

MAY / JUNE 2023

FIRE, FOREST AND WATERSHED RECOVERY

GREEN FIRE TIMES

News & Views from the Sustainable Southwest



**EARLY SANGRE DE CRISTO
LAND GRANT SETTLEMENTS**

2023 NEXT GENERATION WATER SUMMIT

VOLUME 15 NUMBER 3

GREENFIRETIMES.COM

PUBLISHER GREEN EARTH PUBLISHING, LLC

EDITOR-IN-CHIEF SETH ROFFMAN, EDITOR@GREENFIRETIMES.COM

ASSOCIATE EDITOR JAIME CHÁVEZ

ADMIN. ASST./EXEC. CONSULTANT THÉRÈSE WILLIAMS

DESIGN WITCREATIVE

COPY EDITOR STEPHEN KLINGER

CONTRIBUTING WRITERS FRANCES ANDERSEN, CHRISTINE Y. CHÁVEZ, JAIME CHÁVEZ, CHARLES CURTIN, MARTHA DAVIS, ANDREW ERDMANN, LAWRENCE D. GALLEGOS, PAULA GARCÍA, HANNAH GROVER, BODHI LEWIS, MATTHEW J. MARTINEZ, RYAN C. MAST, NICOLE MAXWELL, MARÍA MONDRAGÓN-VALDEZ, CHRISTOPHER PIEPER, DOUG PUSHARD, VALERIE RANGEL, SETH ROFFMAN, MICAH ROSEBERRY, ALESSANDRA SEAWRIGHT, GLENN SCHIFFBAUER

CONTRIBUTING PHOTOGRAPHERS DAMIAN ANAYA, CHARLES CURTIN, KAI-T BLUE-SKY, MATTHEW J. MARTINEZ, JIM O'DONNELL, SHANNON ROMELING, SETH ROFFMAN, ARNOLD VALDEZ, REID WHITTLESEY

ADVERTISING SALES ADVERTISE@GREENFIRETIMES.COM

**PRINTED LOCALLY WITH 100% SOY INK ON
100% RECYCLED, CHLORINE-FREE PAPER**

GREEN FIRE TIMES ©2023 GREEN EARTH PUBLISHING, LLC
C/O SOUTHWEST LEARNING CENTERS, INC.

A NONPROFIT EDUCATIONAL ORGANIZATION (EST. 1973)
505-989-8898, P.O. BOX 8627, SANTA FE, NM 87504-8627
GREENFIRETIMES.COM

COVER: RÍO GRANDE WATER FUND ILLUSTRATION © THE NATURE CONSERVANCY
RESTORING ESSENTIAL FORESTED LANDS UPSTREAM ENSURES A CONTINUOUS SUPPLY
OF CLEAN WATER DOWNSTREAM.

GREEN FIRE TIMES REALLY NEEDS YOUR SUPPORT

Green Fire Times is a platform for regional, community-based voices—useful information for residents, businesspeople, students and visitors—anyone interested in the history and spirit of New Mexico and the Southwest. GFT's small, dedicated staff and multitude of contributors generate articles documenting the interrelationship of community, culture, the environment and the regional economy. The sustainability of our region affects all of us, and requires people from all backgrounds working together to create solutions. One of the unique aspects of GFT is that it provides multicultural perspectives that link green, cutting-edge innovations with time-honored traditions.

Storytelling is at the heart of community health. We have an opportunity to change the story going forward, which can lead to positive transformational change. GFT shares inspiring stories of hope and community action. By helping our communities discover who they once were and what they can become, a more positive future can be created.

Of course, it is an extremely challenging time to continue to produce a free, quality, independent publication. Production costs have greatly increased. Many local and regional publications have folded or have been bought up by corporate entities. Fortunately, a growing number of publications are receiving boosts from nonprofits that are devoted to protecting journalism. GFT is owned by Southwest Learning Centers, Inc. (est. 1973), a nonprofit educational organization. SWLC provides a mentorship program for some of GFT's writers, aspiring journalists and documentarians.

Green Fire Times is struggling to survive. We also need funding to upgrade our on-line archive and make 14 years of articles more accessible to community members, students and researchers. Don't assume that someone else will help. Please consider making a tax-deductible donation through our website, or send a check made out to Southwest Learning Centers (with a notation 'for GFT') to P.O. Box 8627, Santa Fe, N.M. 87504-8627. Also, please advertise! The print edition—currently published every other month, while our website is updated more frequently—is widely distributed from Albuquerque to Taos and beyond. For a rate sheet, visit GREENFIRETIMES.COM.

FIND YOUR FUTURE @ NORTHERN New Mexico College

You may qualify for
FREE TUITION with the
New Mexico Opportunity
Scholarship!*

*Based on NM Higher Education
Department residency requirements.

NORTHERN offers 50+ bachelor's, associate and certificate programs in
Arts & Human Sciences, Liberal Arts, STEM, Nursing, Technical Trades and
FULLY ONLINE PROGRAMS IN BUSINESS, TEACHER EDUCATION & RN TO BSN.

Now Enrolling for Summer & Fall 2023
Call us at (505) 747-2111 or visit nmc.edu

GREEN FIRE TIMES

News & Views from the Sustainable Southwest

CONTENTS

WATER AFTER FIRE: REFLECTIONS ON THE HERMIT'S PEAK-CALF CANYON FIRE AND FLOODS – PAULA GARCÍA / 4

EARLY SANGRE DE CRISTO LAND GRANT SETTLEMENTS – MARÍA MONDRAGÓN-VALDEZ / 6

OP-ED: CHARLES CURTIN – HERMIT'S PEAK/CALF CANYON FIRE RECOVERY / 8

RETHINKING FOREST HEALTH – CHRISTOPHER PIEPER / 10

HOLD IT HIGH: THREE RESTORATION PROJECTS THAT ARE IMPROVING LIFE IN THE RÍO GRANDE WATERSHED – THE NATURE CONSERVANCY / 11

NEWSBITES: 13, 14, 21, 27

ALDO LEOPOLD WRITING CONTEST STUDENT WRITERS – BODHI LEWIS, FRANCES ANDERSEN, ALESSANDRA SEAWRIGHT / 16

NEW MEXICO'S STATEWIDE WATER-PLANNING PROGRAM – ANDREW ERDMANN / 18

U.S. SUPREME COURT HEARS CASE ON NAVAJO NATION ACCESS TO COLORADO RIVER WATER – SETH ROFFMAN / 22

CREATING A CULTURE OF COMMUNITY ACCESS AND ENGAGEMENT – MATTHEW J. MARTINEZ / 24

A LETTER FROM VALERIE RANGEL, CITY OF SANTA FE HISTORIAN / 26

2023 NEXT GENERATION WATER SUMMIT / 28

LIGHT SHINING THROUGH THE CRACKS: NEW APPROACHES TO INFRASTRUCTURE – MARTHA DAVIS / 29

SIMPLIFIED GRAYWATER PERMITTING COMING SOON – DOUG PUSHARD / 30

SANTA FE'S CERTIFIED WATERWISE COMMERCIAL PROGRAM – GLENN SCHIFFBAUER / 31

OP-ED: RYAN C. MAST – NEW MEXICO IS MAKING A DOWN PAYMENT ON INFRASTRUCTURE / 34

OP-ED: LAWRENCE D. GALLEGOS – WILL THE INFLATION REDUCTION ACT AND 2023 FARM BILL MAKE A DIFFERENCE? / 35

LEGISLATIVE WINS FOR NM'S FOOD, AGRICULTURE AND LAND STEWARDSHIP – PAM ROY / 35

AGROFORESTRY HAS POTENTIAL IN NEW MEXICO – MICAH ROSEBERRY / 36

REZO, I PRAY. A POEM BY JAIME CHÁVEZ / 36

WHAT'S GOING ON / 37



Día de San Ysidro acequia blessing procession 2022, Atrisco, New Mexico © Seth Roffman



**Because Healthy = Delicious Organic Food
You will want to get your groceries here.
314 Paseo del Pueblo Norte
Taos, New Mexico
575-758-3841**

Everyone is welcome to shop here.

taosfood
coop

the small store with the big heart

Water After Fire

Reflections on the Hermit's Peak–Calf Canyon Fire and Floods in the Las Vegas and Mora, New Mexico areas

BY PAULA GARCÍA

A Presentation for the Río Chama Congreso, Feb. 25, 2023

Hello everyone. I'm Paula García. I'm the executive director of the New Mexico Acequia Association (NMAA). I grew up in Mora, and this presentation is about my experience with the Hermit's Peak–Calf Canyon Fire (HPCC) and floods during the past year.

The NMAA is a grassroots, membership-based organization of acequias and community ditches. Since 1989, we have been working to protect acequias and agricultural water rights through education and advocacy on water, agricultural traditions and leadership development.

Acequias are located around the state—mostly in the tributaries, the high-elevation mountain villages. They are some of the communities most vulnerable to catastrophic wildfires and wildfire flooding. We have certainly seen that with Hermit's Peak-Calf Canyon. Those fires have devastated the watershed. Where



it was covered with beautiful forest, it's now charred, and all of that debris has been washing down into the streams and the Las Vegas water system. It's been devastating for acequias that have relied on this watershed for water for hundreds of years.

The fire started as a “controlled” burn, but it escaped the controlled-burn perimeter. The Hermit's Peak fire was almost contained, but later in April, the

For many of us, recovery is going to take the rest of our lives.

Calf Canyon Fire started from smoldering piles of cleared trees from thinning projects. On April 22, from morning to afternoon, the fire spread rapidly. It made a 15-mile run through where I grew up, in Peñasco Blanco, and our homeland was ravaged in one day. We watched helplessly as it went from valley to valley over ridges into other communities and villages. People had to rapidly evacuate. We were moving farm equipment out of our barns into fields to try to save it.

Mora is home to our school, the main parish of our churches and the main institutions of our community. Hundreds of homes were burned, and that was devastating for many families, but many homes were saved. As families returned from evacuation, they came back to a burned landscape. In a lot of places, had it had not been for the bulldozed lines, that fire would have reached hundreds of homes. For a lot of people, the smoke was very difficult to endure. Even as we watched from a distance, our burned landscape was traumatic and devastating. The fire burned most of our favorite places.

The fire was starting to go to Taos, Angel Fire and Peñasco. The rains came just in time to put that fire out. It was a sense of relief, but at the same time, we had a lot of anxiety and dread with the coming of the monsoon season because of the flooding we knew was going to happen. For a lot of people, there was another round of evacuations.

There has not been any one coordinated effort yet.

and down into our valleys and acequias. Families struggled to stay safe amid almost daily monsoon rains and floods. Some homes suffered major damage. Communities had to go through this over and over again every time it rained.

We're still grappling with the aftermath. After the flooding, the acequias were inoperable. They were so filled with ash and sediment and debris that we lost an entire season of irrigation. If partial sections clog up, none of the acequia can be used. Diversions were clogged with large logs. We've never seen this before in our entire history, not on this widespread scale. Acequias about 20 miles downstream from the burn scar were clogged. In some communities, not just the acequia, but the mutual domestic water line, fiber optic cable and the county road where the culvert was, were destroyed.

There is a major capacity problem to organize and mobilize people in this checkered landscape to get all onboard on one project.

does not do any kind of work in the watershed or in the landscape. We're struggling with how that kind of work can be done. We're on a steep learning curve because we've never done this before. The flooding we're getting from the watershed is devastating, and many acequias that were irrigating from this area are clogged and inoperable.

There's a long road to recovery. We know that this is a long-haul effort; it's going to take decades, and for many of us, it's going to take the rest of our lives. We need much more effective programs for landscape-scale restoration, and this is not something that can be done under the current framework. The programs are siloed. The Forest Service can do work on USFS lands but does not consider the downstream communities. NRCS can work on private lands but not on USFS lands. There is a major capacity problem to organize and mobilize people in this checkered landscape to get all on board on one project. It's not clear to us how that's going to happen. We need a coordinated effort.

There are some federal programs that would work, but it is not clear how they're going to move us toward recovery. Immediately after the fire, they had

In our watershed, the slopes were so bare of vegetation that there was major erosion, and sediment, ash and debris flowed into the rivers

This major damage is very difficult to repair. We mapped about 72 acequias in the burn scar and assisted almost 40 of them with Federal Emergency Management Agency (FEMA) applications. It's a long, arduous process, and that's only for acequia infrastructure. FEMA

Even as we watched from a distance, our burned landscape was traumatic and devastating.

a Burned Area Emergency Response (BAER) team, but that is really a technical team that generates a map and technical report based on recommendations from the Forest Service, but they aren't too concerned with the downstream communities, based on what we've seen. The Burned Area Rehabilitation (BAR) program needs more resources in order to have an impact, and there are many more floods happening now. This program should be expanded at the national level. There is also an NRCS program for watersheds but it is for long-term work and there are gaps in local and state capacity to be

We need much more effective programs for landscape-scale restoration, and this is not something that can be done under the current framework.

sponsors for that work. As of February 2023, it appears that acequias are not able to access resources through the NRCS Emergency Watershed Program (EWP).

The Joint Chief Program has potential because it's a collaboration between the Forest Program and National Resource Conservation



Record winds and low humidity pushed fire across the landscape.

Service (NRCS). It would be good if more resources could be allocated to post-fire recovery. Likewise, RCCP and EQIP have a lot of potential, but for limited-resource communities, those programs can be difficult to participate in because of the application process.

Bright Spots on the Horizon

There is potentially some really good work in planning happening

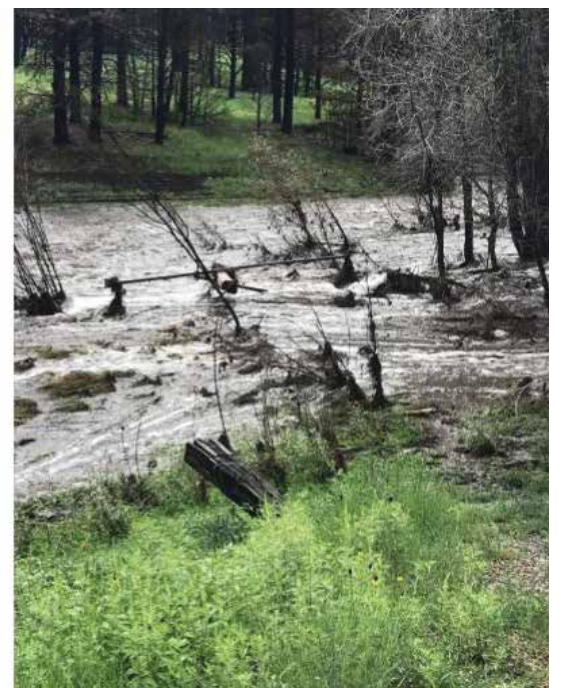
around reforestation. The John Harrington Center in Mora is going to be a hub for the reforestation efforts to provide more seedlings.

In some areas, the acequias are starting their own recovery. While they haven't been able to access FEMA funds yet, we have been able from private donations, such as Western Sky Community Health, to get some debris removed. We're renting equipment. Also, we're accepting volunteers for acequia cleaning. In the fall we did some limited acequia work with volunteers from Riversource and Los Jardines Institute, which was wonderful. If anyone's interested in signing up for a work crew, they can reach out to the NMAA.

