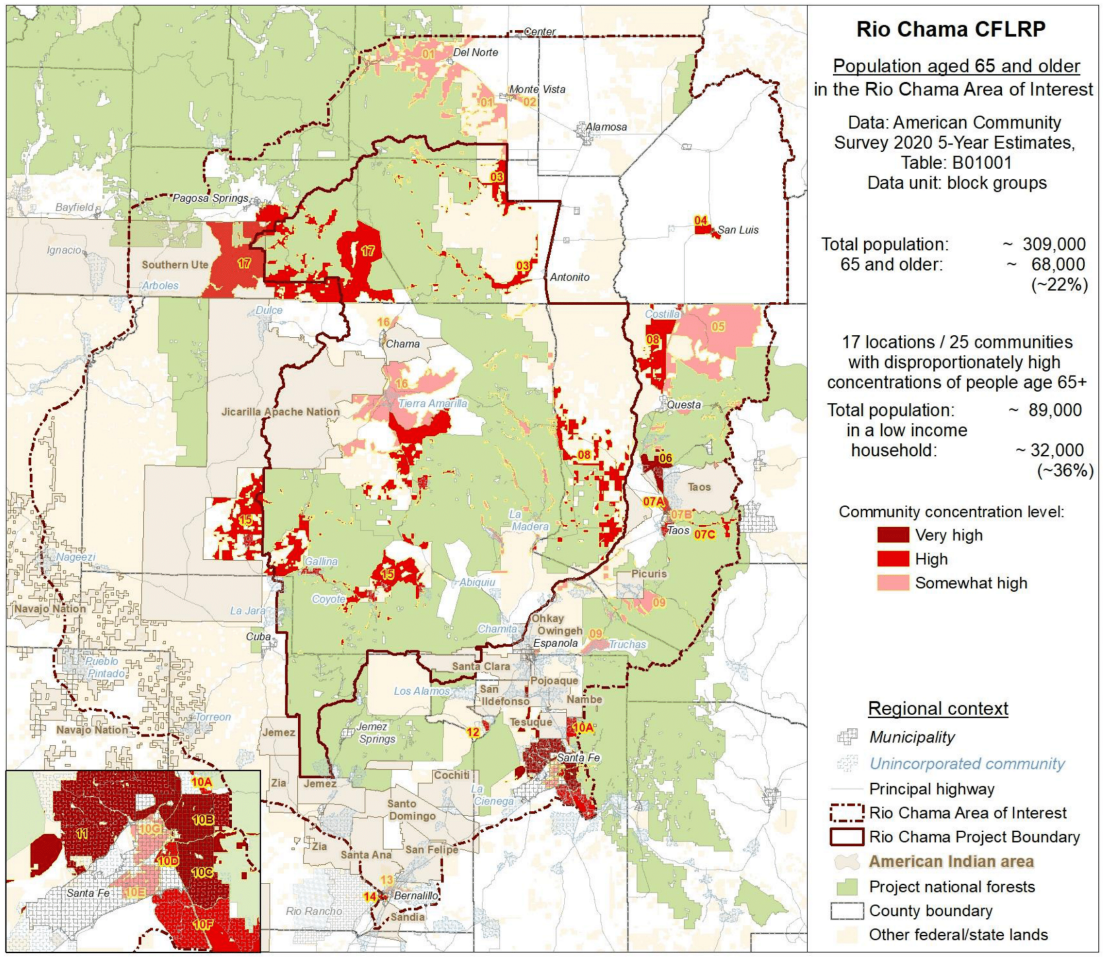


USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Concentrations of people aged 65 years and older

GTAC aggregates Census block groups that share similar elevated "concentration levels" for the population of interest *AND* share common place-based spatial characteristics that strongly suggest they constitute a coherent community that is locally recognizable. These are "high concentration communities" for 65 and older populations.

None of the 65-and-older high concentration communities are principally American Indian areas; in these, population 65 and older is disproportionately *absent* (see previous slide). Many of the communities shown here as high or very high have a population that is disproportionately whiter than the area of interest (see race).



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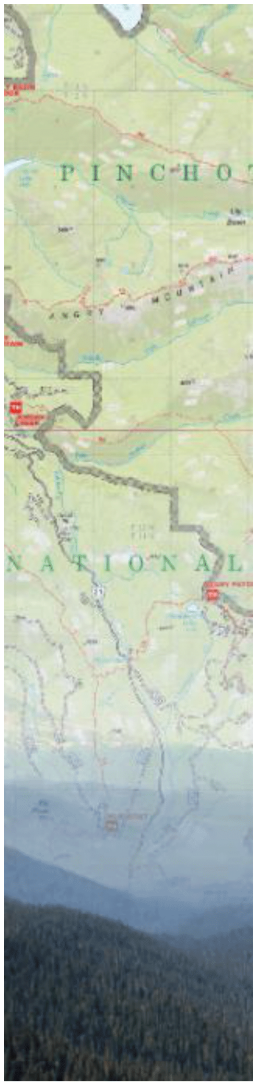
Insert 4.6: Locations with High Concentrations of Low-Income Individuals within and adjacent to Rio Chama CFLRP Boundary



