



SAN JUAN – CHAMA WATERSHED PARTNERSHIP

Call to Action: Invest in critical watershed protection BEFORE a severe wildfire happens

In a warming climate, the San Juan-Chama Project (SJCP) source watersheds and the headwaters of the Rio Chama are at risk of severe wildfire and subsequent loss of watershed function. Arguably one of the most important and at-risk watershed areas for the state of New Mexico, the importance of the San Juan-Chama Project source watersheds cannot be overstated. **Conveyed through the Rio Chama, the SJCP provides approximately 75% of Albuquerque’s drinking water and 50% of Santa Fe’s drinking water.** Many beneficiaries of the SJCP (Figure 1) are heavily dependent on SJCP allocations, including municipalities, Tribes and irrigation districts. As fires decimate adjacent watersheds, a wide coalition of partners have long recognized the need for decisive action in San Juan-Chama region in order to protect this “natural infrastructure” from severe wildfire. Landscape-scale ecological forestry work is needed to protect these watersheds and diversion project.

In the slow-growing but overly dense forests of the San Juan-Chama region of Northern New Mexico and Southern Colorado, new investments are desperately needed to incentivize accelerated forest treatments and support a restoration economy. Long-term funding sources are required to drive biomass product markets and to keep contractors in business. Just in the last couple of years, several forest operators in the region have gone out of business because of a lack of project funding. The challenge is the magnitude of forest treatments needed to avoid catastrophic fires, the low value of wood products, and the magnitude of funding required to conduct treatments and employ operators. **Large investments are needed to fuel the regional restoration economy and increase the scale of work by more than an order of magnitude.**

Leveraging efforts of the Rio Grande Water Fund, the San Juan Headwaters Forest Health Partnership, and the 2-3-2 Cohesive Strategy Partnership, The Chama Peak Land Alliance and San Juan Chama Watershed Partnership call for increased investments to increase the pace and scale of watershed restoration in this crucial region by working on crucial private lands. While USDA is already investing in the Rio Chama CFLRP and San Juan-Chama RCPP, there is still a massive need for treatments in three particular Focal Areas that supply water to Heron and El Vado Reservoirs Reservoir. **Private lands make up the bulk of the watershed area that flows into Heron and El Vado Reservoirs.** Our landscape strategy is to bring in new sources of funding, treat highly prioritized acres on private lands, and leverage the work that all of our cross-boundary partners are completing in the region.

Through partnership with The Nature Conservancy’s Rio Grande Water Fund and downstream water utilities, CPLA has been working for many years to implement forestry treatments on the critical private lands in this region. We have also laid out ‘shovel ready’ projects on several thousands of acres of priority fuel mitigation projects. Unfortunately, due to the huge landscape needs, we have barely scratched the surface. **Recent analysis conducted by the San Juan Chama Watershed Partnership indicated that more than 85,000 acres may need to be treated in the San Juan Chama Project**

source watersheds, the Upper Chama watersheds, and the Rio Brazos/Hwy 64 Corridor to prevent high severity fire from easily moving across the landscape. Along with the Rio Grande Water Fund and several watershed Partnerships, our strategy strives to reduce the risk of severe wildfire, protect critical watershed function, protect and restore fish and wildlife habitat, sequester carbon, and feed a strong local restoration economy. Focusing on private lands in these particular watersheds that supply Lake Heron and El Vado will be key to safeguarding the important water supply values of the region.

There is an urgent need for watershed protection investments on private lands and on other jurisdictions in the SJCP region. **Our 10 year plan calls for funding to treat thousands of acres of shovel ready projects while building a strong restoration economy** - hiring operators for converting fuels into soil amendments via mastication, creating biochar products, harvesting logs for dimensional lumber and latilla markets, and continue working with Merced de los Pueblos de Tierra Amarilla and Upper Chama Soil and Water Conservation District to distribute firewood to low-income senior citizens in the Chama Valley. As described in CPLA's 2014 Chama Healthy Forest and Wood Utilization Study, there is a need for even more biomass markets than currently exists. The lynchpin for new biomass markets depends on subsidized forest treatments, otherwise there will never be enough incentive to harvest low-value wood products at meaningful scales. Along with CPLA's work with the Rio Grande Water Fund, there is also a need for funding both field and drone monitoring to accompany treatments for the purpose of annual reporting and adaptive management.

