

2016 Projects- Rio Grande Water Fund Proposal

Project Title: Redondo/San Antonio Treatments

Improving Watershed function through landscape restoration treatments within the Southwest Jemez Mountains Collaborative Landscape Restoration Project Area

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Project Location: The Redondo/San Antonio Area Treatments (Treatments) are located in the Jemez Mountains near the community of La Cueva and Thompson Ridge, and are within sub-watersheds of the Rio Guadalupe and Upper Jemez River. The treatments include:

- Redondo forest/watershed treatments: thin and remove biomass (955 acres)
- San Antonio Meadow Treatments: thinning followed by prescribed fire (120 ac)

The Treatments have been identified as a priority for 2016 because of their proximity to the communities of La Cueva and Thompson Ridge which have approximately 250 homes between the two. It is the community water supply for La Cueva, a community of 400 residents. None of the Redondo thinning units need to be accessed through the Valles Caldera, we will use existing Forest Service roads for this work. The Treatments are part of the Southwest Jemez Mountains (SWJM) Collaborative Landscape Restoration Project Area, Jemez Ranger District, Santa Fe National Forest.

Budget Narrative:

The Forest Service has prioritized three treatments for funding requests from the RGWF for implementation in the summer/fall of 2016. The Rio Grande water funding would serve as a non-federal contribution to the CFLRP program or other Federal or State moneys that might be made available. The **highest priority** is to implement thinning and biomass removal on 955 acres within the Redondo Area. The RGWF contribution of \$573,000 would cover the contractual work to thin and remove the biomass (\$600/acre). As a match, the Forest Service has completed the pre-treatment preparation including the archeological surveys/clearances, wildlife surveys, timber marking and NEPA analysis (funded through CFLRP program funds \$955,000). The **second priority** is a request for \$72,000 to implement thinning on 120 acres within San Antonio Meadow and the **third priority** would be for \$9,000 to burn the San Antonio Meadow after thinning (\$75/acre). Again as a match, the FS has completed the pre-treatment site preparation and NEPA analysis (funded through CFLRP program funds \$120,000). Partial funding of this project would also be useful, both for the contract and the match requirement of the CFLRP program.

The CLRP was designed by Congress to partner with local entities and leverage private and non-federal funding to help sustain the project funding through 2019. The Forest Service is submitting these proposals in an effort to leverage CFLRP funds and achieve the long term goals of the SWJM restoration project.

Larger restoration plan or landscape strategy to which your project contributes

The SWJM Landscape Restoration Project, located in central New Mexico, is a long term effort focused on improving the resilience of ecosystems to recover from wildfires and other natural disturbance events in order to sustain healthy forests and watersheds for future generations. The landscape area is approximately 210,000 acres in the Southwest Jemez Mountains including a portion of the Santa Fe National Forest (110,000 acres), the nearly 86,000 acres on the Valles Caldera National Preserve, and the Jemez Pueblo, along with parcels of state and tribal lands. Here is a link which provides overarching additional information <http://www.fs.usda.gov/goto/sfe/swjm>.

The SWJM project area comprising the entire upper Jemez River watershed drains more than 1,000 square mile of mountain and semi-arid terrain before joining the Rio Grande. The Jemez River flows through the middle of the project area. Other drainages include the San Antonio Creek, Rio Guadalupe and Rio Cebolla. Approximately 12 sub-watersheds make up this 1,000 square mile area. The hydraulic characteristics of the drainage basin have been affected by changes over time that has affected the function and contribution of this watershed as a valuable tributary to the Rio Grande. The high risk of damaging wildfire and subsequent floods influencing the condition of the landscape pose a threat to future water security. The Jemez Mountains have been identified by the RGWF as one of four focal areas where restoration treatments and economic development should be focused.

