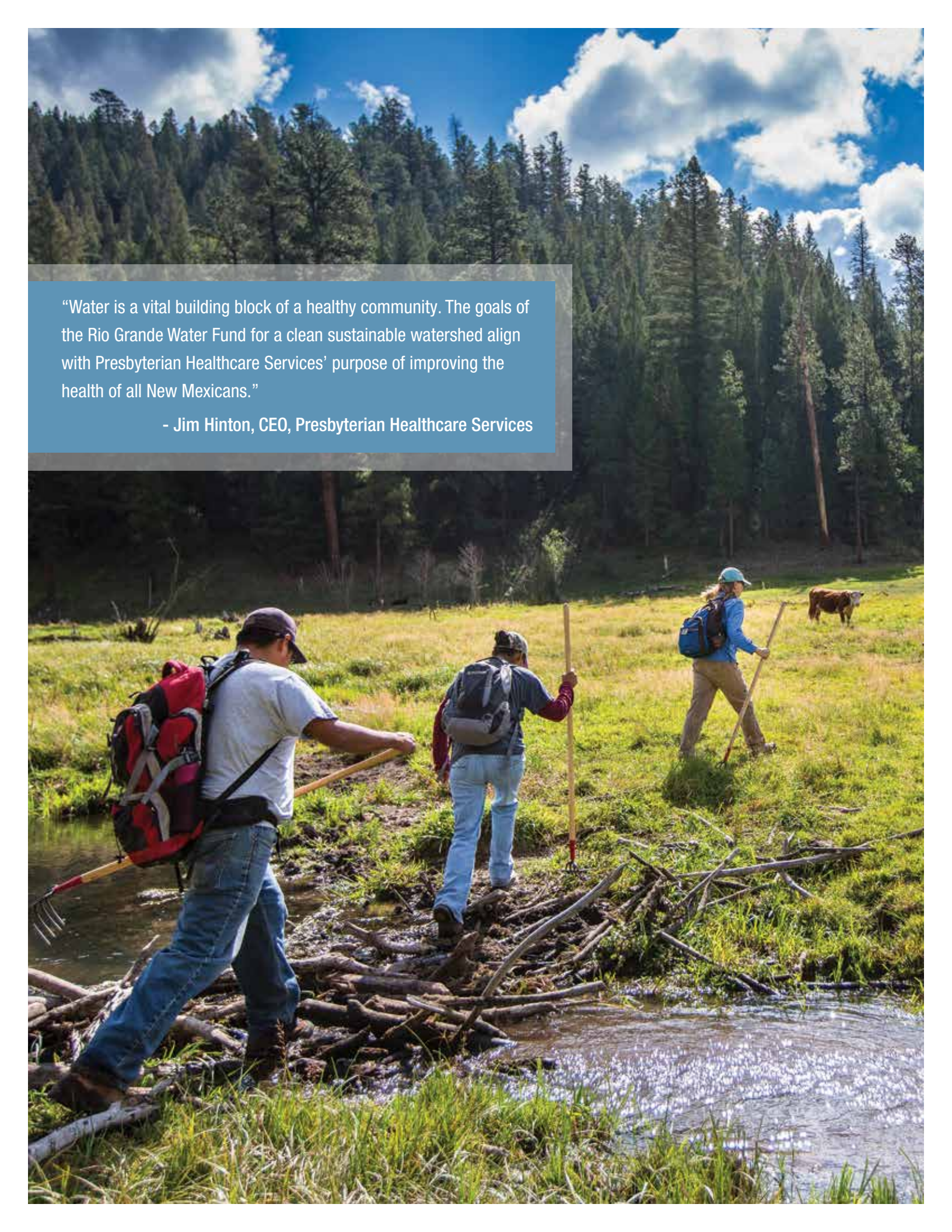




RIO GRANDE WATER FUND WILDFIRE AND WATER SOURCE PROTECTION

▶ **ANNUAL REPORT 2016**



“Water is a vital building block of a healthy community. The goals of the Rio Grande Water Fund for a clean sustainable watershed align with Presbyterian Healthcare Services’ purpose of improving the health of all New Mexicans.”