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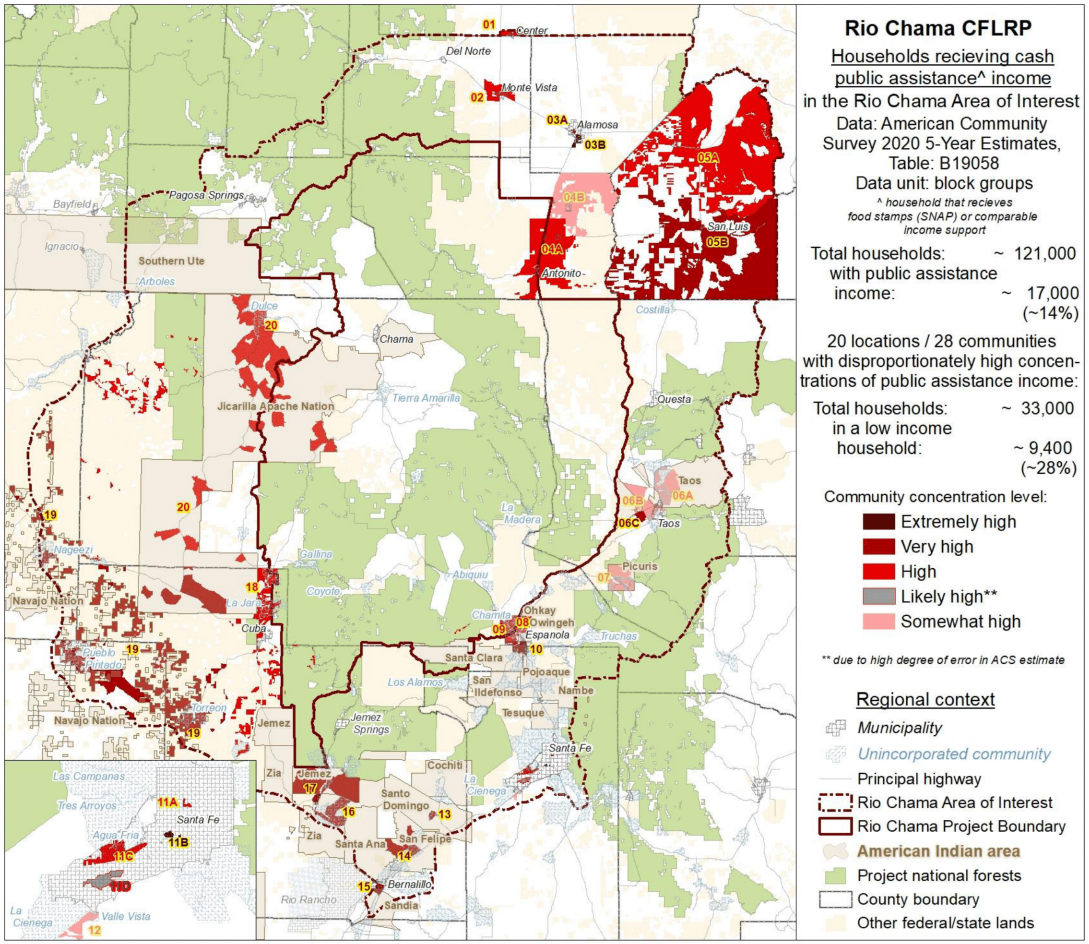
Locations with high concentrations of low income individuals

GTAC aggregates Census block groups that share similar elevated "concentration levels" for the population of interest *AND* share common place-based spatial characteristics that strongly suggest they constitute a coherent community that is locally recognizable. These are "high concentration communities" for households receiving public assistance income.

Public assistance concentrations largely align with low income concentrations – as would be suggested by the previous map. The intensity of concentration is typically not the same, however – places like Española, for example, have very high public assistance concentration but only somewhat high low income concentration.