The recently funded (and ranked as a top priority in the nation) Rio Chama CFLRP has identified the need to support treatments on non-federal lands in the Rio Chama landscape. **Investments in treating private lands in the SJCP landscape would be a great opportunity to provide required program match and leverage for the Rio Chama CFLRP, and create a pathway for treating acres on crucial private lands that leverage treatments on federal lands.** We are advocating for all partners to track treated acres in the New Mexico Shared Stewardship Portal. Ultimately, our vision is to leverage efforts and stimulate local economies as we work to secure the future water allocations originating in the San Juan-Chama region.

Creating resilient watersheds in this region will require investments in the tens of millions of dollars. If we are incredibly fortunate to another decade without a severe wildfire, these investments over the course of 10 years should prevent a large-scale catastrophic wildfire from occurring and subsequent degradation of watershed function and water delivery. When a severe wildfire burns (such as the recent Hermits Peak/Calf Canyon Fire), the costs are astronomical. Initial firefighting, post-fire rehabilitation, replacement of destroyed structures, loss of watershed function and subsequent consequences over many years, ecosystem loss of soil, vegetation, and wildlife habitat, etc. are significant costs. **In the incredibly important San Juan-Chama region, let's put significant investments in place BEFORE a severe wildfire, rather than after.**

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Attachments

Links:

- [CPLA 2014 Chama Healthy Forest and Wood Utilization Study](#)
- [CPLA – 5 year Accomplishment Report to Rio Grande Water Fund](#)
- [CPLA – Small Unmanned Aerial Vehicle \(UAV\) Monitoring Protocol for Operational Forestry](#)
- [CPLA – UAV Monitoring of Changes in Forest Structure Caused by Forest Restoration Treatments](#)
- [Navajo-Blanco Working Group – Navajo-Blanco Watersheds Resilience Strategy for the San Juan Chama Project Source Watersheds](#)

Upon request – CPLA annual performance reports to RGWF

Upon request – Before the Burn: 10 year plan for San Juan Chama and Rio Chama headwaters DRAFT

[RGWF – San Juan Chama Return on Investment Study](#)

[RGWF – Economic Effects of Wildfire Risk Reduction and Source Water Protection in the Rio Grande River Basin in Northern New Mexico and Southern Colorado. Rio Grande Water Fund](#)

[RGWF – 2014 Comprehensive Plan](#)

San Juan Chama Project Contractor	Full Allocation (acre-feet)
Albuquerque Bernalillo County Water Utility Authority	48,200
Middle Rio Grande Conservancy District	20,900
Jicarilla Apache Nation	6,500
City of Santa Fe	5,230
Taos Pueblo	2,215
Ohkay Owingeh	2,000
County of Los Alamos	1,200
City of Española	1,000
City of Belen	500
Town of Bernalillo	400
Town of Taos	400
Town of Taos Settlement	366
Village of Los Lunas	400
County of Santa Fe	375
Town of Red River	60
El Prado Water and Sanitation District	40
Village of Taos Ski Valley	15

Pojoaque Valley Irrigation District	1,030
Aamodt Settlement	1,079
Cochiti Recreation Pool	4,290
TOTAL	96,200

Figure 1. Full annual allocations to beneficiaries of San Juan-Chama Project, or “contractors”. According to the Bureau of Reclamation, since diversions began in 1970, there have been 6 years when supply was insufficient to make a full annual allocation, beginning in 2014. A large-scale severe wildfire in the SJCP source watersheds would further threaten these allocations over a timespan of multiple years.