- Jim Hinton, CEO, Presbyterian Healthcare Services



▶ MESSAGE FROM THE EXECUTIVE COMMITTEE

THANK YOU

The Rio Grande Water Fund launched two years ago to exponentially pick up the pace of protecting our forested water sources. This 2016 report shows how partners are working to leverage their investments and coordinate activities, reaching further together and getting more done. Today, key watersheds are focal areas for critical planning needed to achieve long-term water security; people have newly created forestry jobs and important access to increasing amounts of firewood; and students are learning by monitoring treatments that will keep our forests and water safe for future generations.

Matching the scale of watershed restoration to the impact of mega-fire on headwater forests is a key objective of the Rio Grande Water Fund. With proof of the water fund concept from the Santa Fe Watershed, we started small. Now the Rio Grande Water Fund has 53 Charter signatories and has tripled the average acres restored compared to just four years ago. In one example, the Greater Santa Fe Watershed Coalition is scaling up their efforts to more than 10 times their original goal. Their collaborative planning will lead to the same on-the-ground activities, but at a broader scale than ever possible. As a result, they will be more effective at protecting regional water security.

In this second annual report, you will find highlights of studies that guide our investments; stories of students learning firsthand where their water comes from; data about treatment activities and jobs created; and sincere appreciation to all who have made a commitment to work together for Rio Grande water in the future. Thank you!

- Jake Caldwell, LOR Foundation
- Rick Carpenter, Santa Fe Water Division
- Dale Dekker, Dekker/Perich/Sabatini
- Martin Haynes, Business Water Task Force
- Cal Joyner, USDA Forest Service
- Laura McCarthy, The Nature Conservancy
- Brent Racher, New Mexico Forest Industry Association



What is the Rio Grande Water Fund?

The Rio Grande Water Fund is a public-private partnership whose goal is to generate sustainable funding for a 20-year program to restore 600,000 acres of forested watersheds—including thinning overgrown forests, managing fire, restoring streams, and rehabilitating areas that flood after wildfires.

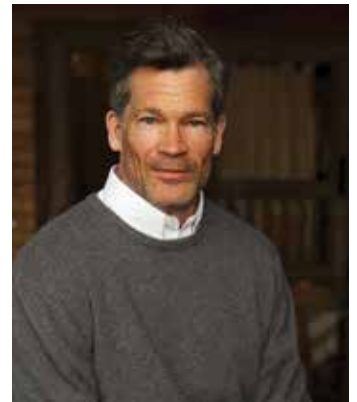


▶ HOW MONEY HAS BEEN INVESTED

We have made substantial progress increasing the pace and scale of critical forest restoration in northern New Mexico this year. Working together, we are continuing to secure clean water for communities, catalyze much-needed investments, and kick off new projects in priority areas. Here are highlights of what your support has helped accomplish.



In Their Words



“Wildfires are burning longer and hotter than ever, threatening water supplies, livelihoods, habitat and wildlife, as well as costing the U.S. economy billions of dollars a year. We are proud to support the innovative Rio Grande Water Fund in its efforts to restore forest health in New Mexico and ensure clean water for communities across the state.”

Louis Bacon,
Founder and Chairman of
The Moore Charitable
Foundation and its affiliates

THIS PAGE clockwise Louis Bacon © Yann Dandois; The Water Fund paid for archaeology surveys at Tusas-San Antonio and Pueblo Ridge, a requirement for NEPA clearance. © USDA Forest Service; Measuring a fire-scarred tree as part of an archaeology survey. © USDA Forest Service; Burning debris piles in the Aztec Springs area of the Greater Santa Fe Fireshed © TNC (Robert Findling)

BY THE NUMBERS

20% increase

in forested lands restored this year thanks to Rio Grande Water Fund



12,000 acres

treated in total by leveraging Water Fund investments



2,414 acres

with archaeological surveys to complete NEPA planning



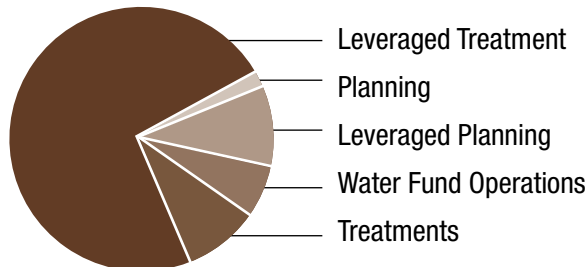
\$4 leverage

from public funding for every single Water Fund dollar invested

EXPENDITURES	2014-2015	2015-2016
Water Fund Operations	\$330,000	\$330,000
Direct and Leveraged Treatments	\$4,100,000	\$3,292,920
Direct and Leveraged Planning	\$652,200	\$1,589,350
Total Expenditures	\$4,860,000*	\$5,212,270*