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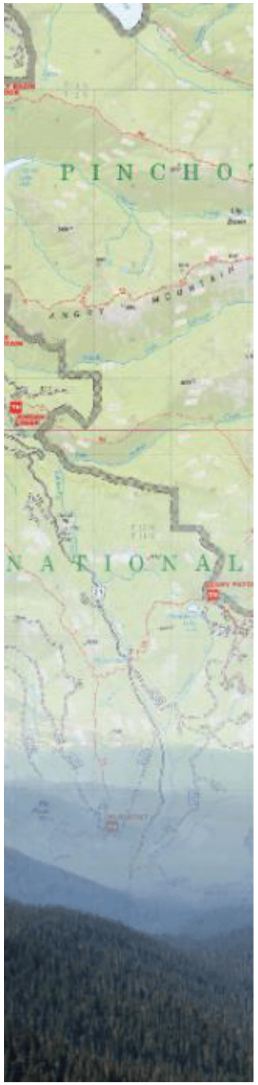
Insert 4.7: Hispanic and/or BIPOC Communities within or adjacent to Rio Chama CFLRP Boundary



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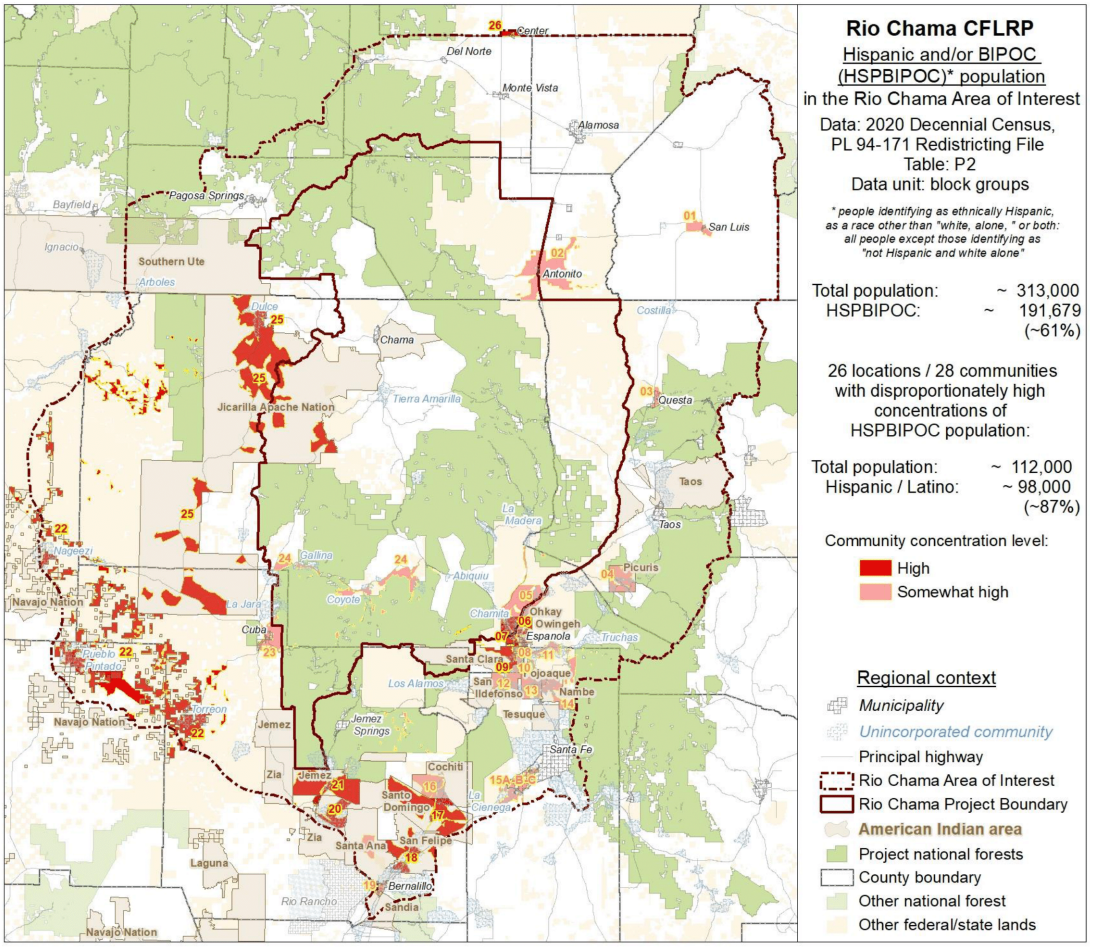
Hispanic and/or BIPOC communities

GTAC aggregates Census block groups that share similar elevated "concentration levels" for the population of interest *AND* share common place-based spatial characteristics that strongly suggest they constitute a coherent community that is locally recognizable. These are "high concentration communities" for Hispanic and/or BIPOC populations.