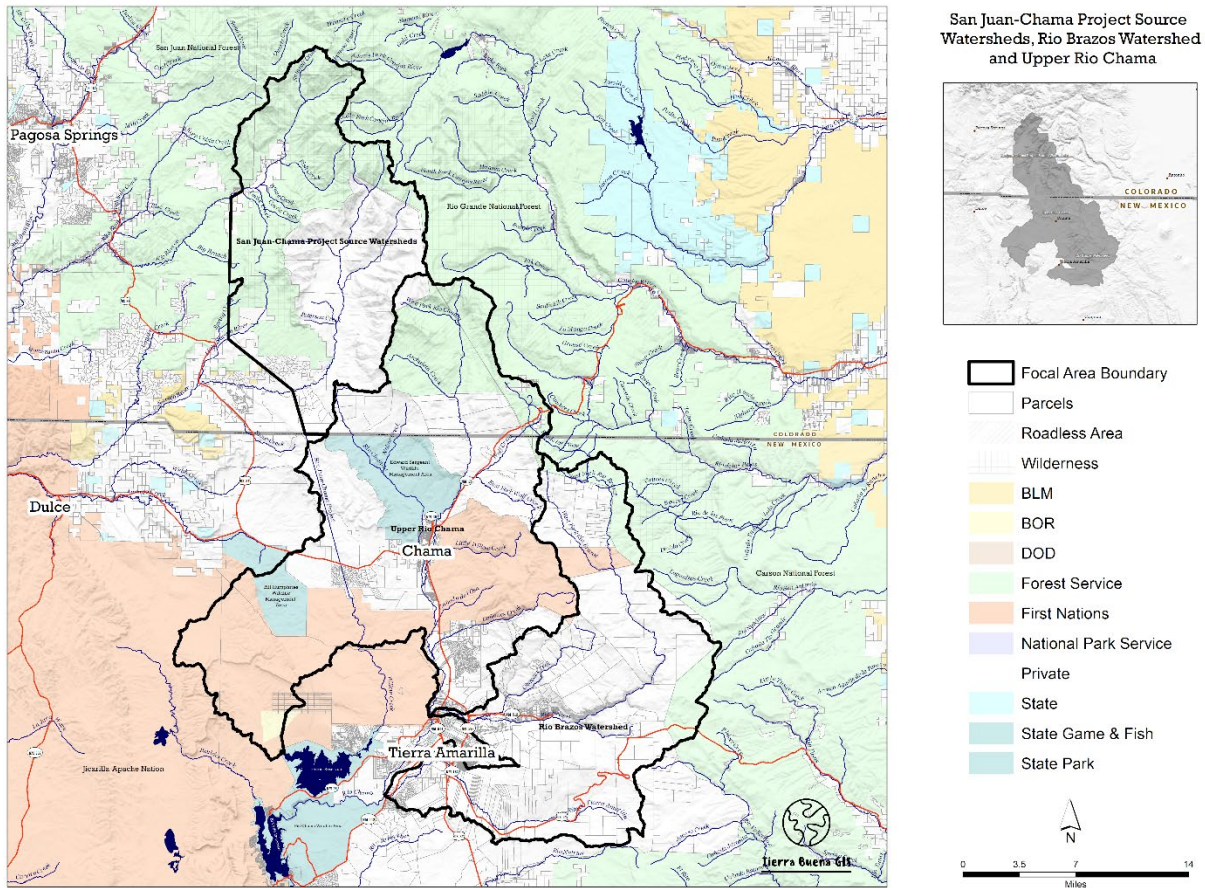


Figure 2. Location of proposed project area lies within 3 priority Focal Areas identified by the San Juan-Chama Watershed Partnership. Total project area is 496,227 acres.