* All expenditures not represented above

FUNDING SPENT 2016



ACRES	2014-2015	2015-2016
Direct Planning Acres	0	2,414
Leveraged Planning Acres	0	21,890
Direct Treatment Acres	130	561
Leveraged Treatment Acres	10,000	12,000

Lightning Strikes

As luck would have it, a July 24 lightning strike on McGaffey Ridge, south of Taos, touched down in an area that Taos Valley Watershed Coalition partners had previously tagged as ideal for natural fires. Though the smoke plume loomed large over Pot Creek, the FireWise community kept their cool, secure in the knowledge that several years of reducing crowded, woody debris around their homes would pay off. The fire topped out at about 500 acres, improving habitat for wildlife and performing nature's "cleansing" function—for about one-tenth the cost of thinning.



McGaffey fire © Alan Eckert Photography

▶ 2015-2016 RGWF RESTORATION INVESTMENTS





▶ RIO GRANDE WATER FUND INVESTORS

Founding Investors

- Bernalillo County
- Ciudad Soil and Water Conservation District
- Fire Learning Network
- Dr. Steven Hecht and Dori Smith, MEd
- LOR Foundation
- Lowe's Charitable and Educational Foundation
- Lowe's Companies
- PNM Resources, Inc.
- Taos Ski Valley Foundation
- US Bureau of Reclamation: Southern Rockies Landscape Conservation Cooperative
- USDA Forest Service

Lead Investors

- Anonymous
- Buckman Direct Diversion Project
- City of Albuquerque
- McCune Charitable Foundation
- Middle Rio Grande Conservancy District
- New Mexico Department of Game and Fish
- New Mexico Watershed and Dam Owners Coalition
- NM EPSCoR
- Racher Restoration Management LLC
- Santa Fe Community Foundation

Secure Investors

- Albuquerque Bernalillo County Water Utility Authority
- Albuquerque Community Foundation
- Avalon Trust
- Jonathan and Kathleen Altman Foundation
- Edgewood Soil & Water Conservation District
- General Mills Foundation
- Lineberry Foundation
- New Mexico Interstate Stream Commission
- US Geological Survey
- Wells Fargo Bank/Wells Fargo Foundation

Contributors

- Anonymous
- Bohannon Huston, Inc.
- Kristen and James Hinton
- Los Alamos County
- Los Alamos National Laboratory and Los Alamos National Security, LLC
- Tides Foundation
- United Way of Central New Mexico
- US Army Corps of Engineers
- Williams Family Charitable Foundation

Other Supporters

- Bank of Albuquerque
- Kathleen Bearden
- Bow and Arrow Brewing Co.
- Mr. Irving M. Deitz III
- Kelly's Brew Pub
- Los Alamos National Bank
- Mrs. Jennifer M. Mammoli and Dr. Andrea Mammoli
- National Forest Foundation
- Sayak Natural Resource Consulting
- SCM Partners, LLC

▶ TRACKING RESULTS, ENGAGING YOUTH

The Water Fund teamed up with the Forest and Watershed Restoration Institute (FWRI) at New Mexico Highlands University this year to track the environmental effects of forest treatments. The data enable us to make necessary course corrections through the adaptive management framework. Last summer, a roving team of junior and senior students in college natural resource management programs monitored seven sites in the Chama Peak Alliance project area. At a rate of one plot per 10 acres, they quantified pre- and post-treatment conditions. An additional 20 plots were monitored in the David Canyon area near Albuquerque. Information gathered will be analyzed this winter. Also, the Doghead Fire has presented a unique opportunity to measure conditions after treatment and wildfire. The team will establish a few plots across multiple land ownerships to assess forest conditions in affected areas.

This year's Water Fund successes also include ever-increasing youth engagement and citizen science outreach. Krista Bonfantine of Arid Land Innovation engaged 26 students, ages 16 to 24, in watershed monitoring at four sites across northern New Mexico. Before and after, participant quiz scores improved from a "C/D" to a "B+"—illustrating significant growth in students understanding the importance of watershed science. The program even caught the attention of KUNM, which aired an "audio postcard" in July (<http://kunm.org/post/young-scientists-measure-wildfire-threat#stream/0>).