Labeled locations refer to the next slide and the accompanying spreadsheet. Repeating lables indicate either multiple Census block groups are combined into a single community feature (22), or a single block group spans multiple distinct small towns or villages – multiple place names are then included in the table (24). High concentrations clearly associated with Tribal communities are delineated to as closely match the recognized Tribal land area as is feasible



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Insert 4.8: Multi-racial populations exclusive of part-American Indian Identity within and adjacent to Rio Chama CFLRP Boundary

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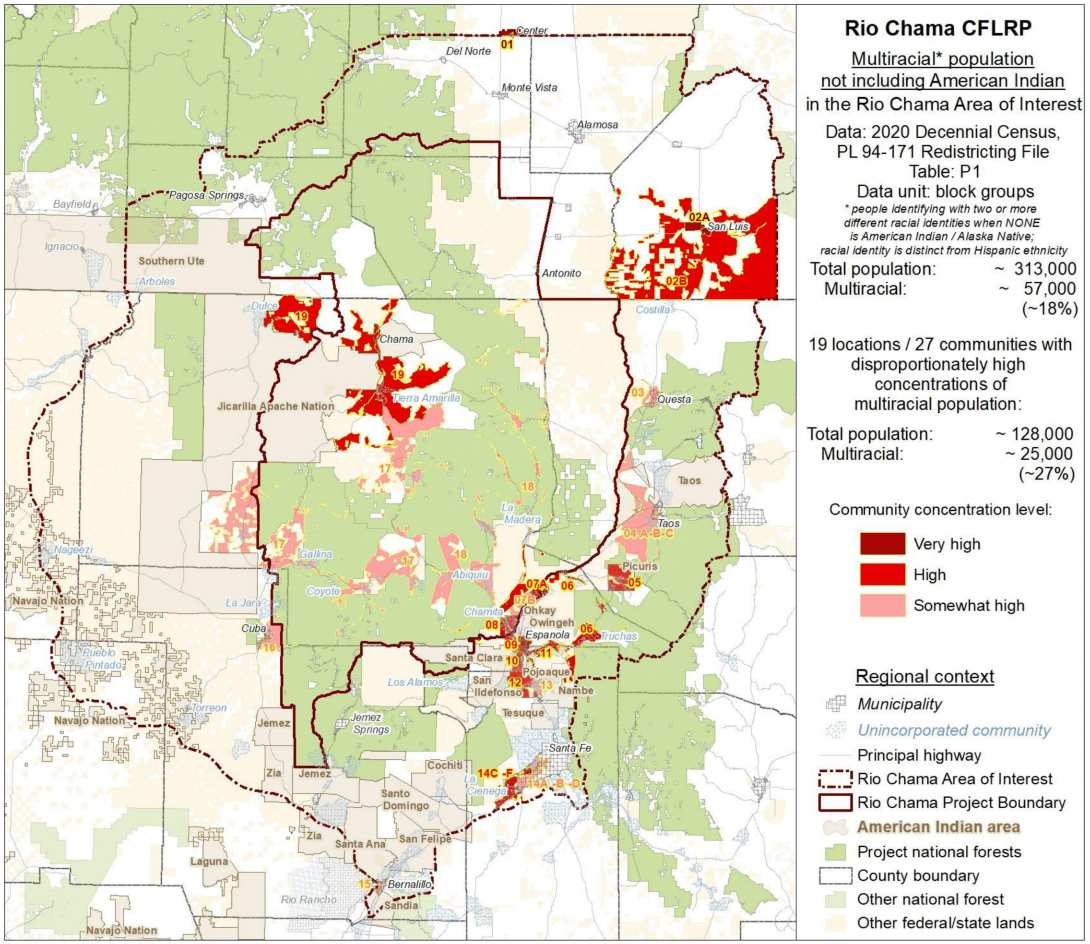
Multi-racial population exclusive of part-American Indian identity

GTAC aggregates Census block groups that share similar elevated "concentration levels" for the population of interest *AND* share common place-based spatial characteristics that strongly suggest they constitute a coherent community that is locally recognizable. These are "high concentration communities" for multiracial populations.

Most of the communities identified in this map are also identified in essentially the same configuration in the Hispanic communities map. There are some minor differences in concentration level and boundaries, and some Hispanic communities in Colorado's San Luis Valley (e.g., Monte Vista, Alamosa southside) do not register here.



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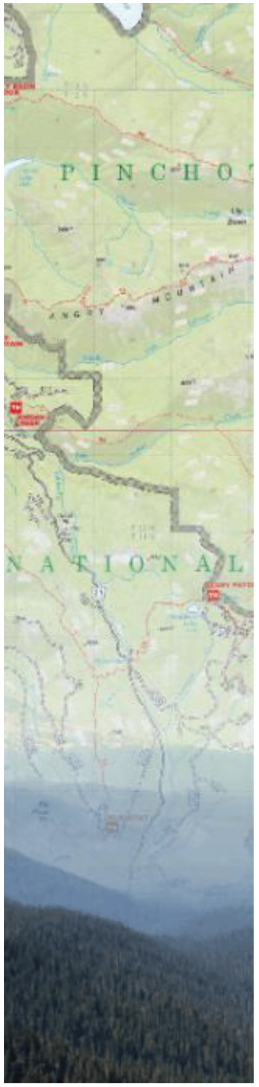
Insert 4.9: American Indian Communities within and adjacent to Rio Chama CFLRP Boundary



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American Indian communities

All high concentration communities for American Indians are in the New Mexico portion of the Rio Chama AOI. Only one – the town of Cuba (17) – is not located on a federally-designated Tribal reservation. In 12 of these 18 communities, the proportion of American Indians is three times that or more of proportion in the Rio Chama AOI and state of New Mexico.