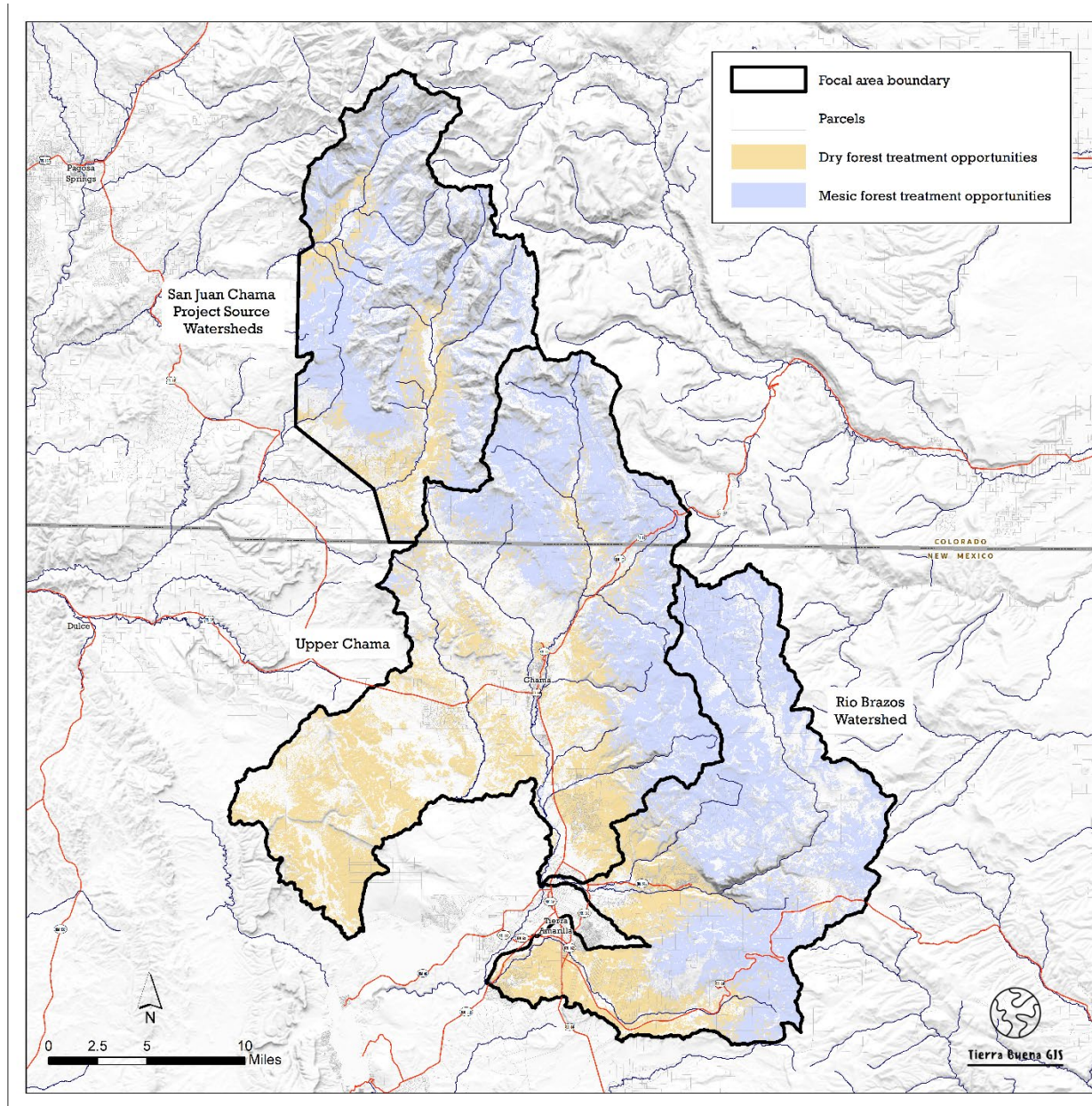


Figure 3. The San Juan-Chama Watershed Partnership (SJCWP) have identified 283,479 acres of dry and mesic forest treatment opportunities. USDA research (GTR-423) indicates that the minimum area that should be treated with strategically placed forest treatments (mechanical thinning and/or prescribed fire) to reduce high-severity wildfire from moving easily across the landscape is 30 percent of the treatable planning area. Following this guidance and focusing on areas that are both at risk of severe wildfire and post-fire erosion, 85,044 acres of treatments may be needed to create resilient watershed conditions in this area. Watershed protection efforts will need to be strategically placed and leveraged with other cross-boundary investments over the next several years in order to create resilient watershed conditions.