Responses to RSI Eligibility Criteria

Section 1 Ranking Criteria

1. *Larger-scale effort*. This project is part of a larger landscape-scale effort – The SWJM Collaborative Landscape Restoration Project encompassing 210, 000 acres within the Jemez Mountains, primarily composed of the Upper and Middle Jemez River Watersheds. A wide variety of coordinated and integrated treatments will occur including forest thinning, prescribed fire, management of natural fires, road closures and rehabilitation, riparian zone restoration projects, fisheries and wildlife habitat improvement, and re-establishment of protected species on a total of 110,000 acres of NFS land. All thinning and burning treatments are strategically located and prioritized in Wildland Urban Interface (WUI) areas or areas having the most highly altered fire regime condition class (FRCC 2 to 3), emphasizing drier aspects and ridgetops to mimic historic fire patterns. To date approximately 21,000 acres have been treated on the National Forest lands through mechanical treatments and prescribed/managed fire.
2. *Contributions: in-kind or match*. Refer to budget narrative.

The scientific rationale. The collaborative group that developed the SWJM Landscape Restoration Project proposal identified the ecological context and restoration needs for the project area based on various landscape assessments, scientific research, and other documents that describe the current conditions that depart from historic reference conditions. These documents show that fire regimes have been radically altered in this area and ecosystems are in an unsustainable condition. The Santa Fe NF used Restoring Composition and Structure in Southwestern Frequent-Fire Forests: A science-based framework for improving ecosystem resiliency (RMRS GTR-310), as the scientific basis for how to restore resiliency to the primarily ponderosa pine and dry mixed conifer forests of the area. We also have a Historic Reference Condition study from Northern Arizona University's Ecological Restoration Institute which supports the science behind our project, which is site specific to the Jemez Mountains.

<http://nau.edu/uploadedFiles/Centers-Institutes/ERI/Forms/Resources/southwest-jemez-cflr-project.pdf>

For the meadow thinning specifically it's in a Unit 8 in our Santa Fe Terrestrial Ecosystem (TEU 1991)

Survey Units, where this area should not have trees on it as it currently has, if fire hadn't been excluded from it. This is the climax potential from the soil surveys done in this area.

Section 1 Ranking Criteria

1) *Engagement of the local community.* Collaborators who developed the SWJM strategy represent a broad range of perspectives and values, and include parties who have been collaborating on forest and watershed management in the SWJM area for the past decade. They have become not only cooperators but active forest restoration partners. Each cooperating entity is engaged in different aspects of restoration efforts.

- ❖ We have engaged and encouraged the communities of Sierra de los Pinos, Sierra de los Indios to take action to make their communities fire-adapted. We have hosted numerous public meetings speaking to the fact that fire is a given on this landscape and the methods to make their community fire resilient and adapted. We have done field trips to show them the treatments on the Forest Service side of the fence such as the Los Griegos, and the Los Indios thinning and burning projects. Every year in La Cueva we attend the Northern Jemez Disaster Preparedness Cooperators workshop. This public event brings together agencies, volunteer groups, and residents to talk about risks and steps residents can take to make their private property more resilient to wildfires. Additionally, we developed a Community Wildfire Protection Plan CWPP with these communities at risk.
- ❖ Wild Earth Guardians, Los Amigos de los Valles Calderas, New Mexico Watershed Initiative, and U.S. Forest Service have restored/protected 6.2 miles of riparian areas (120 acres) and restored 94 acres of wetlands
- ❖ The Forest Guild has employed over 22 local youth to repair fences, clear trails, remove fuel from archeological sites and assist with other landscape treatment activities
- ❖ U.S. Forest Service and Pueblo of Jemez have removed fuels from over 800 sites in treatment priority areas and have assessed over 600 sites for treatment in the project area.
- ❖ New Mexico Watershed Initiative, Valles Calderas National Preserve, and US Forest Service have treated over 500 acres of noxious weeds and invasive plants in the project area. The Valles Calderas National Preserve, and US Forest Service have supported the Joint Venture Jemez Pueblo/Walatowa Industries with biomass from the thinning projects; Approximately 80 jobs have been created every year due to restoration.