As noted in the previous slide, on some Puebloan Reservations, Tribal land and housing is intermixed with non-Tribal, and Census block groups with high concentrations of Indigenous population also sometimes include non-Tribal communities. These are noted in the community name in the table on the next slide. Generally, this does not apply to the more southerly Pueblos, the Jicarilla Nation, or the eastern Navajo chapters.

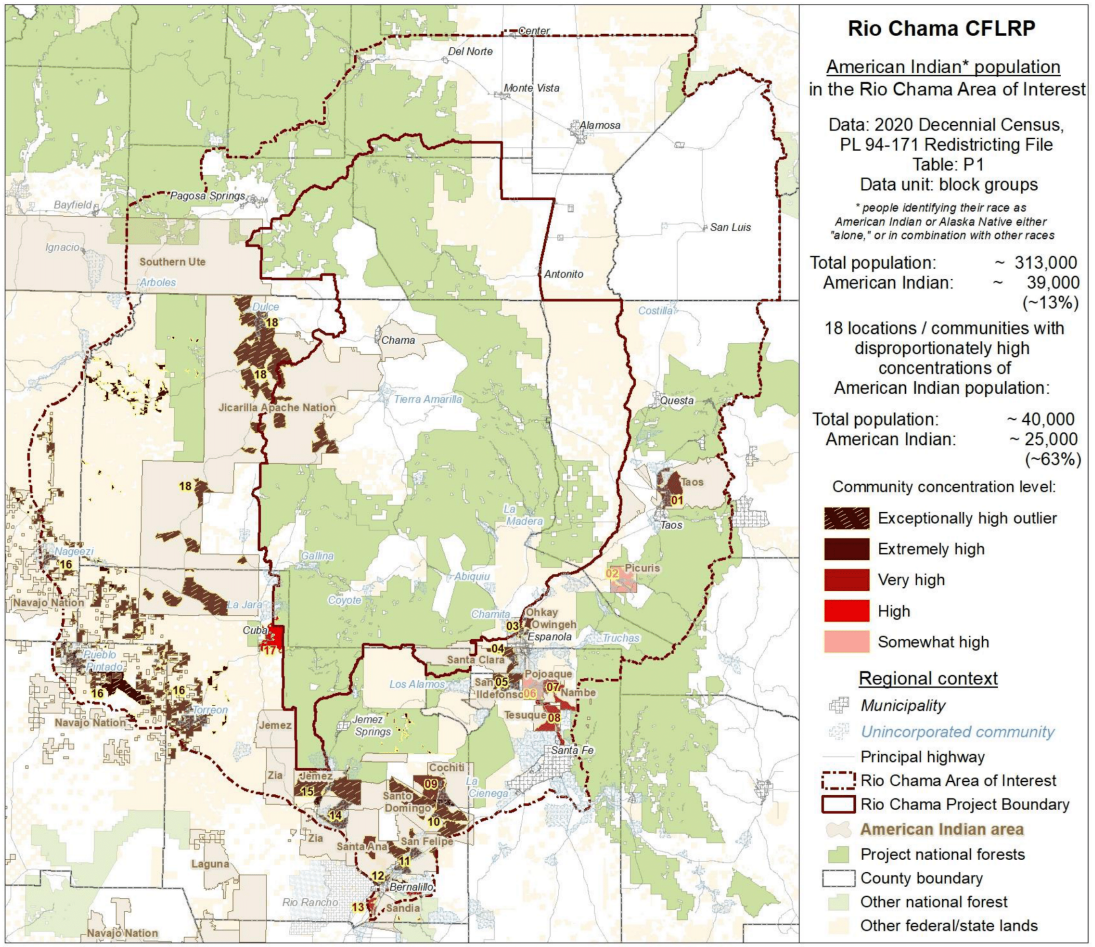

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Table 5.4: Santa Fe National Forest Budget and Staffing for FY 2023

Ranger District	**Indicators**	**Response for Initial Year of CMS***	**(Optional) Notes**	**Response for Year 5 of CMS** Reporting N/A for 2022	**Percent Change** Reporting N/A for 2022
Forest Total	Total annual budget:	$7,300,000	**For Rio Chama portion**		
SO	Total Full Time Equivalents:	**8 FTE**	**USFS Rio Chama Team**		
Cuba RD	Total Full Time Equivalents:	**15 FTE**			
Coyote RD	Total Full Time Equivalents:	**11 FTE**			
Espanola RD	Total Full Time Equivalents:	**8 FTE**	**21 total FTE - 36% of district in project**		
Jemez RD	Total Full Time Equivalents:	**6 FTE**	**25 total FTE - 25% of District in Project**		