We also worked out an arrangement with the New Mexico Department of Transportation. The NMDOT contractors can come in with their equipment, work on an acequia on debris removal, and then they get reimbursed from FEMA. They assisted three acequias in Río Arriba County that were damaged by flash flooding in July 2022, and they are planning similar work in the HPCC and Black Fire areas. Several acequias are already in line to get assistance from NMDOT.

We've got lots of acequias signed up to get this help and we're hoping that some of them will be cleaned out before spring. But we're also bracing for tough times ahead because the flooding will probably happen repeatedly. So, we need to pace ourselves and recover and get through this in phases, and at the same time, look forward to long-term recovery. ■

Editor's Note: *Since this presentation in February, the NRCS announced that \$200 million will be made available for disaster recovery statewide. Also, an action by NRCS Chief Terry Cosby has cleared the way for acequias to be eligible for the Emergency Watershed Program (EWP). USDA Secretary Tom Vilsack made the announcement at a meeting in Las Vegas, New Mexico on April 4. USDA Undersecretary Homer Wilkes was in Mora County on April 25 to share the news with local acequia leaders in Holman, a site of major flood damage.*



Debris washed down hillsides into streams and acequias. Photos courtesy New Mexico Acequia Association



Acequias, culverts, domestic water lines, fiber-optic cables and county roads were destroyed in some communities.

Early Sangre de Cristo Land Grant Settlements

A social and cultural evolution

BY **MARÍA MONDRAGÓN-VALDEZ**

Nuevo Mexicano migration into the uplands of north-central New Mexico and Colorado was a slow process with a complexity of defining moments. Highly static, immovable and insular, the 19th-century frontier was a hostile place due to the history of occupation of Indigenous land by colonies founded under Spanish dominion. Despite many insurmountable barriers, long-residing Pueblos and interrelated Hispano families of original founders lived in close proximity in the lower elevations. It took until the middle of the century for the uplands to be settled. This article recounts part of the story of this area's social and cultural evolution.

Though many bands hunted in the San Luis Valley from the end of the Ice Age forward, the Tewa Pueblos are linked to this primordial landscape, for their forefathers spoke of a "sandy lake place to the north" as the location where their ancient ancestors emerged. A sandy lake did in fact exist a very short distance from contemporary northern New Mexico during the Ice Age. The hydrologic past is faint, but scientists

The impacts of that era have been entrenched within the fabric of those whose ancestral and genetic lines were anchored in the cultural landscape.

have evidence of a shoreline, lagoons, barrier bars, perennial ponds and marshlands very similar to Lake Texcoco in the Valley of México. Flanked by mountain ranges, with nine peaks elevated above 14,000 feet, the lake was estimated to be at least 50 miles wide and 100 miles long. The primeval "sandy lake" later dubbed "Lake Alamosa" by scientists dominated the San Luis Valley of Colorado for three million years, until a catastrophic event caused the "quiet water" to overflow, collapsing the southern rim.

Water flooded southward through a deep gorge, cutting a pathway from the headwaters and extending tributaries of the Río Grande to the lowlands. Underground, the lake's excess flow was slowly impounded in three chambers, with clay barriers forming the perimeter of a massive aquifer. Spilling outward toward the edge of Sierra Blanca Massif, sand from the lake became the largest inland dunes in North America. The San Luis Valley had many distinct features that made it appealing to early people: cooler and wetter uplands, ecologically diverse zones, hot springs and a turquoise outcropping that was mined in prehistoric times. Together, these attributes would have made the valley a place for transmittal of ritual knowledge during antiquity.

As time moved slowly forward, colonists from México came to the Tewa World. Led by strongmen, soldiers and militant-like clerics, descriptions of the terrain, the sedentary people and economic potential of New Mexico's rugged landscape gradually emerged. The vanguard traveled through areas already settled, and so the lowlands were described in relative detail. In contrast, the uplands were unknown, though exploratory parties may have entered the San Luis Valley just before colonization. When the lowland colony was founded with the use of brutal military power and weaponry in 1598, the religious and social sphere that ensured harmony in the Tewa World shattered but was not destroyed.

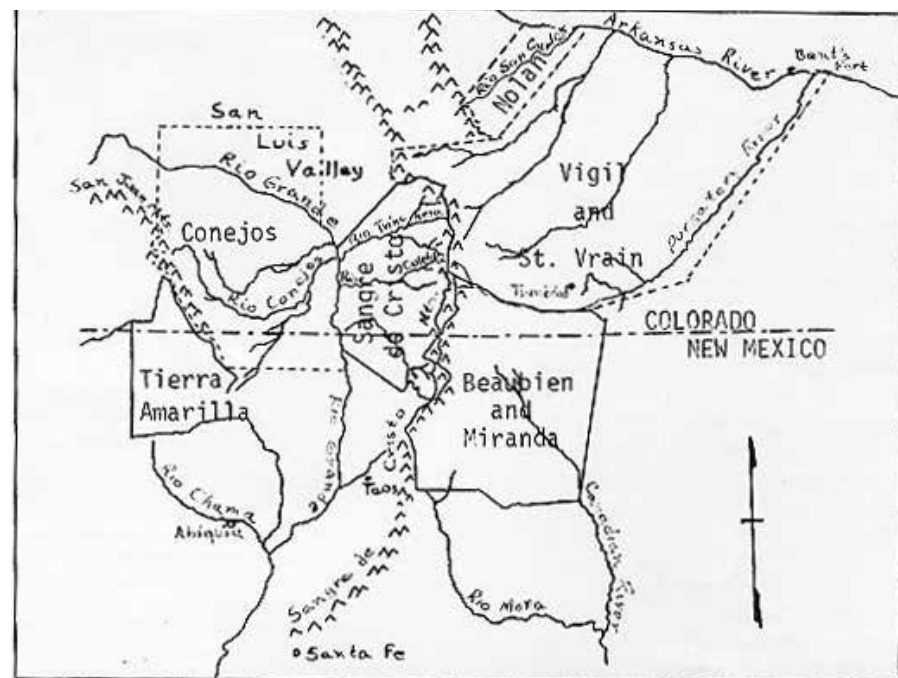
The forebears of the conquerors and the community of the conquered were inextricably intertwined.

Wealthy medieval men, not the Spanish Crown, underwrote the occupation. They required tributes of woven cloth, milled corn, labor and large haciendas. In return, the leaders were required to protect the colony and Christianize the



Acequia de los Saucos and the San Luis hills
© Arnold Valdez

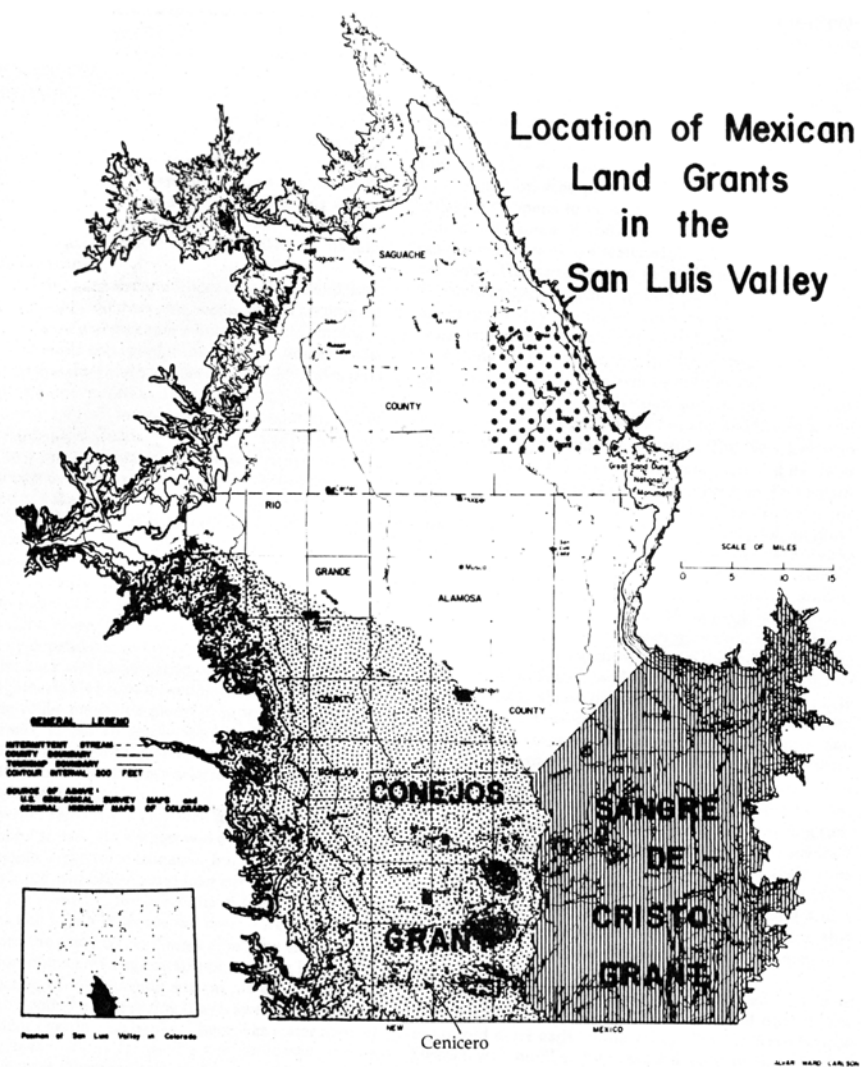
Pueblos. In this faraway realm, the majority were struggling frontier settlers, subordinated and disadvantaged, and yet they too were empowered because they took part in the victorious conquest. Slavery broke relationships, which estranged the colonists from the Pueblos. Best described by Ramon Gutiérrez, in *When Jesus Came, the Corn Mothers Went Away*, internal hostility, coupled with regional stressors like drought, crop failures and impending hunger, set in motion the 1680 Pueblo Revolt. Four-hundred-twenty people were killed, leaving the infrastructure in ashes, while beleaguered survivors were forced to walk away from the colony that existed for eight decades.



Map 2. Mexican Period Land Grants in Colorado

After Hafén, 1927, 85

Map of Colorado/New Mexico land grants



Conejos/Sangre de Cristo Land Grants

After regrouping, soldiers and colonists returned 12 years later and the land was deemed reconquered. Many who rebelled were executed, and prisoners became slaves to rebuild what was destroyed. Yet, animosity continued to smolder, including after supplies were plundered at Taos by an armed contingent that clandestinely entered the San Luis Valley. As military rebukes of the Pueblos peaked, violence erupted in 1696 after 65 families were given land at Santa Cruz and even more colonists arrived during a time of drought



Herd of sheep in Conejos County, Colorado. © Arnold Valdez

and famine. Two-hundred colonists died from starvation in the first decade. Slowly, larger villas emerged from chaos, and contemporary Santa Fe, Santa Cruz and Albuquerque were reestablished. By the mid-1700s, 16 settler-villages were re-founded in the lower elevations along river valleys.

The historiography on the Río Grande is voluminous, recounting decade after decade of turmoil. Isolated on the frontline, with supplies replenished periodically, and, furious over ignored complaints requesting material support and protection, life for the average settler was tenuous. But for the Pueblos, it was far worse. Although they lived amid hostility, settler villages became a dependable food larder, as resilient extended families organized their society by tilling the soil and raising animals. Because of racial intermixing, most *pobladores* were *mestizo*, or of mixed-blood parentage. Emerging from this context, the forebears of the conquerors and the community of the conquered were inextricably intertwined, though socially distant. The impacts of this era have been entrenched within the fabric of those whose ancestral and genetic lines were anchored in the cultural landscape of that time.

The 18th century launched overlapping challenges, as the Apache, Ute and Navajo increased raiding for horses and sheep, while on the eastern periphery, the French and *Norteamericanos* were inching toward New Mexico to breach Spanish sovereignty. This dire situation was a missed opportunity to parlay with Indigenous bands that lived in the San Luis Valley—not to dispossess or remove them, but to build a mutually beneficial foundation a century before settlement occurred. With a land base of 8,000 square miles, the basin had many ecologically rich zones to accommodate family bands and *pobladores*, had this been undertaken once Taos and the Chama Valley developed a large enough population to move northward. The mountain pastures would have been ideal for self-reliance and bartering, and also for dispersing the population into the cooler terrain during times of drought.

Ramón Gutiérrez's insightful analysis indirectly posits this question, noting that New Mexico was on the edge of developing a textile microeconomy, as large flocks of churro sheep produced a surplus of woolen goods to market in México's interior. The Pueblos were weaving cotton for 300 years before the Spanish drove sheep into the region. Three decades after their arrival, a Spanish textile workshop at Santa Fe emerged with standing looms for weaving wool. Rather than joint settlement through trading partnerships, which periodically occurred, Spain allowed its adversaries to import textiles. Eventually, foreign traders brought European textiles into New Mexico, displacing local

CONT. ON PAGE 32

LAND GRANTS

Sangre de Cristo Land Grant: 1,038,000 acres on the south-central Colorado/New Mexico border. Grantees were Narcisco Beaubien and Stephen Louis Lee, in silent partnership with New Mexico Gov. Armijo. Both grantees were assassinated in the Taos Revolt, while Gov. Armijo fled. French-Canadian Carlos Beaubien, New Mexico Supreme Court justice, obtained the grant, which his son and brother-in-law held.

Beaubien-Miranda Land Grant, known as the **Maxwell Grant:** 1,714,764 acres on the southeast corner of Colorado and New Mexico. Grantees were Carlos Beaubien and Guadalupe Miranda (provincial secretary of state), in silent partnership with Territorial Governor of New Mexico Charles Bent.

Las Animas Land Grant: 4,096,346-acres in southern Colorado. Grantees Ceran St. Vrain (business partner of Carlos Beaubien) and Cornelio Vigil (brother-in-law of Charles Bent). Charles Bent, who held a silent interest in this grant, and Vigil were both assassinated in the Taos Revolt.

Río San Carlos Land Grant: 1,000,000 acres in southern Colorado. Grantee Gervacio Nolan, a French-Canadian, was Carlos Beaubien's close friend and business associate.

Cañoncito del Río Colorado: 575,968.71 acres in southern Colorado. Grantee Gervacio Nolan held this second grant, which adjoined the Río San Carlos.

HERMIT'S PEAK/CALF CANYON FIRE RECOVERY

*Forestry and landscape recovery can serve
as a foundation for renewal.*

The writer and satirist H.L. Mencken once observed, “There is always a well-known solution to every human problem—neat, plausible, and wrong.” So too, with finding solutions to our wildfire crisis in New Mexico and across the West, where simple solutions are too often an illusion. In this article, focused on the efforts of my organization, the Sangre de Cristo Mountain Initiative, I continue a discussion of fire prevention and recovery, which are a microcosm of the complexities, as well as potential opportunities, resulting from wildfire in the West.