2. *Contribution to reducing wildfire risk in a large landscape (Strategic placement of the project)*

3. The forest ecosystems that dominate this area, primarily ponderosa pine and dry mixed conifer forests, and to a lesser extent the piñon-juniper, have significantly departed from historic reference conditions. Nearly the entire forested landscape is in fire regime condition class (FRCC 2-3) moderately to highly departed, which poses a serious risk of uncharacteristically large and intense wildfires and loss of key ecosystem components. Over 80% of the ponderosa pine and 93% of mixed conifer are in a homogenous, mid-age, closed canopy state. The historic condition of large widely spaced fire-resistant tree species is now dominated by small fire-intolerant trees. Fire behavior models show a high probability of a large stand-replacing fire occurring in the area in the near future, and 100% of the Forest and private lands in this area are in a wild land urban interface (WUI). Our treatment units are scattered throughout the project area in order to create fire breaks and break up the continuity of the forest. This also provides diverse habitats for wildlife. Units are located on the west and south sides of communities, since the prevailing winds come from that direction.

Why it would be effective in reducing wildfire risk- Restoration activities will prevent or minimize the effects of catastrophic wildfires. Mechanical thinning and prescribed fire will:

- Reduce the quantity of fuels in decadent forest stands, by removing suppressed dying trees
- Create gaps between groups of trees, which will help keep fires on the ground instead of in the canopies
- Improve health and vigor of remaining stands, by reducing competition between trees
- Create optimal canopy coverage for the capture and retention of snow
- Promote understory vegetation for soil retention and nutrient cycling
- Allow for the re-introduction of low intensity fires to mimic historic fire regimes and reduce the potential for high severity fires.

3. *Removing Forest Products: (Will there be access for removal of forest products (how many road's, how much).* The Redondo/San Antonio Treatment areas are accessed by several forest roads (improved roads with native surface). Forest Road 10 and 376 are the main haul roads in these priority areas.

4. *Do we have the ability and authority to remove products?*

Currently we are anticipating the SWJM Final EIS and the Final Record of Decision by late summer of 2015, at which time we will have authorization to begin implementation of treatments and product removal on 30,000 acres of the landscape restoration area over the next 10 years.

What is the market- how will the products be used?

It is estimated that restoration treatments within the larger landscape area generally yield about 19.6 green tons of material /acre for commercial use. In other words they may yield about 9-12 CCF per acre. Depending on the size and quality of the wood, products will vary from high value vigas and dimensional lumber, to low value chips and firewood. There is a demand for beams, boards, ships, and firewood. It is possible that the contractor who gets to the Stewardship Contract will have a creative use for small logs, such as building a pellet or biomass plant.

Why is the program urgent (What is the risk?)

Fire behavior models show a high probability of a large stand-replacing fire occurring in the area in the near future, and 100% of the Forest and private lands in the area are in a wild land urban interface (WUI). The Sandoval County Community Wildfire Protection Plan identifies several "at-risk communities" in the SWJM area and ranks the area as a top priority for reducing the risk of uncharacteristic wildfire. Any year, there could be another large wildfire that consumes the forest. It is not a matter of if, but when, in regards to this risk.

Community, municipal and agricultural water sources/infrastructure at risk; Communities or concentrations of homes at risk from wildfire, post fire flooding or disruption to water supplies.

The Forest Service has identified and prioritized areas for treatment with the greatest risk to communities, and individual homes within the forest's wild land urban interface. The Pino priority treatment area will reduce the fire risk to the community of Sierra de los Indios (250 homes) and protect the water supply for the community of Ponderosa.

Restoration treatments will improve the functioning watershed processes that directly and indirectly affect the water supply of communities along the Rio Grande. Approximately 35% of the soils in the project area are rated as having a severe erosion hazard. When vegetation is removed the sites

become very vulnerable to post-fire runoff of topsoil, soil litter and organic matter, woody material and ash, damaging the natural and human environments downstream. The more live and dead fuel, the longer the residence time of a fire on the soil and the more severe the effects of the will be. Jemez Springs and the Pueblo have acequia systems which would be severely damaged by post-fire flooding. The streams running through the project area are in narrow canyons, with nowhere for flood water to spread out; therefore, floods would be severe. Houses, water systems, sewers, and roads could be lost in Jemez Springs, Jemez Pueblo, San Ysidro, and Ponderosa.