In Their Words



“The City of Albuquerque is proud to be a partner of The Nature Conservancy’s Rio Grande Water Fund. Our support of environmental education has taught over 500 local children about topics such as storm water management, watershed connections, the importance of forests and mountains as water towers, drinking water sources, and the historic role that fire has played in maintaining healthy forests. We hope the classes will inspire them to become conservationists, helping to ensure our land and water are healthy for generations to come.”

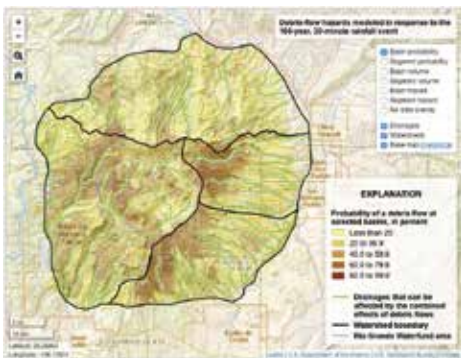
Kevin Daggett,
City of Albuquerque

THIS PAGE CLOCKWISE Kevin Daggett © courtesy Kevin Daggett; Rocky Mountain Youth Corps and local contractor training prior to Water Fund project work © Mark Scheutz; Students sorting and classifying stream macroinvertebrates as indicators of water quality © TNC (Krista Bonfantine); Thinning in David Canyon with forest debris masticated © Alan Eckert Photography

▶ INFORMATION FLOW

HAZARD WARNING

A new interactive map and companion report from the U.S. Geological Survey is allowing agency planners and Jemez Mountain residents to forecast hazards from post-fire flooding and debris flows. As we saw after the devastating Las Conchas fire, wildfire can dramatically increase the likelihood of damaging debris flows—even in landscapes stable throughout recent history. This study provides new information for decision makers about locations at highest risk for wildfires and resulting flooding and debris flows. With this data in hand, we can prioritize areas for forest-thinning projects that best protect communities, water and wildlife.



The Jemez Mountains study is the second of its kind sponsored by the Rio Grande Water Fund, with funding contributed by the Albuquerque Bernalillo County Water Utility Authority, Buckman Direct Diversion Project, Los Alamos County, U.S. Army Corps of Engineers, and the Santa Fe National Forest. Results are available

online, along with an interactive map that allows viewers to zoom into specific areas and learn about post-fire hazards.

“This tool allows land managers and decision makers to prioritize areas for forest thinning and other wildfire mitigation measures,” said Anne Tillery, lead author of the U.S. Geological Survey. See study: <http://dx.doi.org/10.3133/sir20165101>

RETURN ON INVESTMENT

Another study finding aids our understanding of Water Fund returns on investments. Results indicate that, for an entire basin, a 10 percent reduction in moderate and high burn severity areas decreases post-wildfire debris flow probability by 15 percent. In other words, tree thinning and controlled burns to reduce fire severity will reduce the likelihood of debris flows even more.

Location of Modeled Fire	Damages If Left Untreated	Damages After Treatment	Cost of Treatment	ROI
Taos Ski Valley	\$107 Million	\$16 Million	\$62 Million	57%
Pot Creek	\$149 Million	\$23 Million	\$62 Million	118%

Results of Taos County’s Return on Investment Study for Fuels Reduction. See nmconservation.org/rgwf/files/RGWF_TaosFuelsReductionROI_Results.pdf

The figures above exclude many additional benefits to people living in Taos including economic multiplier effects, impacts on non-market categories such as lost recreation infrastructure, and protection of tribal cultural sites and wildlife habitat. The bottom line? Return on investments are positive even without representing the full economic benefits to Taos’ population in these numbers.

Return on Investment Study Pioneered in Taos County

As the Rio Grande Water Fund ramps up, the need to quantify projected financial losses to property, goods and services from catastrophic wildfire has become ever more important. Economists who specialize in risk assessment and non-market valuation were called in to help and undertook a study for Taos County. The “what if” study looked at damages in the event of wildfire, comparing projected losses under the current (and untreated) conditions, with forests already restored through thinning and controlled burning. The conclusion? Fires cause substantially less damage under the forest treatment scenario. Two representative fires were modeled and—even with conservation assumptions—a positive cost/benefit ratio was supported.