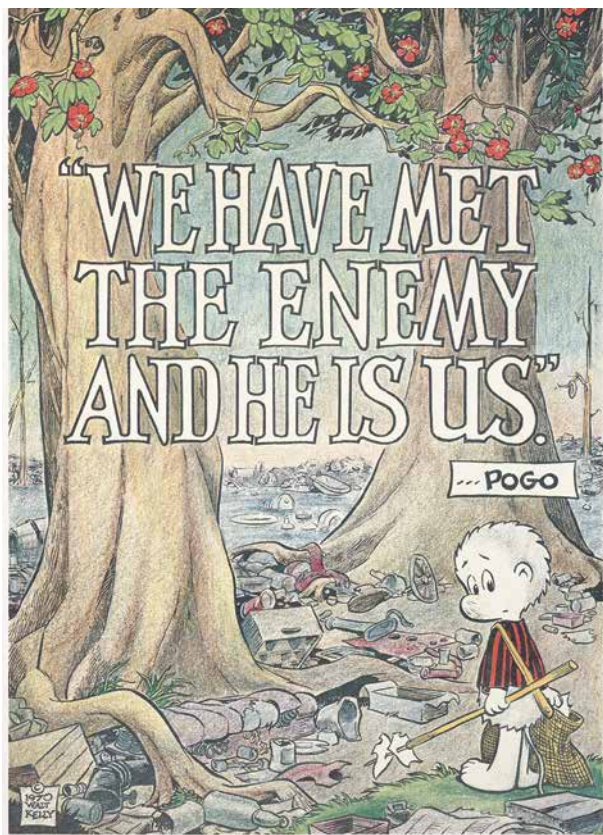
Working With Wicked Problems

Winston Churchill summed up the situation in Europe on the eve of World War Two as “a riddle, wrapped in a mystery, inside an enigma; but perhaps there is a key.” Which pretty well sums up the fire-related situation here in New Mexico too.

*The value of the wood is
what pays for ecosystem and
watershed renewal.*

ethnic neighborhoods in favor of tower blocks such as Chicago’s infamous Cabrini-Green decimated the social fabric of communities. Even with the best intentions, social policies can result in outcomes that are the opposite of what’s intended.

An oft-cited example of catastrophic failures from well-meaning social programs is the redevelopment of inner cities of the U.S. during the post-war era, where the eradication of poor



Pogo cartoon by Walt Kelly from 1970. Forest health issues are dilemmas where people deny the problem but do not take responsibility for a solution.

So, what does urban poverty have to do with rural wildfire? Well... the link is in the notion design theorists Rittle and Webber came up with in the late 1960s called “Wicked Problems.” This is compared to “Tame Problems,” which are the excessively optimistic assumptions organizations and policymakers often make about the issues they’re addressing. Tame problems have apparent alternatives and well-defined solutions, while Wicked Problems are uncertain as to even the nature of the challenge. In a similar insight, organizational theorist Russell Ackhoff stated: “No problem ever exists in complete isolation. Every problem interacts with other problems and is therefore part of

*Landscape recovery
is also a social
justice issue.*

a set of interrelated problems. Furthermore, solutions to most problems produce other problems... a financial problem, a maintenance problem, and conflict among family members...”

So too, is the situation with wildfire prevention and recovery. Yes, the Forest Service struck the match—but the bigger issue is over a century of neglect of our forests and communities—leading to stand densities often 100 times historical levels. Shifting demographics led to fewer people on the land; a warming and drying climate led to the forests being more susceptible to burning; spotted owl lawsuits of the 1990s caused a decline in the forestry industry’s capacity, and sheep grazing in the 1800s led to changes in landscape conditions and forest composition in the first place. This morass can’t be untangled by blame or finger-pointing.

As in the iconic Pogo cartoon, “We have met the enemy and he is us,” we got ourselves into this mess—we need to get ourselves out of it. Not by giving away power by demanding someone else fix our problems—but by empowering ourselves and collectively crafting viable solutions.

Creating an Iterative Question-Driven Process

I returned to the Mora Valley in 2019 following decades of conservation science work in this region and beyond. In Montana, I directed or helped found multi-million-acre collaborative conservation programs. The experience made it clear that most conservation is a zero-sum game with more people chasing fewer dollars. This results in fewer organizations, or more poorly funded ones—when we need more social action and public engagement, not less.

The inescapable reality is that available resources are a fraction of what is needed. An analysis by the consulting group McKinsey & Company documented that annual global conservation needs are about \$300 to \$400 billion. By contrast, global conservation spending is about \$52 billion, mainly in relatively rich developed countries. In sum, much of conservation must pay its way to be viable, or it won’t last when stacked against competing interests and the fickleness of our political and philanthropic systems.



Economic and community renewal are grounded in fire, forest and watershed recovery because, as with Mora, most of our communities are downslope and downstream of wooded uplands. Without attending to the health of our forests and watersheds, most other forms of social and economic recovery may be waste of time if they are undone by another major fire.

A chance meeting with Mike Berry, a 5th-generation New Mexico rancher, and his vision of using biomass energy to fund sustained forest thinning provided a plausible solution. We dived into this possibility and made considerable progress until COVID hit, public meetings were terminated,

and most environmental funding was redirected to health issues. In response, we pulled-back, focused on logistical and finance questions, and determined that small to mid-scale biomass energy plants could be sustainable in our region, while thinning our forests and providing well-paying local jobs. We

were on the verge of a re-launch when the fires hit, and the recovery represented logistical challenges biomass utilization alone could not solve. It was time to reconceive the problem again.

Rethinking Our Thinking

Conservation pioneer Aldo Leopold described land policy as “the sad spectacle of one obsolete idea chasing another around a closed circle, while opportunity goes begging.” Einstein purportedly said, “Insanity is doing the same thing over and over and expecting a different result.” And yet, by focusing on short-term solutions, and not getting to the root of the problem by thinning our forests and restoring our watersheds, we’re setting the stage for the next big fire—not preventing it. This is crucial because fires no longer have generational return intervals marked in decades. According to scientific literature, we’ll have as much chance of a conflagration in 5-7 years as we did before the fires happened last spring. Reburns in California are now happening within two years! Landscape recovery is also a social justice issue. Without clearing the dead-and-down material, the health and vigor of the Hispano-Indigenous communities, which for centuries have relied on their forests, will continue to decline.

So how does one get out of the rut of myopic thinking or distinguish between needing to stay the course—versus choosing a new path? The answers lie between our ears—not in existing institutions. In other words, we need to reconceptualize our approach. One way to do this is by moving between “convergent” and “divergent” thinking. Divergent expands options and insights, whereas convergent eliminates possibilities and creates choices. Convergent thinking is the norm in Western thought, where we are taught to take a series of “facts” and analyze them, and then converge upon a single answer. Divergent thinking operates more freely and spontaneously, and as a result, unexpected connections are drawn.

Design guru Tim Brown of the consulting firm IDEO describes a “rhythmic exchange between divergent and convergent phases, with each iteration less broad and more detailed than the previous ones.” Thus, designing into the process a continuous exchange or movement between approaches, which requires a combination of bottom-up experimentation

By not thinning our forests and restoring our watersheds, we’re setting the stage for the next big fire.

and initiative, and leadership to provide big-picture guidance. In essence, a culture of prudent risk-taking and critical thinking to find alternative ways of framing challenges and solutions.

In recent months we went through this “rhythmic exchange” when seeking to recover the Sangre de Cristo Mountains from wildfire (and reducing risk of the next one). In a convergent-thinking approach, the challenge was framed as how to harvest 250,000 board feet of timber worth \$100 million from the landscape before it rots in 18-24 months. The value of wood is crucial, for it’s what pays for ecosystem and watershed renewal. The solution? Ramp up existing harvesting capacity and use transportation networks to move the trees that can’t be sold locally through well-capitalized efforts to remove biomass from the system.

Once this goal was established, through workshops and interaction with hundreds of stakeholders, we looked at the factors needed to rapidly remove massive amounts of timber. Crucial facets for success include strong leadership and engagement by the governor, state and federal agencies, and donors in a strategic process, while developing a workforce for running the logging operations.



After weeks of evacuation, many families returned to their homes amid a burned landscape. Photo courtesy New Mexico Acequia Association

The only viable solution is local empowerment to enact wholesale change, with the citizens guiding the economic and ecological recovery process.

However, through our community engagement process, we discovered an immense gap between perception and reality. In conversations with the governor, she’d say—the federal government created the wildfire; they need to fix it! And yet, FEMA is in the rapid recovery—not the long-term strategy biz. The Forest Service can’t operate on private land that comprises much of the burn area. At the same time, the NRCS (Natural Resource Conservation Service) can apply post-fire treatments but doesn’t have the resources to determine if they’re adequately applied (or even working). Meanwhile, local governments are often awash in fire recovery resources with few effective ways to deploy them.



Forest thinning is crucial for reducing fire impacts. Often habitat loss is greatly reduced and damage to the rest of the ecosystem is minimized, even when the fire is hot and the trees killed. On the left side, the forest was thinned and the understory is recovering. On the right, it was not thinned. The soil was mineralized and is lifeless. It could take decades or more for this ecosystem to fully recover. © Charles Curtin

Opportunity may go begging as plausible solutions to landscape renewal fall between the cracks. The only viable solution is local empowerment to enact wholesale change, with the citizens, in partnership with agencies, guiding the economic and ecological recovery

CONT. ON PAGE 33

RETHINKING FOREST HEALTH

BY CHRISTOPHER PIEPER

With the recent devastating fires in New Mexico, how we manage our forests is of the utmost importance—but are we addressing it from the wrong perspective?

Dead wood is the biological capital of a healthy forest.

Within our natural world we can see the cycle of birth, life, death, decay

and renewal played out everywhere. Energy from the sun has driven this endless cycle for billions of years, sustaining life through the miracle of photosynthesis. The health of every ecosystem on the planet is intimately tied to this cycle, in which carbon from the atmosphere is transformed into plant bodies and then broken down by fungi and other microbes, ultimately returning to the soil, where it may remain for thousands of years.

In temperate forests, it is estimated that 40 percent of the biodiversity is dependent on dead wood—the biological capital of the forest. In fact, dead wood in the form of standing snags, fallen logs and coarse woody debris play a critical role in water retention, nutrient cycling and overall forest health. One of the main drivers of forest degradation is the limited awareness about the range of ecological functions dead wood provides that are central to ecosystem health. It's time to change our perception of dead wood.

First of all, it is important to understand that “dead wood” is a misnomer. Most dead wood has more living tissue than a live tree. This comes from the fungi, the insects and the countless diversity of microorganisms that are directly or indirectly feeding on the wood. In addition, numerous species of birds and mammals utilize fallen logs or standing snags as habitat for their nests and homes. From the smallest microorganisms to some of the largest animals in the forest, dead wood is central to their life cycle.

Legislation that prioritizes the removal of dead trees to improve “forest health” or reduce fire risk is not good public policy.

As wood decomposes, it absorbs and retains a significant amount of moisture. Dead wood is increasingly recognized as a major part of the hydrology within forest watersheds. Water retention in our temperate forests is critical during the dry season, as it is linked to decreased soil erosion, reduced flooding and extended runoff, thus improving river health and water quality. Additionally, the shade provided by fallen branches helps seedlings regenerate by reducing soil temperature and lessening evaporation. In short, dead wood helps forests stay hydrated.

A “clean” forest with only living trees is not a healthy forest. Maintaining sufficient dead wood is critical for supporting a highly biodiverse forest ecosystem. Biodiverse forests are more resilient to disease, and with increased moisture retention and species richness, less vulnerable to catastrophic fire. Thus, dead wood is the biological capital of a healthy forest.

A diverse forest with an abundance of aged dead wood in various forms retains more moisture and is thus more resistant to crown fires. The claim that dead trees increase fire probability, intensity or rate of spread has been strongly refuted by current science. In fact, forests with high levels of snags tend to burn *less intensely*. Shortly after trees die (the “red stage,” when reddish-brown dead needles are still on the trees), the combustible oils that naturally occur in their needles begin to dissipate, reducing potential fire intensity shortly after the trees die. A 2015 study published by the National Academy of Sciences concluded that recently dead trees in the red state were not more fire prone than live trees.

As dead wood decomposes it undergoes a process called humification, in which dead and decaying organic matter is converted to rich humus by bacteria, fungi and other microorganisms. Farmers will recognize humus (made up of the most complex organic molecules in soils) as the foundation of healthy soils, supporting their capacity to cycle nutrients and hold moisture. As dead wood decomposes and ultimately turns into humus, it supports an incredible diversity of organisms, increases water holding capacity, returns nutrients to the forest and sequesters massive amounts of carbon.

Legislation that eliminates environmental safeguards and prioritizes the removal of dead trees to ostensibly improve “forest health” or reduce fire risk is not good public policy. It does not safeguard the health of our public lands and precious watersheds. Recognizing the tremendous ecological value of dead wood is critical for the creation of evidence-based policy and forest management. Protecting the health of our watersheds and helping to reverse the biodiversity crisis starts with respecting the natural processes that have sustained the planet for billions of years. We must change our perceptions of death as an end. In the forest, it's a beginning. ■

Christopher Pieper and his wife, Elana, are former high school science teachers. They own Mudd n Flood Mountain Shop in Taos, NM.



Courtesy New Mexico Acequia Association

HOLD IT HIGH

Three Restoration Projects That Are Improving Life in the Río Grande Watershed

Water is central to life and livelihoods, and this is especially true in New Mexico, where the Río Grande and its tributaries supply water for wildlife and one million people. The health of these waterways is key to the health and economic growth of half of the state's population, including Albuquerque, Santa Fe, Native American pueblos and other communities. But severe annual wildfires and the flooding that follows put those water sources at risk.

The Nature Conservancy's Río Grande Water Fund helps protect forests and boosts local economies by creating jobs and wood for products. It also generates a sustainable funding source for a 20-year program to restore 600,000 acres of forests in northern New Mexico and southwestern Colorado. Increasing the pace and scale of forest restoration—especially in the most high-risk areas of the Río Grande watershed—increases access to clean water and outdoor opportunities.

Water Fund Projects in New Mexico

Project 1: The Santa Fe Indian School Community-Based Education Program

Mapping and assessing the environment along a 1.5-mile reach of the river makes it possible to improve habitat for native plants and wildlife. Students from the Santa Fe Indian School have been conducting ongoing environmental monitoring and restoration efforts in the pueblos of Cochiti, Santo Domingo, Tesuque and the Santa Fe River Preserve. The school—working with teams of tribal youth, community volunteers and staff from the U.S. Fish and Wildlife Service—manages several projects that are restoring passages for fish along the lower Santa Fe River.

One species in focus is the Río Grande cutthroat trout, a brilliantly colored member of the salmon family found in northern New Mexico and southern Colorado in the Río Grande's tributaries. The New Mexico state fish is a traditional food included in tribal members' diets and oral history.