Table 5.5: Carson National Forest Budgets and Staffing for FY 2023

Ranger District	**Indicators**	**Response for Initial Year of CMS***	**(Optional) Notes**	**Response for Year 5 of CMS** Reporting N/A for 2022	**Percent Change** Reporting N/A for 2022
Forest Total	Total annual budget:	$9,180,000	**For Rio Chama portion – 54% of 1.5M acre forest**		
SO	Total Full Time Equivalents:	**3 FTE**	**USFS Rio Chama Team**		
West Zone	Total Full Time Equivalents:	**26 FTE**			

Table 5.6: San Juan National Forest Budget and Staffing for FY 2023

Ranger District	**Indicators**	**Response for Initial Year of CMS***	**(Optional) Notes**	**Response for Year 5 of CMS** Reporting N/A for 2022	**Percent Change** Reporting N/A for 2022

Forest Total	Total annual budget:	$2,660,000	**For Rio Chama portion – $20M total for forest (1.8M acres)**		
SO	Total Full Time Equivalents:	**1 FTE**			
Pagosa RD	Total Full Time Equivalents:	**9 FTE**	**35 total FTE – 26.9% of District is in Project**		

Table 5.7: Rio Grande National Forest Budget and Staffing for FY 2023

Ranger District	**Indicators**	**Response for Initial Year of CMS***	**(Optional) Notes**	**Response for Year 5 of CMS** Reporting N/A for 2022	**Percent Change** Reporting N/A for 2022
Forest Total	Total annual budget:	$3,800,000	**For Rio Chama portion – 1.8M acres total, 376K in Rio Chama.**		
SO	Total Full Time Equivalents:	**2 FTE**			
Conejos Peak RD	Total Full Time Equivalents:	**18 FTE**	**99% of district**		

(Monitoring Questions #7 & #8 covered earlier in annual report template)

Monitoring Questions #9 "Did CFLRP maintain or increase the number and/or diversity of wood products that can be processed locally?"

- Data will be provided to 2022 cohort projects to address this question in the FY23 report. If your CFLRP project has data available about the current timber harvest by county and/or product, the number of active processing facilities in the area, or other data about forest products infrastructure please provide here.

Step 1: Define the counties considered "local" for your CFLRP Project. This should align with the county list used in the Core Monitoring Question #7 Jobs and Labor Income Analysis using TREAT.

Counties--CO: La Plata, Archuleta, Rio Grande, Conejos, Alamosa, Costella, Mineral, Saguache, Hinsdale, San Juan, Ouray, San Miguel; NM: Rio Arriba, Sandoval, Los Alamos, Santa Fe, Taos, Mora, San Miguel, Bernalillo, San Juan; UT: San Juan

Step 2: Complete the tracking template below.

Most recent year for which data is available:

Table 5.8: Timber Harvest by County

New Mexico County	MCF	Percentage of harvest
Los Alamos	571	1%
Mora	10,757	19%
Rio Arriba	22,895	39%
San Juan	2,963	5%
San Miguel	6,893	12%
Sandoval	8,859	15%
Santa Fe	2,398	4%
Taos	2,755	5%
TOTALS	58,091	100%

Colorado County	MCF	Percentage of harvest
Alamosa	802	3%
Archuleta	2,578	10%
Costilla	6,794	26%
Hinsdale	4,222	16%
La Plata	2,694	11%
Mineral	2,937	11%
Ouray	548	2%
Rio Grande	3,290	13%
San Juan	377	2%
San Miguel	1,415	6%
TOTALS	25,657	100%

Table 5.9: Timber harvest by product

New Mexico Product	MCF	Percentage of harvest
Bioenergy/fuelwood	27,045	46%
Composite panel	992	2%
Miscellaneous	4,620	8%
Poles, posts, pilings	959	2%
Pulpwood	1,738	3%
Saw logs	22,736	39%
TOTALS	58,091	100%

Colorado Product	MCF	Percentage of harvest
Bioenergy/fuelwood	9,464	37%
Composite panel	590	2%

Colorado Product	MCF	Percentage of harvest
Miscellaneous	1,830	7%
Poles, posts, pilings	1,439	6%
Pulpwood	79	>1%
Saw logs	12,254	48%
TOTALS	25,657	100%