THIS PAGE Larger ponderosa pines survive controlled burns that thin out the undergrowth. © Alan Eckert Photography

▶ FOCUSED PLANNING

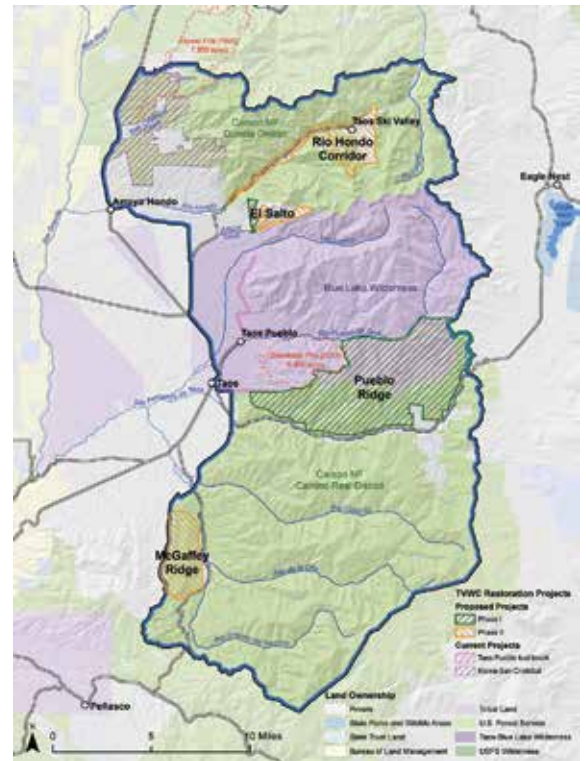


Strategic investment of Rio Grande Water Fund and partner funds in on-the-ground treatments is critical for success. That can be a challenge, but by collaboratively using science and spatial analysis, we're doing it together. Working

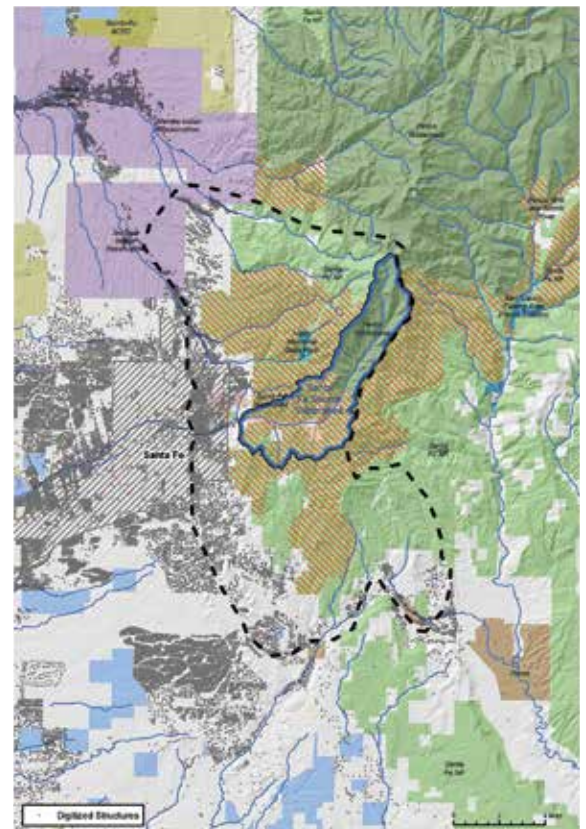
with local stakeholders to develop restoration strategies generates buy-in and approval for ongoing treatments in their communities. These landscape-scale strategies are a guide for site-specific planning and—when coupled with an inclusive, transparent and science-based process—they ensure restoration funding is well spent.

The Rio Grande Water Fund encourages collaborative strategy development in all of our focal areas and, in 2016, we completed one such plan and started two more. The first plan for landscape restoration was adopted by the Taos Valley Watershed Coalition, which includes 19 partner organizations. Next, an effort was launched by the Greater Santa Fe Fireshed Coalition in the southern Sangre de Cristo Mountains. And then through the combined efforts of the Chama Peak Land Alliance and San Juan Headwater Forests Partnership, a strategy is being designed for the Blanco and Navajo watersheds that provide water for Albuquerque and the Middle Rio Grande.