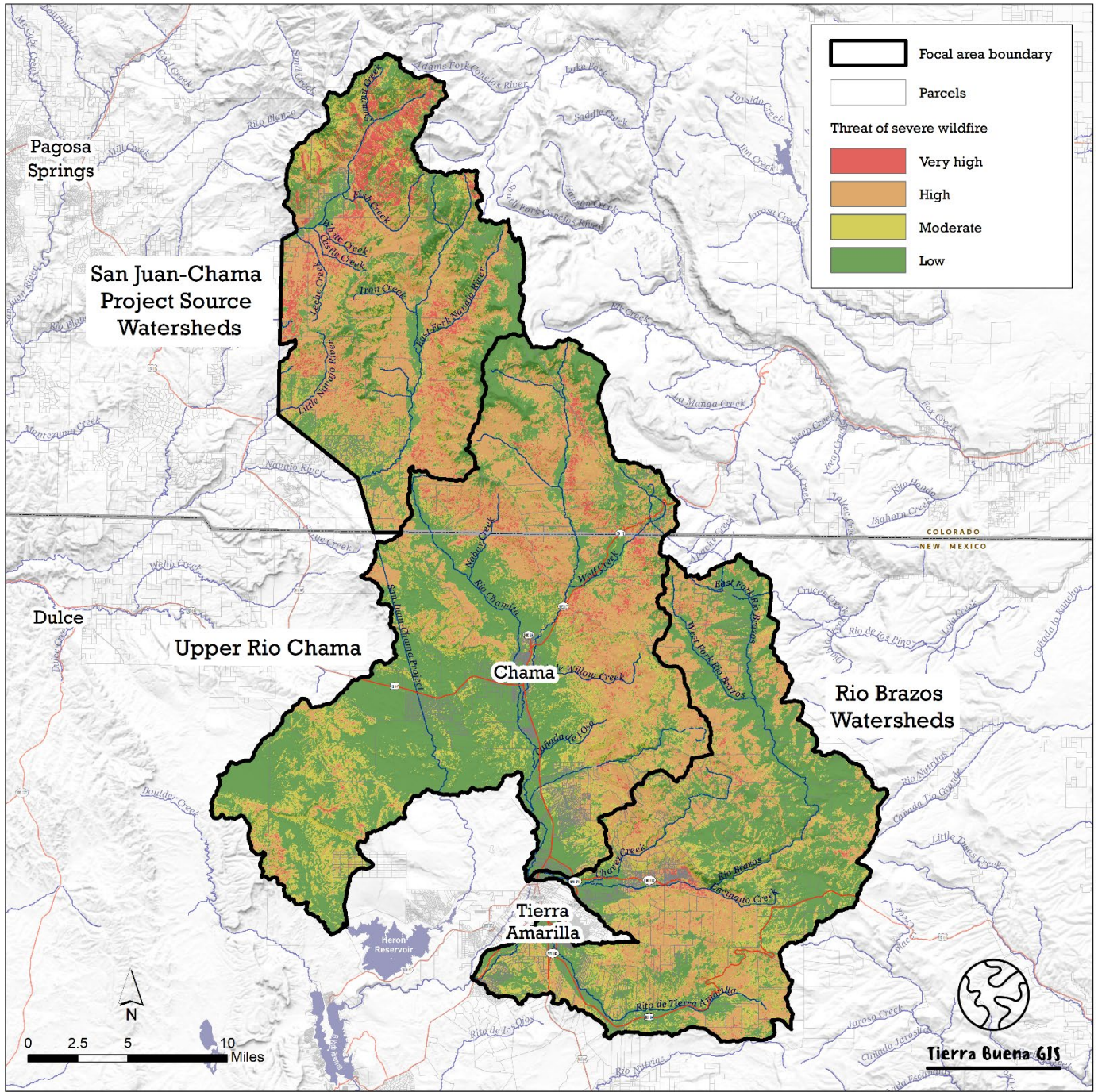


Figure 4. Using spatial information from the New Mexico Forest Action Plan, the SJCPW has identified 273,379 acres at moderate – very severe threat of severe wildfire.