Kai-t Blue-Sky, a wildlife biologist, is an Oak Clan member at Cochiti Pueblo, where he was born and raised.
© Kai-t Blue-Sky

In Cochiti Canyon, erosion-controlling Douglas fir has been planted along a perennial stream that flows into the Río Grande. "Planting a tree encourages biodiversity," said Kai-t Blue-Sky, a naturalist and instructor in community-based education at the Santa Fe Indian School. While stabilizing river banks and learning about careers in natural resources, the students connect with ancestral practices, the ecosystem, their community and each other. "This project is about stream restoration and demonstrating actions that can mitigate flooding in a post-fire scenario," Blue-Sky said. "But we're also building resilience of language, customs and cultural lifeways for communities to carry on storytelling from older generations."

Project 2: Amigos Bravos – The Wetland Jewels Project

One of the best ways to build resilience in the face of climate change is to protect and restore mountain wetlands, which serve as sponges within watersheds, releasing clean water over time.

Working with wetland and GIS specialists, with input from watershed stakeholders, Amigos Bravos, a Taos-based organization, identified 22 high-priority "Wetland Jewels," in the Carson and Santa Fe national forests. Ongoing work includes prioritizing restoration projects and raising public awareness of

Local conservation leaders explain how restoring streams and wetlands along the Río Grande is bringing fresh water and economic opportunity to New Mexico.

sites such as Midnight Meadow, La Jara, Gila and San Juan through story maps. The group has implemented large-scale projects at two sites so far.

Rachel Conn, Amigos Bravos deputy director, explained that whether it is a single wetland or a complex of connected wetlands, each site is a powerhouse that serves its surrounding community. "They provide important ecological functions to terrestrial and aquatic ecosystems and landscape—stream flow maintenance, carbon sequestration, aquatic habitat, flood control, brown-water recharge and essential forage for livestock and wildlife," she said. "Also, they are beautiful."



Rachel Conn is deputy director for Amigos Bravos, a conservation organization dedicated to protecting and restoring the waters of New Mexico. © Jim O'Donnell

Assessment data made it possible to create a Restoration Toolkit. "The toolkit identifies techniques for engaging in wetland and riparian restoration. We also use it in education and outreach," Conn said.

East of Taos, the La Jara project combines assessment of existing impairments—such as head cuts and incised channels—and the restoration needed. The plan for this site became seven project areas. The first four were completed in 2019, with installed structures such as one-rock dams, spreader inclusion and rock rundowns. In Area Seven in the project, the current and future focus is engaging a local collaborative,

including groups such as The Nature Conservancy, the Town of Taos, Taos Land Trust, the U.S. Forest Service, the Taos Valley Acequia Association and others to revitalize local ecological health and forge agricultural connections downstream.

A significant structural addition that runs through the project is the riparian pipe rail fence, which allows grazing permittees to better manage cows in the area and adhere to the 10-day grazing limit. Other elements include an excavated channel, earthen structures and diversions to re-saturate flood plains. "Before, when the fence was more porous, cows were in the area much longer," Conn said.

Thanks to its proximity to paved highways and Taos Canyon, the project has created a great opportunity for public education on the importance of wetland restoration. This includes field trips, prominent signage on highways about work underway, resources for how the community can learn more, as well as information on restoration techniques employed. Community collaboration includes extensive engagement with grazing permittees and sign-off on restoration plans.

Project 3: Río Grande Return - Headwater Restoration

Another organization, the Río Grande Return, launched the Headwater Restoration project, which is focused on re-establishing historic practices and species to help correct local ecological imbalances. Those could be from human-caused species eradication, grazing or logging.

While beavers are not present—likely poached out more than a decade ago—many historic beaver dam structures still have an impact by providing important lessons in restoring balance and improving existing stream systems. Old dams integrate large woody debris that improve wetland hydrology and support species- and biodiversity.

New Mexico | Rio Grande Water Fund

Restoring essential forested lands upstream will ensure a continuous supply of clean water downstream



Wood from thinned small trees provides firewood for winter warmth, materials to build homes, mulch for playgrounds and other products.



Healthy forests store more snowpack and release more water to streams, leading to **more resilient forests**.



Thinning overdense trees and controlled burns protect forests from megafires.



More than 15 tribal nations live in the footprint of the Water Fund. Several Pueblo tribes are active participants in the work of the Water Fund.



Healthy rivers, forests and mountains benefit New Mexico's **tourism and recreation economy** by attracting visitors and providing experiences for locals to enjoy the state's beautiful outdoors.



The Rio Grande and its tributaries **supply water to nearly half of New Mexico's population**.



Healthy forests and streams provide **habitat for fish and wildlife** and protect them from damaging wildfire, flooding and ash-flows that often follow high-severity burns.



Frequent, **high-severity wildfires and subsequent post-fire flooding** cause extensive soil erosion and debris flows that degrade water quality for communities downstream.

**Learn More
or Donate**
nature.org/riogrande

Matt Piccarello
Forest & Watershed Health Manager
m.picarello@tnc.org
(505) 470-9725

Paul Blaney
Development Director
paul.blaney@tnc.org
(415) 205-1163

The Nature Conservancy 

**RIO GRANDE
WATER FUND**
A Wildfire and Water Source
Protection Project

They also collect fine sediment, improving soil. “There’s a relic beaver dam that had impounded and collected sediments, probably over hundreds of years. And so, that soil is high in nutrients and carbon storage,” said Reid Whittlesey, Río Grande Return’s restoration director. “There’s been a whole forest shift away from conditions that the beavers were actually helping to manage.”

Achieving full landscape-scale restoration required grazing management with fences, restoring ecological processes and re-introducing species such as beaver, or structures that mimic their dens. One riparian restoration project underway in San Antonio Creek includes a number of those elements, including re-introducing woody species, such as planting willow on creek sites—sometimes by the truckload. Construction of riverbank fences helps manage cattle and elk populations that can overgraze. Where allotment fences are down and need repair, cattle may graze an area for months longer than the 10-day allowance. Overgrazing stunts willows and other plants that are trying to grow back.

By increasing species and creating concentrations of woody debris that mimic beaver dams, the water table grew by more than 2.5 feet and wetland species increased significantly. “I was wading across that pool last week to take measurements and it’s now pretty deep,” Whittlesey said. “We’re increasing water storage capacity in these watersheds. Overall, while it is very much for the ecosystem, it also has tangible impacts on human communities. When you expand the riparian width, you’re also helping to attenuate the impact of flooding and wildfire. And we’re aiding in tipping the balance toward a much higher rate of carbon sequestration.”

In September 2022, The Nature Conservancy in New Mexico led a virtual learning event, sponsored by Taos Ski Valley Foundation, called *Hold it High: Stream and Wetland Restoration Benefits in New Mexico*, highlighting



La Jara – Stream rehabilitation in Taos County, New Mexico
© Shannon Romeling



Reid Whittlesey, restoration director for Río Grande Return, lives in Río en Medio. He has been practicing ecological restoration for over 14 years. © Reid Whittlesey

three Water Fund projects that are restoring streams and wetlands along the Río Grande to bring fresh water, economic opportunity and support New Mexico’s cultural wealth. The panel of experts included Kai-t Blue-Sky, Rachel Conn and Reid Whittlesey. The moderators were Matt Picorello, TNC Forest & Watershed Health manager, and Martha Cooper, TNC’s Freshwater Program director for New Mexico. You can watch the full recording here: https://www.youtube.com/watch?v=EO9N6VP0WSO&list=PLSESGXFZKCFRDSKUPLV-4QY_O11PDYUYY&index=26 ■

LAND OF ENCHANTMENT LEGACY FUND

The Largest Investment in Conservation in New Mexico History

On March 23, Gov. Lujan Grisham signed Senate Bill 9, The Land of Enchantment Legacy Fund, into law, calling it “a generational investment in the well-being of the state.” The bill creates New Mexico’s first dedicated, long-term funding stream for land and water conservation. It will provide matching state dollars to federal money to fund projects ranging from forest and watershed restoration, to breeding of game and fish, to promoting outdoor recreation for low-income families.

The goal is to endow legacy and permanent funds in the coming years to invest in existing state programs to leverage federal funds to protect rural and agricultural communities from wildfire, flood and drought, and safeguard urban and rural water supplies. When combined with the state budget, the fund authorizes \$100 million in immediate funding, \$50 million of which will be used to carry out projects in the next four years. The remaining \$50 million goes into a permanent fund for future projects.

The Legacy Fund is a bipartisan product of five years of negotiations among a broad coalition of legislators, state agencies, community stakeholders and non-governmental organizations. The bill was sponsored by senators Steven Neville (R), Peter Wirth (D) and Rep. Nathan Small (D). Information on the fund can be found at <https://www.enchantmentfund.org>.

Lesli Allison, executive director of the Western Landowners Alliance (WLA), said, “The Legacy Fund is a visionary investment in our shared future. It will enable us to restore our watersheds, provide for increased water security, improve agricultural productivity, conserve and restore soils and wildlife habitats, protect cultural resources and increase outdoor recreational opportunities.”

“We’re proud to be among the broad coalition that advocated for this fund,” said Pam Roy, executive director of the Farm to Table and coordinator of the New Mexico Food & Agriculture Policy Council. “How we manage our natural resources directly affects the health, safety, livelihoods and quality of life of every New Mexican.”

TRIBAL NATIONS CONSERVATION PLEDGE

In March, Native Americans in Philanthropy and Biodiversity Funders Group, in partnership with 15 leading funders, announced the launch of the Tribal Nations Conservation Pledge at the White House Conservation in Action Summit. By that time, 15 funders had committed \$102.5 million over the next five years to support tribal-led conservation work. The pledge calls on foundations and philanthropists to allocate a self-determined percentage or amount of funding to support the biodiversity and conservation efforts of tribes, inter-tribal organizations and tribal consortia.

The pledge demonstrates an important commitment to a new way of thinking about conservation that centers the people who are most impacted by the climate and biodiversity crisis but also hold the knowledge on how to best steward lands and water. Indigenous people, especially in the United States, have been impacted by a changing environment that has upended traditional hunting and fishing practices, as well as livelihoods.

The collaboration of funders represents a shift in philanthropic support for tribal-led solutions in conservation work. Historically, less than 0.5 percent of philanthropic dollars have been allocated to Native communities, and fewer of those dollars have gone towards Native-led conservation. The pledge is a turning point in climate funding that recognizes and supports Native communities who have long been leaders in this work.

“Conservation is not just about safeguarding land. It’s about prioritizing people, especially those who hold traditional knowledge on how to combat our climate and biodiversity crisis, and recognizing that they can chart a path forward,” said Erik Stegman, CEO of Native Americans in Philanthropy. “Through the pledge, Tribal Nations can continue to lead the way on the conservation of our lands and waterways, our agricultural systems and our planet. We are grateful to our funders who are part of this turning point in the environmental space and understand the impact of grounding this work in Indigenous values and sustainability.”

The Tribal Nations Conservation Pledge will be critical in ensuring that the U.S. meets the minimum goals of the 30 x 30 initiative, a global effort to conserve 30 percent of the terrestrial and marine habitat by 2030. For more information, visit WWW.TRIBES.NATIVEPHILANTHROPY.ORG.



Interior Secretary Deb Haaland addresses attendees at the White House Conservation in Action Summit.

PUEBLO OF JEMEZ GRANTED ABORIGINAL TITLE TO PART OF THE VALLES CALDERA

The Valles Caldera, a remnant of a massive volcanic eruption, is one of 18 national preserves in the United States. It is filled by a lush meadow as far as the eye can see, home to herds of elk. Native people from tribes and pueblos have hunted, gathered and practiced their culture in the caldera for centuries. The Pueblo of Jemez, located near the caldera, considers it a spiritual sanctuary that is part of its traditional homeland.

Under Congressional authority, surveyors asserted that the land was vacant, and it was given to Spanish Land Grant heirs in 1860 as part of a land swap. The federal government purchased the property in 2000 and began to operate it as a working ranch with a goal of developing public recreational opportunities. The pueblo sought to reclaim “aboriginal title” to the preserve, first suing the federal government in 2012, as members of Congress and others sought to transfer management to the National Park Service.

After years of litigation, in March, the 10th Circuit Court of Appeals, in a split ruling, decided in *Pueblo of Jemez v. U.S.* that the pueblo has aboriginal title to part of the caldera known as “Banco Bonito.” The ruling confirms the pueblo’s occupancy rights and ability to use and enjoy the Valles Caldera. The court rejected claims to three other areas, saying that the tribe had not notified the government that it was seeking claim to those specific areas. The partial victory is the first time a tribe in the U.S. has ever demanded return of an aboriginal title that has not been extinguished or terminated, and successfully recovered it in court. Both the pueblo and the federal government could appeal the ruling.

Aboriginal title is a concept developed in *Johnson v. M’Intosh* (part of the Marshall Trilogy), issued in 1823, making this the 200th anniversary of one of the foundational cases of federal Indian law.

U.S.F.S. AND AINTA SELECT RECIPIENTS FOR NATIVE ACT GRANTS

The American Indian Alaska Native Tourism Association (AIANTA), the only national organization dedicated to advancing cultural tourism in Native nations and communities across the United States, as a collaborative partner with the U.S. Forest Service (USFS), has selected awardees of the NATIVE Act Grants. Of 21 applicants, six project proposals will receive funding from the U.S. Forest Service, to aid their efforts to enhance cultural tourism and recreation for the advancement of Native American communities within a two-year time span.

Applications were solicited from Tribal Nations, Tribal Enterprises and Native nonprofits that border and/or have historic ties to U.S. Forest Service managed lands and regions. Toby Bloom, national program manager for Travel, Tourism and Interpretation, USFS, said, “Our ultimate goal is to work with tribes to enhance representation and help strengthen tourism and recreation efforts of tribal nations both on and off USFS lands. The Forest Service is thrilled to work with AIANTA to expand more diverse and inclusive tourism opportunities.”

NATIVE Act Grantees in New Mexico are:

- Picuris Pueblo: Celebrating, Protecting and Sharing the History of Picuris Pueblo through Our Voices (\$250,000)
- Jemez Community Development Corporation (DBA Jemez Enterprises): Red Rocks Interpretive Trails (\$129,000)

For more information, visit WWW.AIANTA.ORG.



Walk with us to raise awareness about the importance of Mental Health for All!

Saturday May 20 in 3 locations:

Alto-Bicentennial Park in Santa Fe – 8:30 a.m.
 Balloon Fiesta Park in Albuquerque – 8:00 a.m.
 Berg Park in San Juan County



Learn more at:
www.namiwalks.org/newmexico
 505.395.6204 | info@namisantafe.org



Santa Fe



Start and end your day with us!

KSFR fm
 santa fe public radio 101.1

**Award winning news,
 public affairs & talk radio**

Eclectic music

**streaming live
 @ ksfr.org**

Listener supported public radio

NEW TAX INCENTIVES FOR CLEAN ENERGY PROJECTS IN FOSSIL FUEL COMMUNITIES

BY HANNAH GROVER NEW MEXICO POLITICAL REPORT

During a White House briefing on April 4, officials announced an additional 10 percent bonus on Inflation Reduction Act incentives for clean-energy projects if they are built within traditional fossil fuel-producing communities.