4. *What are the risks to and opportunities for economic development? Describe how your project will address them. (significant economic values at risk)*

Recreational/tourism values. The area has many attributes that attract recreation, including fishing, camping, hiking, rock climbing, bird watching, and nature viewing. These activities are valued by the local communities, the larger urban areas of Rio Rancho and Albuquerque, and by out-of state visitors and international tourists. Previous fires have greatly reduced tourism. Also, when fire danger is high, the Forest is closed to the public, so businesses in Jemez Springs and La Cueva suffer a great drop in revenue. Restoration treatments such as thinning and prescribed fire/pile burning, will temporarily limit access to some recreation or wood cutting areas in the short term but will have significant long term ecological and economic benefits to this community. Most of our prescribed fire is on the shoulder season which should not impact the economic benefits of tourism and only have a limited amount of smoke versus wildfires. If the area were to suffer a high-intensity fire, tourism would be impacted for years to come; people don't want to recreate in black, treeless forest.

Will this project supply wood to existing wood processing businesses or new wood industry?

One of the main goals of the project is to stimulate new industry and efficient use of small-diameter wood. It remains to be seen how this plays out, until the stewardship contract is awarded. Several existing proprietor-owned businesses in and immediately around the SWJM area produce a variety of wood products, including specialty building materials (latillas, vigas and beams), specialty carvings for homes, wood chip. Commercial firewood is an important use of wood in the region. There is potential interest in the SWJM projects from wood utilization businesses including the potential creation of a wood biomass facility to power local communities or research facilities in Los Alamos and Sandoval County.

5. *Is there a work force available? Describe the nature of the works force, including existing skill level and numbers.* Yes, for example, Walatowa Timber Industries (WTI), one of the existing businesses in the immediate area, employs approximately 4 workers to conduct mechanical thinning in the forest. These positions are generally machine operators (\$19-\$23/hour). Approximately 8 people are employed at the mill site in the manufacturing and wood utilization component of this operation. These positions are general laborers (\$10-\$30/hour depending on experience). Additionally, the Santa Fe NF has the workforce capacity to do the prescribed fire treatments and access to contractors with the capability to do road maintenance and decommissioning. The Jemez tribe is developing a forestry crew who will be able to mark and cruise timber. They also have a 20 person fire crew that is available on call, the Jemez Eagles.

Is this project in an area used for traditional community wood supply? Will a portion of the product be available as free or low-cost firewood to local communities? Estimate the percent of the volume removed you are willing to offer.

Yes, the acreages identified in this proposal are in areas used for community wood supply. There will be residual wood debris available for community firewood. Household firewood is an important use

of wood in the project area. It provides a cost savings in the form of reduced heating expenses, and an economic opportunity for entrepreneurs. Over 36 percent of houses in the Jemez Pueblo area are heated with wood (US Census 2000). It is estimated that these 400 acres would produce approximately 2000-4000 cords of firewood, depending on the specifications of the Stewardship Contract which has not been finalized yet. However, it is our intention to provide firewood to the local community.

Statement of qualifications: Project lead(s) - education, resume/description of similar projects:

Jeremy Marshall has been the SW Jemez CFLRP Implementation Leader from November 2013 to present. He has been involved with planning and implementation of prescribed fire, thinning and watershed restoration work associated the SW Jemez CFLRP on the Santa Fe National Forest. Prior to this he worked on the Sweet Home All Hands Collaborative on the Willamette NF in Oregon. Jeremy has a BA, Liberal Studies (Forest Ecology Focus) 1998 Humboldt State University, Arcata, CA. (see attached resume)