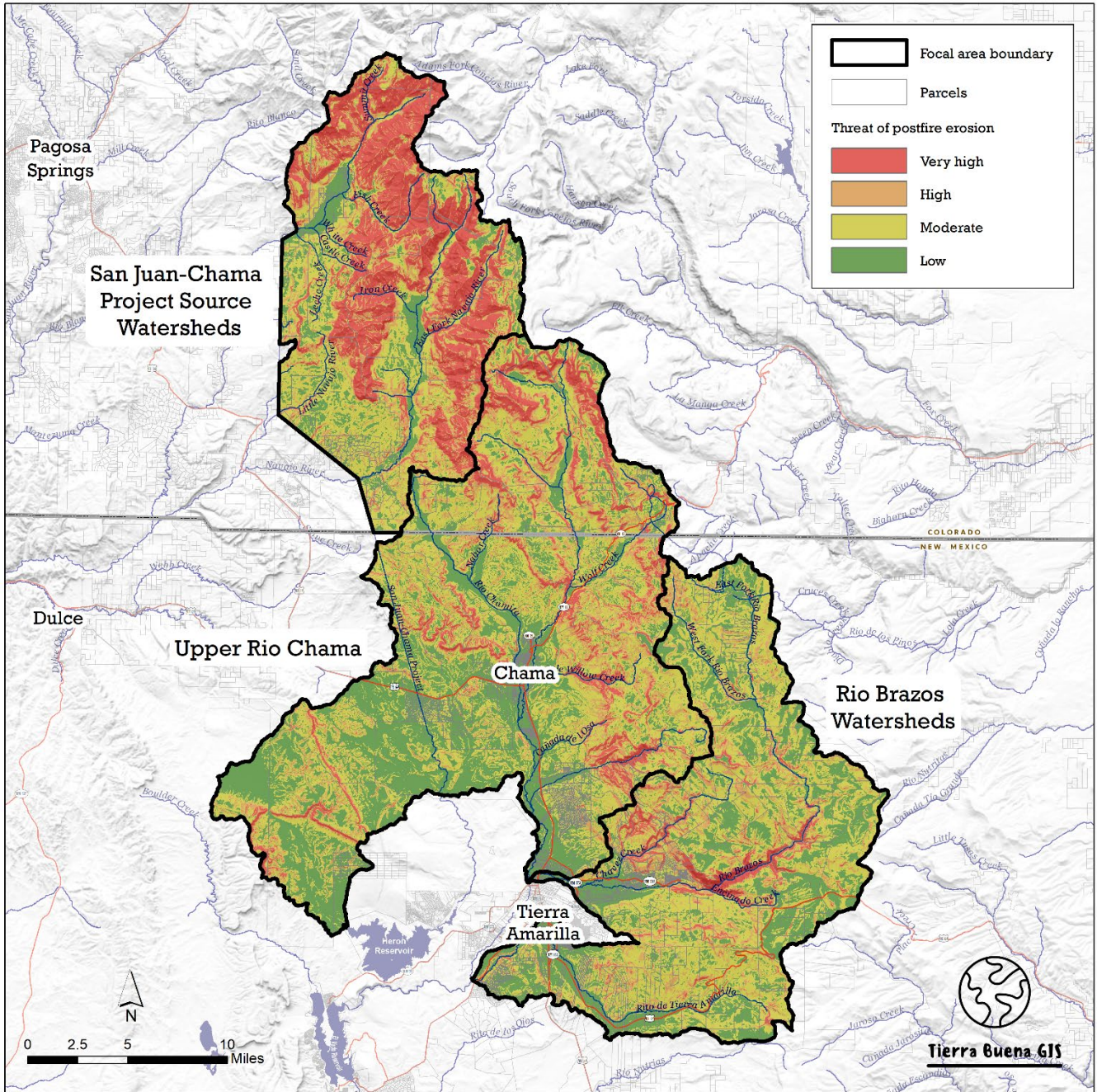


Figure 5. Using spatial information from the New Mexico Forest Action Plan, the SJCWP has identified 348,206 acres at moderate – very severe threat of post-fire erosion. Note the large amount of area of severe post-fire erosion threat in the San Juan-Chama Project source watersheds.