“Many energy communities have the knowledge, infrastructure and resources to take advantage of the clean-energy transition, but in many cases, they would benefit significantly from an initial public investment to jumpstart this process,” U.S. Treasury Secretary Janet Yellen said. “That means a solar farm operator can get an extra dime on the dollar of their investment if they site a new facility in a coal community, on top of the existing tax credits.”

A new map available at ENERGYCOMMUNITIES.GOV shows which communities are eligible. These communities directly adjoin tracts that have seen coal mines close since 1999 or have had units at coal-fired power plants retire since 2009. It also includes some metropolitan and non-metropolitan areas where at least 0.17 percent of direct employment has come from extraction, processing and transportation of fossil fuels including coal, oil and gas.

Communities in southeast New Mexico’s Permian Basin are featured in blue on the map, meaning they meet the 0.17 percent employment threshold. Many communities in western New Mexico are qualified because of their coal mining history. These include portions of San Juan, McKinley, Grant, Cibola, Catron and Sierra counties.

Hy Martin, chief development officer for D.E. Shaw, said federal incentives and policies have catalyzed D.E. Shaw’s investments in projects in coal communities: “That is folks that are coming out of a job at a coal mine looking for a transition. That is land owners who are trying to figure out how best to use their land.” He said the company’s investments include solar, wind and battery storage projects. D.E. Shaw Renewable Investments acquired the San Juan Solar Project and the Arroyo Solar Project, both of which include battery storage and are intended to replace electricity the state’s largest utility received from the San Juan Generating Station.

Eleven federal agencies have signed a memorandum of understanding that will enable them to work together to get energy communities the assistance they need to take advantage of grants and funding opportunities and attract projects. John Podesta, senior adviser to President Biden for clean energy, innovation and implementation, said, “There’s enormous untapped potential in these communities from fossil fuel workers whose skills we need to build the industries to existing facilities that could be retooled and repurposed, to local entrepreneurs and universities who are working to attract talent and investment.”

The announcement came alongside a report on two years of efforts by the Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization. The group was created through an executive order focused on addressing the climate crisis President Biden signed shortly after taking office. Brian Anderson, the group’s executive director, said that more than \$480 million of American Rescue Plan Act funds have been invested in economic development in coal communities, and \$877 million of federal funding has been invested in abandoned mine land reclamation projects. The efforts also include setting up rapid response teams to help communities faced with the closure of coal-fired power plants.

There were three initial teams, including one in the Four Corners region led by Los Alamos National Laboratory. Deputy Assistant to the President and Deputy National Climate Adviser Ali Zadi said, “If anything, this moment will be judged by our success in building those projects. I think we are finally responding to the responsibility we have to the folks who have powered our economic progress, our economic competitiveness for decades, for centuries.”

ALDO LEOPOLD WRITING CONTEST

WINNING STUDENT WRITERS

The Leopold Writing Program has announced the winners of the 2023 Aldo Leopold Writing Contest. More than 170 students from across New Mexico in grades six-12 entered



this year. Students were asked to submit original essays in response to the following question: “After reflecting on author Robin Wall Kimmerer’s and Aldo Leopold’s thoughts

about our relationship to the land, what do you see as your role in returning the Earth’s gifts?”

In the 10th-12th grade category, **Bodhi Lewis**, 10th-grader at the Santa Fe Mandela International Magnet School, is the winning essayist. Honorable mention award winners are: Sofia Alexandrescu, 11th-grader at Santa Fe Preparatory School; and Madeline Hostetler, 11th-grader at Río Rancho High School.

In the 8th-9th grade category, **Frances Anderson**, 8th-grader at the Santa Fe Girls School, is the winning essayist. Honorable mention award winners are Maiya Brock, 9th-grader at the New Mexico School for the Arts in Santa Fe; and Mary Helen Brown, 9th-grader at Rehoboth Christian High School in Rehoboth.

In the 6th-7th grade category, **Alessandra Seawright**, 6th-grader at Santa Fe’s La Mariposa Montessori School, is the winning essayist. Honorable mention award winners are Aliana Hardy, 7th-grader at Albuquerque’s Native American Community Academy; and Evelyn Lemon, 6th-grader at La Mariposa Montessori School.

This year’s writing contest, the 15th annual, was chaired by New Mexico environmental educator Elena Kayak, with a team including Sayre Gerhart, vice president of the Leopold Writing Program, and 16 volunteer judges. “Each year, we create an essay topic to challenge students in their thinking of how the Earth may thrive,” said Kayak. “Every judge can tell you how we are uplifted by their ideas and writings.” The students were honored at an awards ceremony on Earth Day—with cash prizes totaling almost \$3,000 to the winning writers—on April 22 at the Indian Pueblo Cultural Center in Albuquerque. The ceremony was followed by a lecture by Kimmerer, author of *Braiding Sweetgrass*.

The Leopold Writing Program is a New Mexico nonprofit dedicated to building on Aldo Leopold’s legacy as a writer by inspiring the next generation of environmental leaders to help advance environmental ethics through the spoken and written word. Leopold is best known for *A Sand County Almanac* (1949), in which he articulates his lifelong philosophical search for how humans could “live on the land without spoiling it.” This search culminated in “The Land Ethic”: “A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.” For more information about the contest visit WWW.LEOPOLDWRITINGPROGRAM.ORG.

TAPESTRY

BODHI LEWIS

First Place Grades 10-12

Grade 10 – Mandela International Magnet School, Santa Fe N.M.

Teacher: Sairey Pickering



The Earth is a tapestry, and our lives are a gift. We have the responsibility of paying forward. In order to return the Earth’s gifts, we must remember our *own* nature: positive relationships with our surroundings and our inner selves.

Through my 10 years of being vegetarian, I have learned to appreciate animals as beautiful and entwined threads in this weaving of natural balance. No species is more important than another, so none can take more than their share of the Earth’s gifts. My plant-based diet has reduced my carbon footprint by 52 percent per year compared to a meat-eater,¹ and empowered my gratitude for the gift of food. This thankfulness enables me to become a more educated overall consumer. I consider the implications of what companies I buy from by reading ingredient labels carefully. I am

continually using the Earth’s gifts with each turn of a faucet, flip of a light switch, trip to the gas station, and so much more. I know that returning these gifts starts with what we can control, so as a consumer, I consciously support and boycott companies. For example, whenever possible, I buy products without palm oil and single-use packaging. The economy demands our dollars—we have the power of spending them sustainably. As I grow up, I wield the responsibility to stand up for businesses that prioritize the welfare of the *whole* ecosystem, not their bank vaults.

All species are equally important threads on Earth’s tapestry.

I have considered downhearted news around climate change’s worsening effect on the natural world for as long as I can remember, and have asked myself ever since childhood—why don’t people wake up? The natural world *is* our world, how can we let this happen? I use my voice to better “love and respect... the land as a community to which [I] belong.”² Last Earth Day, I wrote a newspaper article on how to reduce our plastic footprint in the *New Mexican*. When I was 10, I participated in a Sustainable Solutions fair and focused my project on Red Tide, which was locally affecting us in Costa Rica. A friend’s project convinced me to stop drinking cow milk and to this day I don’t. I did my 10th-grade personal project on making a wholesome, sustainably sourced energy bar and I will write a report on my findings; especially how much our food system demands from the Earth. Voicing beliefs is how this generation will become leaders who return the Earth’s gifts—not just politically, but educationally and morally incentivize stewardship.

A voice is a thread on nature’s tapestry: weaving it requires other strings.

I connect with my community to hear my generation’s collective voice. I have been fortunate to be surrounded by Indigenous culture in my home of northern New Mexico. I have been inspired by their deeply rooted understanding of our interconnectedness. Last summer I was selected by the Department of State as a U.S. Youth Ambassador to Ecuador and had the privilege of immersion in an Indigenous Andean community. My peers and I learned the value of effective diplomacy, which I hope to put into practice working internationally in my future.

At school, we bring our International Baccalaureate-driven world view to the lens of land stewardship. We know that the modern economy praises materialistic businesspeople. They refuse to change money-making practices even when they pollute entire watersheds. They decimate forests, introduce “forever chemicals” into the ecosystem, and worse.

My peers and I study policy strategies to curb climate change, such as imposing a cost for the right to emit greenhouse gases or providing incentives for homeowners to go solar. A passion in my heart now burns towards action for a sustainable future—which starts with human rights, animal rights and peace. For far too long, humans have eyed land and water for its “commodity” and “natural resource” rather than as *gifts* that the Earth provides.^{3,4} My responsibility as a recipient of the Earth’s gifts is to be educated and well-versed in modern issues. I pay her gifts forward to all living creatures to contribute to balance throughout the ecosystem, not just human societies.

Awareness, communication and respect weave the tapestry; we cannot rip it.

¹ [HTTPS://WWW.PETA.ORG/ISSUES/ANIMALS-USED-FOR-FOOD/FIGHT-THE-CLIMATE-CRISIS/](https://www.peta.org/issues/animals-used-for-food/fight-the-climate-crisis/)

² Aldo Leopold, *A Sand County Almanac*

³ Aldo Leopold, *A Sand County Almanac*

⁴ Robin Wall Kimmerer, *Returning the Gift*, pp. 18

A LETTER TO MY GREAT-GRANDCHILD IN 2123

FRANCES ANDERSON

First Place Grades 8-9

Winner of David E Stuart Humanitarian Award for Special Merit

Grade 8 – Santa Fe Girls' School, Santa Fe N.M.

Teacher: Olivia Carril

You will be reading this letter in the distant future, and I hope your world is full of grace and beauty. I wish I could say the same about the world we live in now, when many of us still take so much from the land and treat it like a commodity. Some days, I fear that this will not change. As I think these thoughts, I ask myself what should I do to replenish the Earth in return. I remember the people before me like Aldo Leopold and Robin Wall Kimmerer who used the world around them as their teacher. So, I too learn from the bison, the deer and the bees.



When I study the bison that roam the Great Plains, I watch how they contribute to the life cycle of the grasses: big blue-stem, switchgrass and Indian-grass. The bison give them their yearly haircut and aerate the soil, contributing to the evolution and biodiversity of these species. They don't even think about how they are helping the grasses survive, they are just eating. I can't speak for the bison and the grasses, but what I observe is the way that they have an unspoken gratitude toward each other. As I watch their silent understand-

ing of each other, I long to have that natural connection with the Earth, giving back by helping the topsoil stay healthy and strong for plants and animals.

I am a student of deer, too. That quiet prancer up mountains and through meadows, bouncing so quietly that the trees barely see them. As they lay down to rest, the plants beneath them surrender to their weight, but after the deer wake, the plants float up after a night of being delicately folded underneath the deer's body. When I think of this, I feel suddenly raw and embarrassed, noticing my heavy human tracks over the plants, and how my body thoughtlessly pressed them so flat that they are stuck and unable to move. But after watching the deer, I am learning to move through the world with more grace, with a light-footed approach, with a gentler touch.

I learn from the diligence of the bees. They work in a community effort, never backing down, always on a mission. As I watch them come and go from the lavender to the sunflower, I admire how they hover and wait for each other, making sure no one is left behind. As I grow up in 2023, our culture praises those who do things on their own and look like they do not need help. But some of us believe that it's possible to unite and restore the land, as a community. Like the bees. I am young now, so my role in this movement is to be a student of the land: to listen, learn and do my best to love the Earth and show others that the Earth is our teacher. I will always be a student, but when I grow older, I intend to be a botanist who is still humbled by the adaptability and perseverance of native plants. I will work with others, like the bees, so you, my great-grandchild, will have a more stable ecosystem and leaders who have compassion for all species. I hope my generation will be good ancestors to you.

ALESSANDRA SEAWRIGHT

First Place, Grades 6-7

Grade 6 – La Mariposa Montessori School, Santa Fe, N.M.

Teacher: Katrina Holder

Author Robin Wall Kimmerer inspired me to think about how the Earth has so many gifts that we take for granted. This planet gives us water, food and so many things that help support life. I am so grateful for this planet. I also entirely understand that humans are taking too many of Earth's resources and that this is destroying the balance of nature. Kimmerer reminds us that, "Though the Earth provides us with all that we need, we have created a consumption-driven economy that asks, 'What more can we take from the Earth?'" As a global community, we need to acknowledge our gratitude for Earth's gifts and ask, "What does the Earth ask of us in return?"

Down in the Southwest, I go to a wonderful school where my friends and I learn how to be stewards of the Earth. My classmates and I regularly spend time cleaning up old trash from a nearby 45 acres of land that used to be an illegal dump. During the beautiful month of October, when we are able to see Mother Nature thrive and turn our trees shades of purple, orange and red, our school community plants seeds and flower bulbs in preparation for the spring. To nurture our environment, we use fertilizer that our goats, donkeys, pigs and horses kindly create for us. The wildflowers blanketing our campus are oh, so beautiful! We collect seeds from all the colorful sunflowers that grow on our playground and feel grateful for how breathtakingly beautiful Mother Nature is! We truly need to protect her.

Worldwide, people are making choices that increase pollution and do damage to the various ecosystems that exist on land and in water.



Too much plastic trash is going into our oceans and this harms the lives of fish and sea creatures. We still have too much reliance on fossil fuels. Mining for precious metals that are used in our cell phones and other electronic devices is polluting the land.

We clear-cut entire forests so that cows can have more grazing land, all because we want to consume more and more meat. Why are we burning and using these things when they are hurting the Earth, our home? We have other choices that we can make.

Conservationist Aldo Leopold said, "We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect." We need to be partners with the Earth and take advantage of alternative renewable energy resources like sun, wind, water and geothermal power. Earth is a beautiful planet, but if we love it so much and it is the only planet that can support life, why are we making the choice to destroy our home? It is like making the choice to do terrible things to your most prized possession. Let's make changes together to heal and take care of the Earth.

New Mexico's Statewide Water-Planning Program

BY ANDREW ERDMANN

New Mexico is one of the driest states in the nation, and opinions about how our limited water should be planned for, permitted, administered and managed. Planning for a resilient water future is essential to sustaining communities in the Southwest. The long history of water shortage and related water management in the area points to the difficulties of sharing a resource that is essential, but neither consistent nor abundant.

The history of water management in this part of the world reaches back much further than statehood. This article is about how water planning in New Mexico is handled by the New Mexico Office of the State Engineer (NMOSE) and the Interstate Stream Commission (NMISC).

The Office of the State Engineer

The NMOSE has authority over the supervision, management, appropriation and distribution of all surface and groundwater in New Mexico, including streams and rivers that cross state boundaries. Major groups within the NMOSE include seven water rights district offices, and the bureaus responsible for hydrology, water use and conservation, and dam safety. The leader of the agency is a certified professional engineer appointed by the governor. The present state engineer is Mike Hamman, who has been leading the agency since spring 2021.

The NMOSE evolved from the Territorial Engineer's Office, which was established in 1907. At the time of the agency's founding, water conflicts were simpler than those experienced today. The development of priority administration for water rights helped address or avoid conflicts caused by upstream diversion of water from a river—for example, by miners—that had established uses downstream—for example, by farmers.