Insert 5.0: Number of Active Timber Processing Facilities within the Local Area

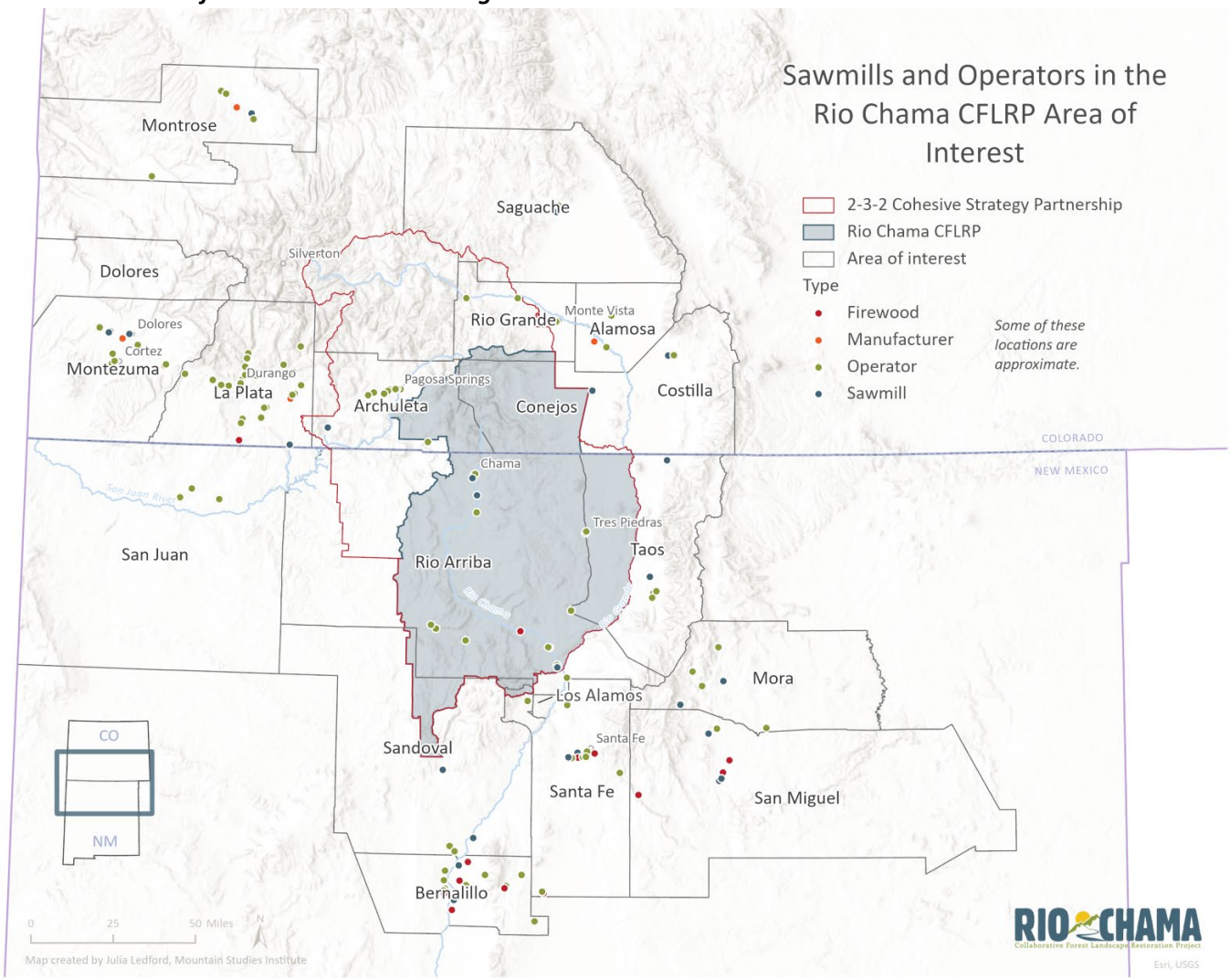

Table 6.0: Wood Innovations Grants Awarded within CFLRP Landscape

Location	Recipient	Description
SW Colorado – Alamosa	Rocky Mountain Timber Products	New small log firewood processing
SW Colorado – Durango	Phoenix Recycling	Large scale fixed and mobile low-cost biomass transportation and processing from area fuels treatments

SW Colorado – Durango	Table-to-farm Compost	Woody biomass removal and transportation. Carbon analysis of soil and compost blends.
Northern New Mexico – Santa Fe	Architecture 2030	The Mass Timber Tipping Point: Engaging design industry leaders to unlock the potential for widespread low-carbon timber building system

(Monitoring Questions #10 & #11 covered earlier in annual report template)

Monitoring Questions #12: "How well is CFLRP encouraging an effective and meaningful collaborative approach?" Data will be provided to 2022 cohort projects to address this question in the FY23 report. For detailed guidance, training, and resources, see corresponding reporting template here. Please upload your completed assessment summary provided by the Southwestern Ecological Restoration Institutes here and use it to respond to the prompts below:

- Reflecting on the summary provided, do you have any additional context for the results to share?
- Do you have any feedback about the assessment process?
- What have you done, or plan to do, in response to the challenges, needs, and recommendations identified in the collaboration assessment? Please provide up to 3 specific actions.
- What types of support or guidance do you need to address any of the challenges, needs, and recommendations identified in the collaboration assessment?