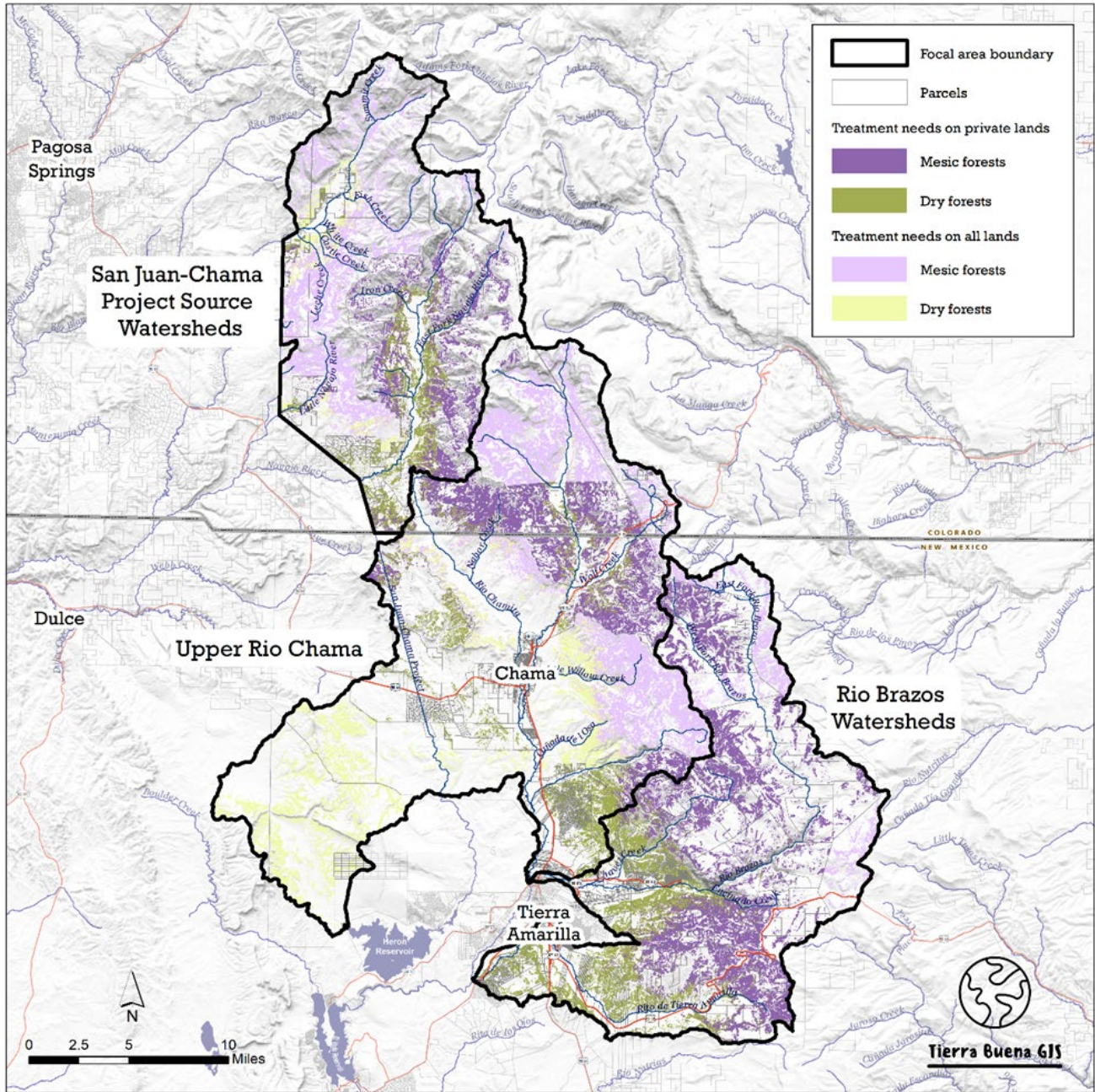


Figure 6. The San Juan-Chama Watershed Partnership (SJCWP) have identified 167,670 acres of dry and mesic forest treatment opportunities that are located operable terrain (under 40% slope) and are at risk of both severe wildfire and post-fire erosion. 97,373 of these acres are on private lands.