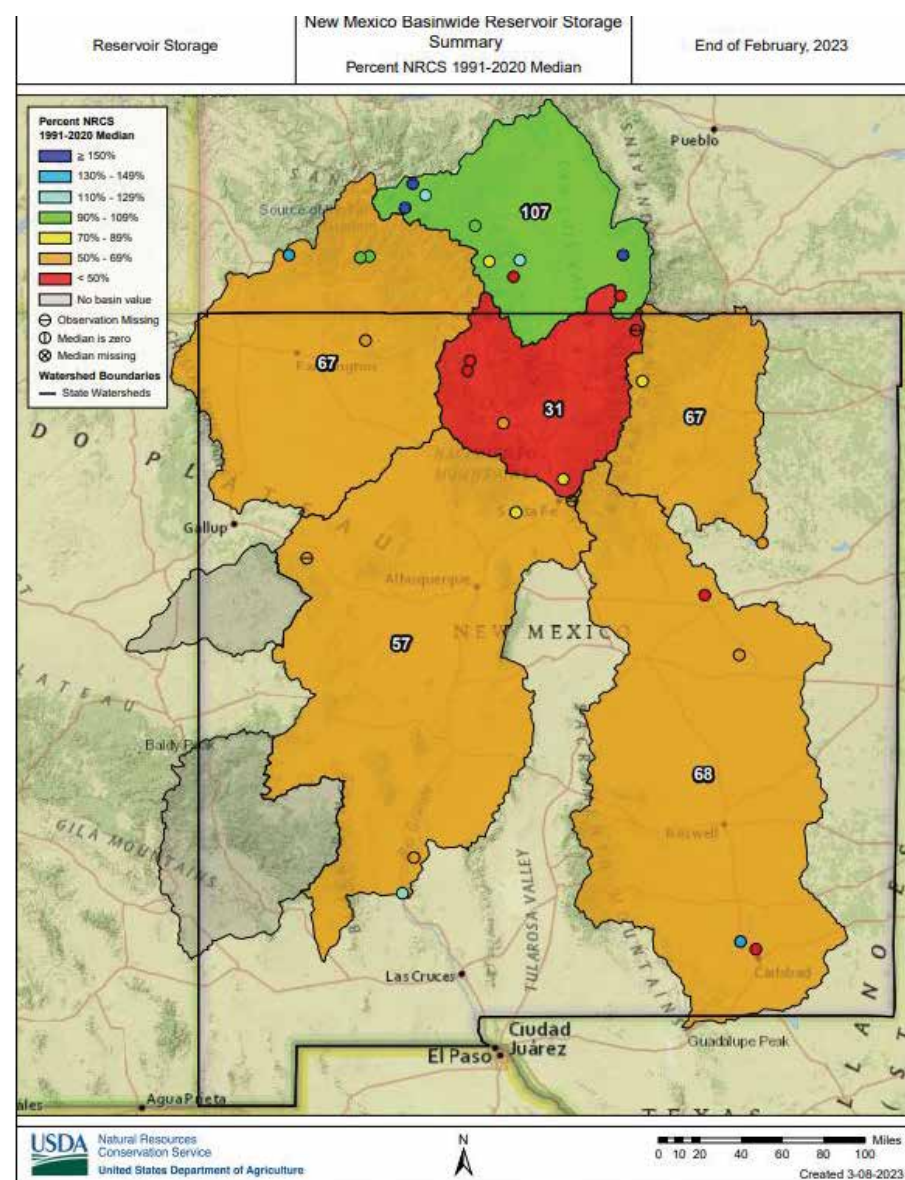
As more technology for accessing, moving and storing water to grow crops and grow cities has become available, the demands on water management have increased. For example, the kind of groundwater wells currently integral to the way New Mexicans live didn't exist until the 1950s. The water well drilling and pumping technology that is used to access groundwater has expanded far faster than the monitoring networks and scientific research used to understand the impacts of groundwater extraction.

Groundwater is an abundant yet finite source in many parts of the state that can support heavy levels of water usage for decades. Unfortunately, the rate of recharge for some groundwater sources is very slow. High levels of well use have reduced the once abundant groundwater to the point where active management is needed to prevent deeper, junior wells from using water that senior wells have the rights to.

In addition to new technology, a second issue adding complexity to water management is water law. Since the creation of the NMOSE, water law has evolved at the federal, regional, state and local levels, creating a complex puzzle. For state-level water managers in New Mexico, interstate compacts determine how water is shared by neighboring states along the same river.

The Interstate Stream Commission

The New Mexico Interstate Stream Commission (NMISC) is a sister agency to the NMOSE and is overseen by a nine-member commission. The NMISC is charged with duties separate from the state engineer, primarily protecting New Mexico's right to water under eight interstate stream compacts. The responsibilities of the NMISC include investigating, conserving, developing and protecting the waters of the state; helping to plan, design and construct Acequia and Community Ditch infrastructure; implementing the Arizona Water Settlements Act in New Mexico; and leading



regional and state water planning.

The specific metrics and strategies for compliance with the various interstate compacts vary, but, in general, compacts are concerned with the quantity of water obligated for an upstream state to provide to a downstream state. New Mexico is a party to eight interstate compacts and is an upstream state in some instances and a downstream one in others.

The State Water Planning Program has conducted regional and state water planning since its creation in 1987. The broad statutory responsibilities assigned to the NMISC, including its responsibility for administering interstate compacts, make it an ideal agency for the State Water Planning Program because it works with entire river systems and the water users and stakeholders throughout each basin.

Finding ways to allocate scarce water resources between neighbors requires cooperation, no matter the scale.

Regional Water Planning

Following the 1987 legislation that directed the NMISC to conduct water planning, the state began with regional water plans. Each region was responsible for developing plans that were submitted to the NMISC for approval.

In the years following, regional planning entities formed and drafted plans. By the end of 2008, all the water planning regions had developed plans, ending the first round of regional water planning. The first regional plans were developed by regional planning entities largely in isolation from one another, and a common problem was that many regions intended to continue to expand their use of water, and often the source for additional water was a neighboring region. The problem of each region looking to its neighbor for more water is analogous in many ways to the issues underlying priority administration of individual water rights or interstate compact agreements: Finding ways to allocate scarce water resources between neighbors requires cooperation, no matter the scale.

The 2008 regional water planning effort was mostly bottom-up, and the 2013 effort was mostly top-down. The 2013 approach was designed to make regional plans consistent statewide, in part so that they could be rolled into a State Water Plan. The methodology from 2013 included:

- Agency-calculated water supplies for each region under normal and drought conditions
- 50-year projections for water demand based on population growth
- Contractors to run meetings and develop planning materials, and
- A process for forming a steering committee composed of regional water users and their representatives.

The 2013 regional planning effort concluded by 2018 with updated plans for all regions. Many participants in the process were critical and expressed concerns about regional boundaries, the administrative water supply, the method for correlating population growth with increasing demand, and other issues. Reducing

Equitable, efficient and long-term water management strategies that are responsive to local needs and developed with scientific integrity.

water use in response to reductions in available water due to climate change is not addressed in the existing regional water plans.

The Future of Regional Planning

Now, in 2023, the NMISC is working to evolve regional water planning that allows local communities to identify and prioritize regional water needs while supporting larger basin-wide and statewide needs, including interstate compacts, the federal Endangered Species Act and current science. Water users, activists, planners and managers across the state have expressed strong interest in empowering regional values and needs to shape water management decisions.

In the 2023 legislative session, the NMISC presented an agency-sponsored bill intended to re-invigorate regional water planning. The bill, SB337 or the Water Security Planning Act of 2023, passed the House and Senate with unanimous support and only minor edits before being signed into law on April 4. The Water Security Planning Act of 2023 calls for a public rulemaking process to revisit regional boundaries and identify strategies that allow regions the autonomy to identify needs and projects in a manner consistent with the needs of the state relative to interstate compacts and endangered species.

In the coming years, the State Water Planning Program will be engaging water users throughout the state to shape a new approach to regional water planning. Our goal is to be transparent in the trade-offs associated with different administrative strategies and geographic boundaries and to develop a process and framework for regions to organize and advocate for their needs. These efforts will dovetail with efforts across the state to improve monitoring and climate science to ensure equitable, efficient and long-term water management strategies that are responsive to local needs and developed with scientific integrity.

Statewide Water Planning

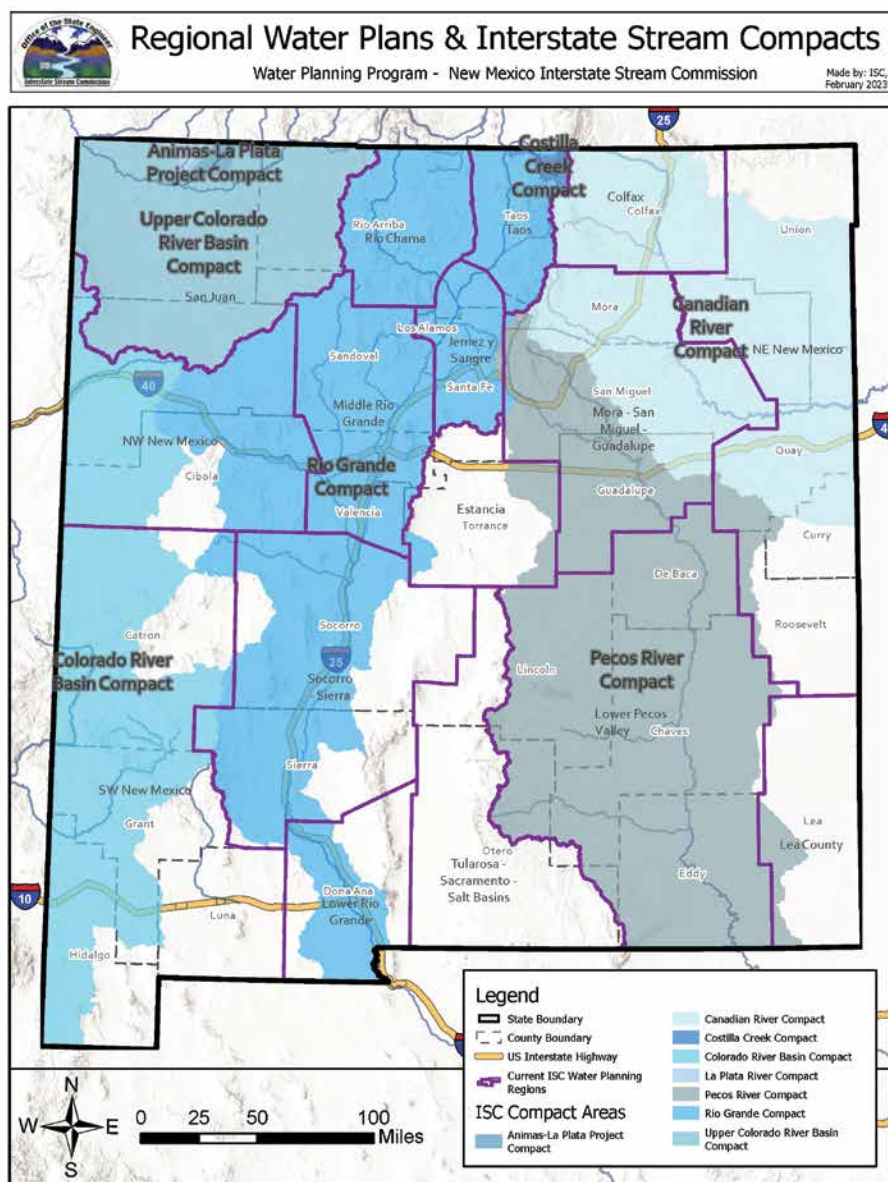
The State Water Plan Act requires that the NMISC review the State Water Plan every five years. The purpose is broad—everything from protecting cultural traditions and the environment, to prioritizing infrastructure investments, to providing continuity of water policy and management across the state. The scale of the goals is mismatched to the size of the Water Planning Program—recently expanded from two to three positions—and is administratively challenging because the scope reaches well beyond the authority of the NMISC and NMOSE.

Despite the mismatch between the size of the task and the size of the team tackling it, the Water Planning Program created a 2003 State Water Plan, reviewed it in 2008 and developed a proposed update process, updated it in 2013, and updated it again in 2018. Two-thousand-twenty-three marks five years since the publication of 2018 State Water Plan, and a thorough review is planned to develop a timetable for incorporating climate change projections into all the statutory requirements for the State Water Plan over the coming years.

The 50-Year Water Plan

The 50-Year Water Plan is the most recent work that the Water Planning Program has undertaken and is currently in its final stages of review. Guided by the principles of stewardship, sustainability and equity, and grounded in science, the 50-Year Water Plan aims to provide actionable steps to improve resilience based on the climate-change impacts to water supplies in New Mexico projected in the next 50 years.

A peer reviewed report commissioned by the NMISC and developed by the New Mexico Bureau of Geology and Mineral Resources, *Climate Change in New Mexico Over the Next 50 Years: Impacts on Water Resources*, is also referred to as the “Leap



Temperatures have already started to rise and are expected to increase statewide by 5-7 degrees in 50 years.

Ahead Report.” It includes detailed information about likely impacts of climate change on issues including soil health, groundwater, fires, flooding and farming. Read the report online at engagemwater.org.

A key finding from the Leap Ahead Report is that temperatures have already started to rise and are expected to increase statewide by 5-7 degrees fahrenheit in the 50-year study period. Higher temperatures will increase the aridity of New Mexico and alter the timing and amount of snowmelt, as well as increasing consumption of water by plants and evaporation. More extreme precipitation patterns such as flooding and drought are predicted.

Water management in New Mexico is already challenging due to highly variable rainfall, legally and historically complex water rights, and many regulations that preceded scientific understanding of groundwater and surface water. Water infrastructure projects are vastly expensive to build, operate, maintain and maintain in use for decades or more. The 50-Year Water Plan is a strategy to improve New Mexico’s water resilience as we move into a drier, more arid and unknown future.

The 50-Year Water Plan aims to provide actionable steps to improve resilience based on the climate change impacts to water supplies.

What’s Next for Water Planning?

Now is an unprecedented time for water planning in New Mexico. Recent fires, flooding and last summer’s dry Río Grande through Albuquerque for the first time in almost 50 years have all emphasized the urgency of addressing our changing water conditions. Unprecedented federal and state investment for infrastructure projects offers an opportunity to build water projects that will provide drinking water, flood protection and support our farms. The State Water Planning Program is focused on developing plans based on the projections in the Leap Ahead Report and on broadening participation through outreach and education. Learn more at ENGAGEMWATER.ORG. ■

Andrew Erdmann is the manager of the water planning program at the New Mexico Interstate Stream Commission. He is a graduate of the UNM’s water resources and planning programs and worked in water management in New Mexico for the U.S. Forest Service, the Office of the State Engineer and the City of Santa Fe Water Division prior to joining the NMISC.

NEW MEXICO POISED TO RECEIVE \$30M FOR WATER INFRASTRUCTURE PROJECT

BY **HANNAH GROVER** NM POLITICAL REPORT

New Mexico is poised to receive more than \$30 million in federal funding for water infrastructure projects. The U.S. Department of the Interior has announced that \$585 million of funding from the Infrastructure Investment and Jobs Act will be spent on 83 projects in 11 states, including six New Mexico projects.