Throughout survey development, administration, and synthesis of the descriptive survey results the social science partners of the Rio Chama CFLRP have been communicative, helpful, and responsive. Prior to survey disbursement, 2-3-2 Partnership leadership and staff worked closely with contacts at the Colorado Forest Restoration Institute to refine the survey and to add Rio Chama specific questions. The collaborative governance survey was introduced to 2-3-2 partners by Tyler Beeton of CFRI at their November 2022 partnership meeting. The purpose, need, and background of survey development were shared at this time and partners were given the opportunity to complete the survey at the meeting. The survey remained open for an additional eight weeks into January 2023. 49 usable responses were received, and while the information contained in these responses is invaluable, the survey results represented just under 25% of the 2-2-3-2 Partnership contact list at the time, and of the responses, only about half included free form written information, which often play an important role in the development of actionable recommendations.

2-3-2 partners received and discussed initial survey results and recommendations at their May 2023 meeting via a hybrid presentation by Tyler Beeton and facilitated discussion. The purpose of this conversation was to ensure that initial results resonated with 2-3-2 partners and that recommendations were actionable and in alignment with partnership goals and desired outcomes. According to survey responses, the Rio Chama CFLRP is successfully garnering principled engagement, inspiring shared motivation, and engaging in knowledge sharing, learning and adaptative management. Challenges identified by survey respondents included limited industrial capacity, vacancies and turnover both within agencies and at partner organizations, the timing of fund delivery and amount of funding available, and the impacts of landscape disturbance, including wildfire, on the project. Discussion among participants highlighted:

- A need to increase engagement with Tribal and traditional communities as well as with biomass industry partners.
- Opportunities to identify and empower community connectors and gate keepers, activating them to engage their contacts with landscape-scale considerations related to Rio Chama.

- The ongoing need to increase funding and capacity for planning, management activities, monitoring, and in person partner engagement.
- Creating more specific and pointed information about roles, protocols, and accountability including the alignment of expectations around collaborative engagement and involvement with projects on NFS lands. Some specific items include increasing co-working space, further enhancing communication, and clearly identifying decision space and sideboards specifically related to working in partnership with the USFS.
- Pushing even harder on landscape-scale, cross-boundary planning and emphasizing prioritization processes that will help with cross-boundary implementation.

The information shared and discussed in May 2023 helped set 2-3-2 partners and the Rio Chama project up for successful reflective practice using more formal tools and will support learning and sharing in a CFLRP community of practice nation-wide. Partners are actively engaging with actionable data and recommendations and hope to report progress towards Rio Chama and 2-3-2 Partnership goals based on governance survey data in FY24. Additionally, some progress is already being made towards addressing the above challenges and associated recommendations:

- Between survey administration and FY23 reporting, the Rio Chama project on the USFS side became fully staffed, an important commitment to ensuring the project meets its goals.
- The USFS is committed to onboarding for collaborative relationships and processes for those detailing and taking on new positions in the landscape.
- Long term strategic agreements are in process or in place to facilitate core activities for the Rio Chama CFLRP
- The Executive Committee of the 2-3-2 Partnership is in the process of updating the Partnership Guiding Document
- A socioeconomic working group has been formed to address engagement needs and opportunities with Tribal and Traditional communities. This group has a number of initiatives underway.
- Progress has been made towards establishing an MOU between the Jicarilla Apache Nation, Santa Fe, and Carson National Forests to foster regular and ongoing communication.
- Partners have applied for additional capacity funds to further facilitate relationship building and connecting to key communities in the landscape over time.

While there is more work to be done, partners are digging into actionable recommendations and committed to consistent reflection and improvement over time.

Final governance survey results were received by the Rio Chama team and 2-3-2 leadership in September of 2023. Since receipt of these official results, both the 2-3-2 executive committee and USFS Rio Chama working group have had pointed conversations about the survey and considered additional actions as a result. During these conversations, requests for nationally comparative information were made and participants know there are forthcoming. Additionally, a request has been made to adjust data displays to display the discrete “neutral,” “somewhat disagree,” and “strongly disagree” categories associated with question prompts so those reviewing the information can more easily interpret the figures and consider actionable responses to expressed disagreement or concerns. Governance survey results will be available on the 2-3-2 Partnership website starting in 2024 after a full partnership discussion in February.

(Monitoring Question #13 covered earlier in annual report template)