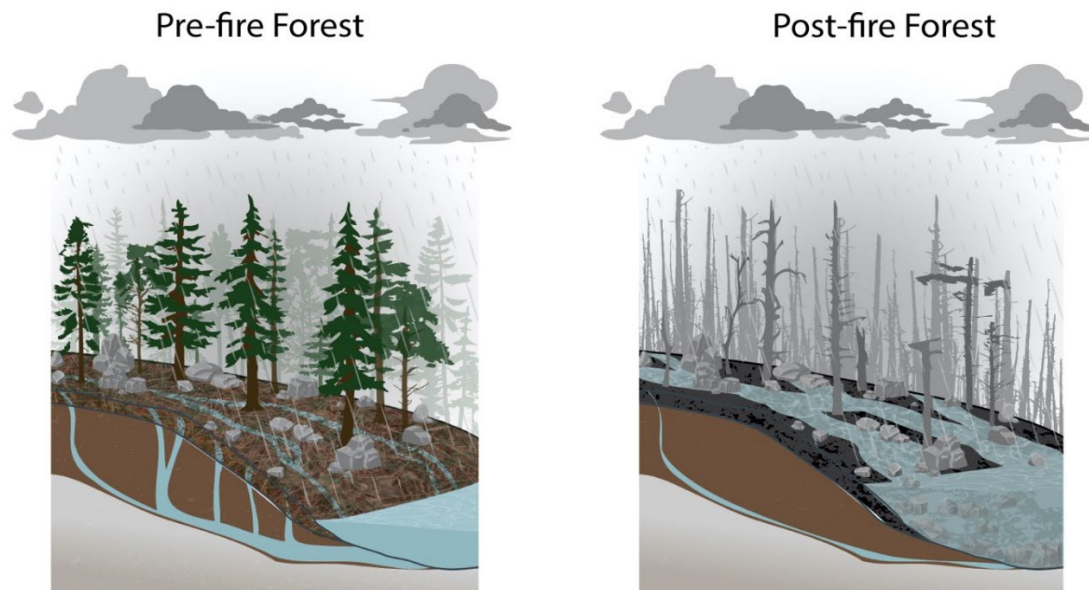


Pre-Thinning



Post-Thinning

Figure 7. Pre and post-thinning monitoring photos. Forest restoration provides reduced threat of severe wildfire initiation and propagation, protection of watershed function, more resilient conditions against drought, insect, and disease, productive wildlife habitat, and economic opportunity for forest operators.



In a healthy forest water runoff collects in small streams that drain towards rivers, creating watersheds and basins. The forest stabilizes the soil and prevents erosion, filters contaminants, enhances soil moisture storage and groundwater recharge, reducing the likelihood of flooding. Water slowly percolates through the soil, or runs off with a low sediment load. Source: USGS and Water Education Colorado.

During a fire, ash, firefighting chemicals, and other contaminants settle on streams and reservoirs as trees burn. Severe wildfires can result in water-repellent or "hydrophobic" soils. After the fire, burned debris and vulnerable soils pose a long-term risk to nearby waterways. Massive erosion and flooding can occur. Ash and debris that enters reservoirs and pipes can have long-term drinking water impacts, sometimes to the point where the water or infrastructure becomes unusable. Source: USGS and Water Education Colorado.

Figure 8. Healthy forests stabilize the soil, enhance moisture storage, and prevent erosion. After a severe fire, the ground is heated to the point where water does not penetrate it well. The resulting intense runoff is erosive, carrying large sediment loads and debris. These post-fire runoff events can result in long-term damage to a watershed.