The projects in New Mexico are on the Río Grande and include:

- \$7.1 million for upgrades to the Bonita lateral at Caballo Dam
- \$1.78 million to repair a restaurant patio at the Elephant Butte Historic District Recreation Area
- \$3.39 million to rehabilitate roads and parking lots at the same recreation area
- \$9.6 million for water infrastructure rehabilitation at Elephant Butte Recreation Area
- \$4 million to repair damaged concrete at the base of El Vado Dam
- \$4.5 million for a study about improvements in the Lower San Acacia Reach of the Río Grande that are intended to “improve water conveyance, maintain or increase habitat available to endangered species, and improve cost-effectiveness of operation and maintenance actions.”

Several projects that will benefit New Mexico are on Colorado’s list, and cross state lines. This includes \$1.5 million to remove and replace the Azotea Tunnel outlet on the San Juan-Chama Project. The SJCP starts in Colorado and moves water from the Colorado River Basin to the Río Grande Basin through a series of tunnels. The outlet of the Azotea Tunnel is on Jicarilla Apache land near Chama. This provides access to Colorado River Basin water for municipalities like Albuquerque.

The Animas-La Plata Project is also listed as a Colorado project. It will receive \$10.8 million. This will be used to cover design, construction, compliance and commissioning costs for the Navajo Nation Municipal Pipeline. The Animas-La Plata Project includes Lake Nighthorse, which is located in Durango, Colorado. Water that will benefit the Navajo Nation is stored in Lake Nighthorse. Currently, the only way to get water from Lake Nighthorse to the Navajo Nation is to release it from the headgates into the Animas River. That leads to potential water losses due to seepage into the soil, evaporation and potential diversion.

Colorado’s projects also include \$56 million to finalize planning, design and construction of a treatment plant for mine waste from the Leadville mine drainage tunnel and a chemical storage building.



ECC Solar
ENERGY CONCEPTS CORP

OFF-GRID | GRID-TIED | BATTERY BACKUP | SPECIALTY SERVICES
Serving New Mexico since 1991 (505) 454-0614 www.eccsolar.com

CITY OF SANTA FE AND WILDEARTH GUARDIANS KEEP SF RIVER FLOWING

Agreement protects lower river, riparian habitat and downstream communities

On April 12, the City of Santa Fe and WildEarth Guardians finalized a settlement agreement resolving a water rights protest related to the city’s proposed San Juan-Chama Return Flow Project. The agreement provides significant protections to preserve a flowing Lower Santa Fe River and improve riparian habitat conditions, while allowing the city to continue its efforts to increase the long-term security and climate resilience of its municipal water supply.

The San Juan-Chama Return Flow Project ([HTTPS://SANTAFENM.GOV/SANTAFE-FAQ_RETURN-PIPELINE.PDF](https://santafenm.gov/santafe-faq_return-pipeline.pdf)) includes a proposed 17-mile pipeline that will return treated San Juan-Chama water from the Paseo Real Water Reclamation Facility (PRWRF) back to the Río Grande. This will allow the city to release less water from upstream reservoirs, while diverting the same amount at the Buckman Direct Diversion (BDD), stretching the city’s supply of renewable imported surface water without changing the amount of water in the river. Increased surface water supplies will reduce the city’s need to use groundwater, allowing the city and Buckman aquifers to continue to recharge, increasing resilience to drought, wildfire and climate change and meeting future municipal demand.

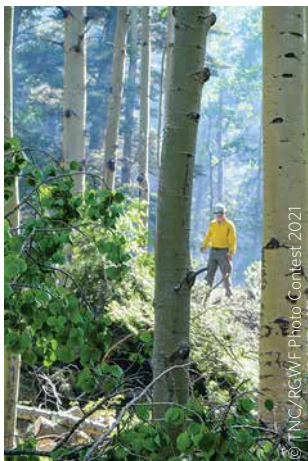
In 2022, the city filed an application with the Office of the State Engineer for a return flow credit needed for the Return Flow Project. WildEarth Guardians protested the application based on concerns that sending recycled wastewater

to the Río Grande could significantly reduce flows in the Lower Santa Fe River, negatively impacting the health of the river ecosystem and downstream water users.

After months of negotiations, the city and WildEarth Guardians were able to agree on a series of measures to resolve WEG’s concerns and formalize the desire of the city to maintain the health of the riparian corridor downstream of the PRWRF. Daniel Timmons, WEG’s program director, said: “The City of Santa Fe deserves credit for working collaboratively to identify a path forward to help secure its water supply for the future, while also protecting the important ecological, cultural and economic values of a flowing Santa Fe River.”

The agreement provides operational parameters, including minimum monthly flow volumes below the PRWRF, to ensure the Lower Santa Fe River continues to maintain connected flow downstream to the natural springs at Ciéneguilla. The city will implement restoration enhancements in riparian zone along the Lower Santa Fe River to enhance water quality and improve riparian habitat conditions. The city will also support flows in the Río Grande by leasing a portion of its surface water rights for environmental, instream purposes.

After signing the agreement, Santa Fe Mayor Alan Webber said, “This deal is truly a win-win. The San Juan-Chama Return Flow Project is a key piece of infrastructure needed to secure the city’s long-term water supply needs, essential for the city to continue to thrive in the decades ahead. Through these negotiations, we’ve also figured out a way to protect a living, flowing river that is so beloved by our community.”



The World We Depend On, Now More Than Ever, Depends On Us

The Nature Conservancy in New Mexico works to conserve our rivers, lands and forests. Guided by science, we create innovative, on-the-ground solutions to our state’s toughest challenges so that nature and people can thrive together.

Learn more about the power of nature at nature.org/newmexico





U.S. SUPREME COURT HEARS CASE ON NAVAJO NATION ACCESS TO COLORADO RIVER WATER

BY **SETH ROFFMAN**

Thirty percent of residents on the 27,000-square-mile Navajo Nation do not have access to safe, reliable drinking water. Farmers, ranchers and other businesses are limited in their ability to grow. The U.S. Supreme Court is considering whether the U.S. government has lived up to treaty promises to the Navajo people. The case could change the Navajo Nation's ability to draw water from the Colorado River Basin. At issue is whether 1849 and 1868 treaties included access to that water. The current case has been crawling through the courts for 20 years.

The Navajo claim stems from federal policies of removing tribes and relocating them westward. Establishing reservations came with the promise that those lands would be permanent homelands in the Diné's ancestral territory. You can't have a homeland without water. The tribe is trying to get the court to rule on whether the federal government has the responsibility to

Top photo: Attorney Hilary Tomkins with Navajo Nation President Buu Nygren in front of the U.S. Supreme Court. Right: Diné leaders and supporters have been in a legal fight for water on their homeland.

The Supreme Court could reshape the federal government's trustee obligations toward tribal water rights.

make sure they have sufficient water for domestic use, for schools, hospitals and economic development. And so, it is asking that the government help assess and identify all such needs and then come up with a plan to meet those needs.

The Navajo Nation first has to establish that it has the right to file a lawsuit over the water. Tribes were purposely excluded from the Colorado River Compact, completed in 1922. The federal government asserted water rights on behalf of some tribes, but not the Navajo. The Navajos claim a valid right to be on the same playing field with other stakeholders when it comes to developing their water, contributing to marketing, leasing or other initiatives that address climate crisis impacts. Native water rights expert Daryl Vigil said, "After 200 years, there's still no structural plan for tribes to engage in the water policy conversation at a level that acknowledges their sovereignty and self-determination."

A 2021 ruling by a 9th Circuit Court panel upheld the fact that the Navajo reservation's purpose expressly included farming, and said that the Navajo Nation should be able to proceed with its complaint that alleges breach of trust against the United States. The 9th Circuit's conclusion comes from a 1908 Supreme Court case that found tribes had some water rights where they

The whole system of water management in the West based on interstate negotiations, lawsuits, regulations and statutes could be disrupted.

were not explicitly granted. The panel wrote the tribe's claims were distinct from the broader dispute about water from the Colorado River.

The Colorado River serves some 40 million people across seven states and some tribal communities along its 1,450-mile path. Some of America's largest cities receive their drinking water from the river, including Denver, Phoenix, Albuquerque, Salt Lake City and Los Angeles. Nearby states don't want to give up any of the water. Amidst longstanding tensions about how to apportion the river's dwindling flow, local water authorities, as well as the federal government, have tried to block the tribe from pursuing a lawsuit. The Biden administration, which is investing \$13 billion from the Bipartisan Infrastructure Law directly into tribal communities, including \$2.5 billion to implement the Indian Water Rights Settlement Completion Fund, is opposing the Navajo Nation in the Supreme Court case.

Navajo Nation President Buu Nygren said, "The Supreme Court needs to honor our treaty rights and honor Navajo people. Our leaders and their leaders agreed that both nations wanted



to be prosperous. We all want to develop; we all want what's best for our children. Everything that we need to do as a nation requires water. Fixing infrastructure such as roads takes water. Farming takes water. Making sure that people can cleanse themselves and survive takes a lot of water. From water comes economic development.



We're finally coming of age to where we've got our own engineers, attorneys, architects, high-end farmers. We are really trying to move ourselves forward, and for them to kind of hold something in front of us with our water rights, to me, it's not right. I say: 'Now honor what you've promised us a long time ago.'"

Navajo President Buu Nygren viewed an exhibit at the National Museum of the American Indian in Washington, D.C.

Without adequate water, tribal communities have often been unable to achieve food sovereignty. Most of the approximately 16,000 farms in the Navajo Nation are family-owned. The Navajo Agricultural Products Industry, a 72,000-acre irrigated farm near Farmington, is the only industrial-scale enterprise. Congress approved the creation of the Navajo Indian Irrigation Project in 1962. A canal system made NAPI possible. The Supreme Court case could impact water rights settlements on the Colorado and Little Colorado rivers, decreasing the water available for NAPI to utilize.

The Navajo Nation does have existing agreements with New Mexico and Utah giving the tribe access to water in those states. But most of the tribe's reservation and population reside in Arizona. Arizona told the justices in a brief that the United States had represented tribal claims to Colorado River water for years and had chosen not to pursue any water rights for the Navajo Nation from the river's main flow. And Arizona has argued that only Congress can pass a law mandating the government to provide the tribe with water rights.

Water has never been willingly allocated in the Colorado River basin by politicians. They were forced to do so by the courts. There are two important doctrines that favor the Diné. The Winter's doctrine, from a 1908 Supreme Court decision, enables the viability of the reservation, with the legal implication of adequate water. And in the Canons of Construction or Doctrine of Interpretation, as it applies to Indian law, treaties are to be interpreted as the Native people would understand them at the time, with ambiguities being decided in favor of the tribes. It is also important to understand that a treaty has the same legal force as the U.S. Constitution.

An amicus brief was filed by the Diné Hataa'ii Association Inc., a nonprofit organization founded by medicine men of the Navajo tribe. The justices are expected to decide the case before the conclusion of the Supreme Court's term at the end of June. ■

Sustainable Technologies at SFCC



Learn to build an adobe house. Discover the secrets of cultivating algae and creating biofuels. Study aquaponics and hydroponics. Find out how to grow using controlled environment agriculture systems.



Do all these things and more at Santa Fe Community College!

Summer and Fall now registering.

LEARN MORE.



SFCC.EDU/SUSTAIN | 505-428-1270

CREATING A CULTURE OF COMMUNITY ACCESS AND ENGAGEMENT

MATTHEW J. MARTINEZ

"I love hearing my voice in a pot as it echoes back and talks to you. Hiwonbo Ko'oe ba'pibo," (greetings, Auntie, how are you doing?)
—Clarence Cruz (Khaayay)

This intimate exchange with clay and pottery as a living relative embodies a fundamental Tewa tradition. For Tewa people like Clarence, holding a pot and saying hello is carried out in the same manner as he would do with any elder or relative to recognize their presence. In English, so-called artwork, objects and artifacts created by ancestral Tewa people continue to have a living spirit. Such a Tewa-centered cultural worldview can be easily erased against a societal backdrop that privileges art markets and a tourist economy. Despite the continued colonial Southwestern tourist gaze, Indigenous people remain steadfast to navigate these often-competing value systems in ways that are conducive to protecting and re-connecting to Indigenous values and traditions.

This spring, Ohkay Owingeh members visited and engaged with museums that house Tewa pottery and archaeological collections. Included in the visits were The Center for New Mexico Archaeology (CNMA), which serves as the repository for archaeological material collected from lands owned by the State of New Mexico. The center is a facility under the Museum of Indian Arts and Culture (MIAC). It currently holds nearly eight million artifacts from all time periods and cultures. The other site visit was MIAC itself, situated on ancestral Tewa land, *O'ga P'ogeh* (White Shell Water Place), also known as Museum Hill in Santa Fe. Over the last year, *Grounded in Clay* has been on exhibit. It represents more than 100 pottery pieces chosen by roughly 60 community curators from each of the 21 Pueblo tribes in the Southwest. This traveling exhibit from the Vilcek Foundation and the School for Advanced Research (SAR) is intended to create a forum among Pueblo

These extensive collections house critical ancestral knowledge and histories.



L-R: Kelsely Medina, Peter Garcia Jr., Michael Bancroft Jr., Rexine Calvert, Patrick Cruz, Clarence Cruz, Sharon Naranjo Garcia, Matthew Martinez. © Damian Anaya

Artwork, objects and artifacts created by ancestral Tewa people continue to have a living spirit.

communities and the larger public to share Pueblo pottery traditions and stories. Small grants from SAR were provided to curators of the Pueblo Pottery Collective to further engage in community initiatives.

Included in the visits were Ohkay Owingeh tribal members Sharon Naranjo Garcia, *Tayi Povi*, (Artist and Potter), Clarence Cruz, *Khaayay*, (Pueblo Pottery Collective), Michael Bancroft Jr., *Paayo Povi*, (Elementary teacher), Rexine Calvert, *P'yo Povi*, (Tribal librarian), Kelsey Medina, *Poekwin Sami*, (Head Start teacher), Patrick Cruz, *Wae'oe Tsideb*, (Pueblo Pottery Collective) and Matthew Martinez, *Tsaadamu Tsay*, (Pueblo Pottery Collective). The museum visits were geared toward gathering a cross section of educators and artists to further engage with pottery collections and access to cultural institutions. Even though these museums are situated on Tewa land, visits to such museums and collections are often not common activities for a variety of reasons.

Over the past 20 years or so, museums and cultural institutions have attempted to engage with tribal communities more directly in the stewardship of their cultural materials. This remains a complicated and sensitive practice among Indigenous communities, particularly in relation to federal mandates of repatriation of human remains and objects of cultural patrimony. There also remain ethical questions on how items of cultural patrimony ended up in museums and other collecting institutions. Perhaps the most famous recent incident is the ceremonial Acoma shield that was stolen in the 1970s and appeared in a Paris auction house

Repair Regenerate Re-use

Sustainable
non-surgical
spine and joint
regeneration

NMPM

New Mexico
Pain Management
www.NMPM.com
800-702-NMPM



for sale. After a yearlong international campaign to reclaim the sacred object, it was returned to its rightful owners in 2019. For Pueblo people, care and collaboration between museum institutions and communities remains a source of tension and requires ongoing discussion with adequate representation at the table and in key leadership positions across institutions.