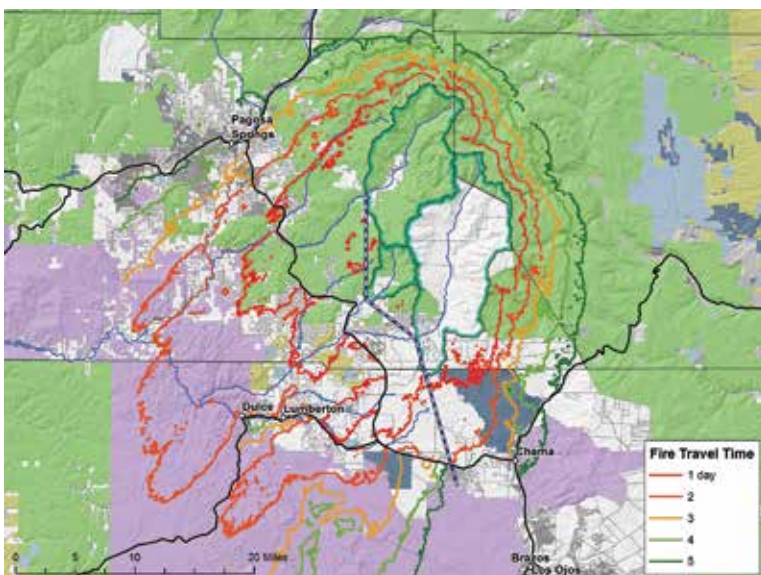
Taos, Landscape Restoration Strategy



Greater Santa Fe Fireshed, WUI



Blanco-Navajo, Fire Rates of Spread



▶ A SMART INVESTMENT IN WOOD AND JOBS



In addition to securing water and other benefits, restoring forest health at a large scale and pace generates needed new jobs in New Mexico. TC Company, for example, was awarded a 5-year stewardship contract for the Southwest Jemez area in July. To harvest and market the new wood supply generated by restoration treatments, owner Terry Conley says his staff will double as he ramps up to complete the contract work. Walatowa Timber Industries (WTI), a joint venture between the Pueblo of Jemez and Terry Conley, will also double their staff this coming year. “The stewardship contract,” according to Conley, “brings the stability needed

to pay decent wages and run quality equipment in the woods.”

WTI sells lumber, latillas, vigas, mulch and firewood, and provides raw materials to local sawmills. In four years, WTI has gone from processing 100 loads of wood each year to more than 600. Markets for products have varied widely over the years, and WTI has been able to respond with changes to their product mix. With firewood, however, “every year we see sales double,” says Conley.

TC Company’s partnership with the Jemez Community Development Corporation provides major support for the rural economy. And WTI has created jobs for the Pueblo of Jemez. These stewardship contracts illustrate the Water Fund’s triple bottom line: When large-scale ecosystem health is achieved, water sources are protected from mega-fire, while jobs and wood products are made available for communities.

Value-added

TSS Consultants was retained to conduct a Wood Waste Utilization Assessment in Taos, with a 50-mile radius. They found nearly 100 percent utilization of existing supplies of roundwood and slash greater than 5” diameter. The most common uses? Lumber and firewood. The study also identified currently available, but under-utilized, wood—small-size slash from tops and limbs—and recommended several value-added products that might be feasible at a community-scale.

Double

the number of jobs at TC Company



1,000

truck loads harvested in 2016;
1,600 truck loads expected in 2017

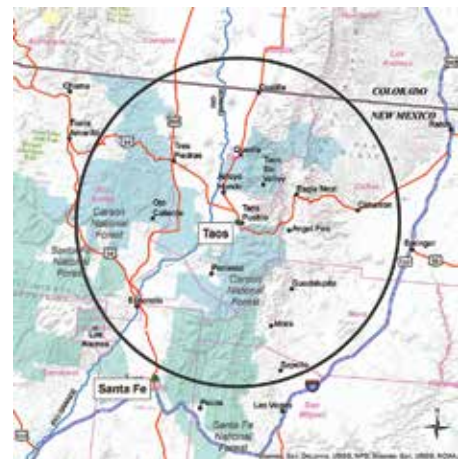


2x

staffing increase at Walatowa Timber Industries

Still at work:

In 2015, we reported 68 jobs associated with the Isleta Project in the Manzano Mountains. Those jobs were sustained in 2016 until fire danger curtailed operations.



Study area for Wood Waste Utilization assessment, with 50-mile radius.

CHARTER SIGNATORIES



*Full list of investors inside

FOR MORE INFORMATION, VISIT US ONLINE AT NATURE.ORG/RIOGRANDE