One of the significant takeaways of the visits included learning that these extensive collections exist and that they house critical ancestral knowledge and histories. Diana Sherman (CNMA collections manager) accompanied the group and shared some insight into stewarding the collections. Having a consistent climate-controlled system is essential to the preservation of



Viewing collections at the Center for New Mexico Archaeology
© Matthew J. Martinez

archaeological collections. As an artist who produces black and redware style pottery, Sharon was intrigued by the intricate designs of Mimbres pottery traditions and the steady hand and patience of our ancestors. She remarked that they painted what they saw all around them, such as birds, insects and mountains. As classroom teachers, Michael and Kelsey reflected on how pottery can also be used as a teaching tool. For Head Start students, Kelsey stated, “They are still developing their motor skills, and what better way to do that than to work with clay and build something that reflects who you are?”

At MIAC, Collections Manager Patrick Cruz pulled pottery specific to Ohkay Owingeh for viewing. Some of the pieces were not signed, which led to a discussion of which family or artist possibly created the piece, based on redware styles and designs. It was evident that having such a space created an opportunity for tribal members to view not only pottery collections but how these relate to family lineage as well as current challenges today that affect access to gathering clay and particular paints and slips that are specific to Ohkay Owingeh. Clarence Cruz stated that “kids are often told not to touch or break fragile items. How can we overcome this idea so kids and families can continue to use their hands to create and hold a piece of who they are?”

Following the museum visits, participants held a forum to share their experiences with the larger Ohkay Owingeh community at the P’oe Tsawa Community Library. Tribal

A Tewa-centered cultural worldview can be easily erased against a societal backdrop that privileges art markets and a tourist economy.

librarian Rexine said, “Our library is the center of the community and serves as a learning place that can include pottery-making activities and traditions.”

We also know that food is an essential means to creating and fueling a community; and what better way to gather people than by offering red chile and beans at the library. Community members were eager to learn more about the variety of museums and institutions that steward Ohkay Owingeh artwork. In addition to local museums, there are numerous New Mexico historic sites, national monuments and preserves that are associated with the traditions of pottery production and Ohkay Owingeh histories. The next step for Ohkay Owingeh members is to continue re-engaging and visiting sites that remain relevant and integral to the pueblo’s traditions. A planned site visit includes Mesa Prieta, *Tsikwaye*, in northern New Mexico, which has the largest number of petroglyphs in New Mexico with over 100,000 rock images.

It is evident that further community access and engagement with cultural institutions presents itself as an opportunity for all communities to experience. Today, the role of curators and archaeologists includes not only what it means to be a good steward of collections and cultural sites, but also of relationships—with tribes, institutions and communities, both living and ancestral. ■

Matthew J. Martinez, Ph.D., is currently serving as executive director of the Mesa Prieta Petroglyph Project. He is a former 1st lieutenant governor at Ohkay Owingeh.



Photo courtesy of the Vilcek Foundation

A LETTER FROM VALERIE RANGEL CITY OF SANTA FE HISTORIAN

(PART 2)

Dear Fellow Santafeans,

My term as the fourth City Historian is coming to a close and I am reflecting on the process and project that I have been working on during this service to our community. Over the past two years I have provided free community lectures and training on historical Storymaps, and served as a resource on historical information to residents who wanted to know more about their neighborhood and historic places within the city. Despite pandemic restrictions in 2021, I participated in public engagement opportunities to hear community concerns and proposed solutions to issues related to history. I learned from a diverse spectrum of residents who shared their experiences, family stories, as well as the strengths and challenges of living in Santa Fe.

The historian appointment has afforded me the opportunity to present knowledge on history with transparency to promote curiosity, scholarly inquiry and constructive discourse. I have gathered thoughts and ideas from the community and created a series of ArcGIS Storymaps, which serve as a tool to enhance learning and build more knowledge of our past, uncover historical truths and uplift shared values. This creative digital learning tool allows the viewer to explore data sets, maps, archival photos, documents, and also learn through video and audio recordings. Historical essays on places have been archived in the digital repository of Santa Fe history, which will be maintained by the Santa Fe Library. The essays are accessible via hyperlinks embedded within the Storymaps.

The Storymap links are featured on the City of Santa Fe's website and accessible to the public to browse online, along with a list of resources available for anyone wishing to research aspects of history on their own. One of the Storymaps that I created, "A People's History," highlights historically significant places within the city and surrounding area. The viewer has the option to either explore different places around the city by selecting a box with a photo, or click on a GIS map marker on a map. A brief description is provided for each location with a fuller context of history provided as a pdf link on many locations, with additional sources and citations to learn more information.

Another Storymap, "Layers of Santa Fe," is an assembly of maps starting with environmental data, archival maps, interactive data maps, cultural perspectives and links to other sources of historical information. A Storymap on Santa Fe's darker history that includes spooky tales of ghosts, mysteries of the unexplained and unfathomable truths may be unsettling. Santa Fe is also known as "The City of Holy Faith," and has a rich history of diverse spiritual and religious practices which are highlighted in yet another Storymap.

Artifacts and archeology tell the story of social changes, as well as our interactions with the environment, just as the history of plants, geology and ice core

*Storymaps inspire and inform,
as well as build a stronger sense of
place through a deeper understanding
of history.*

samples provide an understanding of our natural world. Water is the element that exemplifies our interconnectedness with the environment and all living things—being a necessity for almost all life on the planet. Given its importance, I embarked upon a final Storymap focused on the topic of water with the intention of raising awareness for this precious natural resource, the current state of water quality and quantity and the human connections to water.

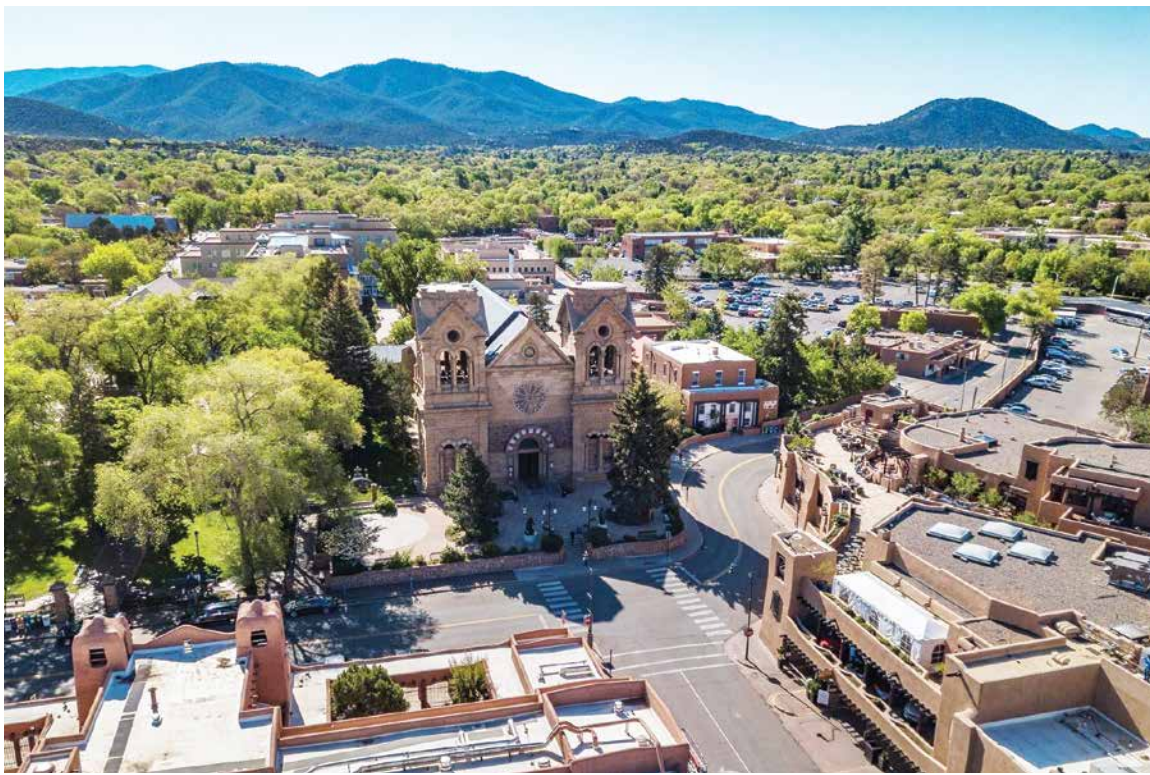
"Perspective on Water" is a Storymap of Storymaps that incorporates perspectives of community organizations around the city to share their thoughts on planning and future needs, as well as their work on water-related projects. There are also cultural stories on water, historical context of our arid environment, Indigenous perspectives, advocacy on environmental issues, as well as research that documents the present human condition with respect to our shared resource.

I also created a Teacher's Guide in the form of a Storymap to show how to utilize the content provided in the Storymaps, with added resources such as educational videos, K-12 lesson plans, question prompts for students and lists of resources. It is important to recognize that communication of historical knowledge can be gathered and learned not solely in written form, but also through oral history narratives, migration stories, origin legends, different languages, cultural dances, poetry, art and theater.

In October 2022, the City of Santa Fe Arts and Culture Department launched a virtual interactive tool for younger generations. Using new "augmented reality" (AR) technology, local artists were invited to develop an artistic lens that links the historical Storymaps with a broader perspective that can be used as prompts for further discussion of culture and history. The gifts of these brilliant artists have opened windows of perception in the digital realm and are an inspiration to future generations to share stories through new and creative ways. Experience Santa Fe history through the eyes of local artists by visiting the "Ojos Diferentes" website and learn how to use your cellphone or iPad to experience the art at select site locations: <http://www.ojosdiferentes.com>.

If you are not familiar with ESRI GIS mapping, ArcGIS Storymaps is a type of digital storytelling platform that combines images, text and video to enhance learning and illustrate spatial relationships. All Santa Fe public schools have access to GIS mapping and the Storymaps application. Teachers during the pandemic utilized Storymaps to create





Shared knowledge and collective wisdom have the power to inform our society, shape our laws and social policies, and serve as a guide for future generations.

lessons for classes, and students across the nation are utilizing Storymaps to present graduate-level research projects. Storymaps are easier to assemble than a PowerPoint presentation and can be easily shared, once published, via a hyperlink. Organizations and for-profit companies are now creating Storymaps to share the history of their work and to market their products. The software doesn't require downloading a program or paying costly fees and is now available to the public for free! The ArcGIS Storymaps website is easy to access online and the software application is

user-friendly, and it is incredibly fun to create a digital story for educational purposes.

Storymaps inspire and inform, as well as build a stronger sense of place through a deeper understanding of history which can effect change, influence opinion and create awareness. They can be a learning tool for use in the classroom and also a great way to introduce new visitors to the City Different and help them explore historically significant places with a narrative that shares the diverse perspectives of the region. I believe that shared knowledge and collective wisdom have the power to inform our society, shape our laws and social policies, and serve as a guide for future generations.

I encourage anyone interested in submitting a family story, historical essay on a specific site, subject, or significant event, photos, newspaper clippings, or other physical materials to contact any of the Santa Fe libraries. If you're interested in telling your story through oral narration, the Library of Congress offers a StoryCorps app that can be easily downloaded. StoryCorps gives people of all backgrounds, typically two at a time, the opportunity to record meaningful conversations and archive the recordings at the Library of Congress. Recording a StoryCorps interview is easy: You invite a loved one, or anyone else you choose, to one of the StoryCorps recording sites to share a 40-minute conversation.



Continue to explore our city's history and Keep Santa Fe Beautiful! ■

In addition to City of Santa Fe Historian, Valerie Rangel has been an archivist for the New Mexico Records Center and Archives, taught at the Santa Fe University of Art & Design, worked as a technical assistance provider for the New Mexico Health Equity Partnership, and presently is the Community Outreach & Engagement manager for New Mexico First. She is author of Environmental Justice in New Mexico: Counting Coup.

NEW DIVISION TO PROMOTE NEW MEXICO'S CREATIVE SECTOR

BY NICOLE MAXWELL
NEW MEXICO POLITICAL REPORT

A newly established state division could help small businesses across the state promote local artists and creative industries. Gov. Michelle Lujan Grisham signed HB8 into law to add the Creative Industries Division to the Economic Development Department (EDD).

"As we strive to diversify our economy, we must lift up the heart and soul of New Mexico: our creativity," House Majority Whip Reena Szczepanski told NM Political Report. "From flamenco studios, to potters and furniture makers, to tech, design and architecture, this division will unlock the incredible economic potential of our creative and cultural industries. Boosting our creative industries will generate good jobs and a larger global footprint for rural, tribal and urban communities... In this first year, we're looking for a dynamic and dedicated division to come together and begin this work, and we will be working with the enormous team of creatives from every corner of the state that have been integral to passing this bill."

Szczepanski, a Santa Fe Democrat, along with Las Cruces Democrat Sen. Jeff Steinborn, were two of the five sponsors of HB8. "It really leverages one of New Mexico's strengths: our creative talent," Steinborn said. "New Mexico has 75 percent more visual artists per capita than any other state in the country, which I think is the most impressive statistic that we all know to be true, but it tells the story of why this division can help turn that creativity into jobs. Also, it will help local communities with infrastructure that they may need to support and showcase these sectors."

The Division's scope includes providing support for entrepreneurs and small businesses in creative industries; assisting organizations that support creative industry companies and workers; supporting educational and workforce training initiatives that facilitate creative industry growth and success; identifying and helping establish public infrastructure to support creative industries; serving as an information clearinghouse by providing resources and opportunities for creative industry stakeholders, and acting as a liaison between creative industry-related businesses and organizations," except for the film industry, which is covered through the EDD Film Office.

The Creative Industries Division becomes operational in July when it is expected to receive a \$2 million appropriation. EDD spokesman Bruce Krasnow said, "The appropriation is one-time money, so as of now, there is no recurring support for the Division. As a result, the agency plans to meet with the bill sponsors and the Governor's Office to determine the best way to advance creative industries in the state within the parameters of this spending mandate."

2023 NEXT GENERATION WATER SUMMIT

June 14-16

“Water Reuse and Conservation: The New Paradigm”

Keynote: “One Water” Approach at the Utility Scale

The 2023 Next Generation Water Summit (NGWS) brings together the building and development community, water reuse professionals and policymakers in a collaborative setting to share best practices and learn about innovative water conservation and water reuse techniques that can comply with water conservation restrictions spreading across the Southwest.

Water reuse and conservation is the central theme to the NGWS. The Friday keynote will directly address these critical issues. Adel Hagekhalil, general manager of the Metropolitan Water District in Southern California, will discuss his experience with reuse and conservation, as well as his assertion that securing resilience through a lens of “water totality” is the primary solution.

Hagekhalil’s keynote will kick off Day 2 of the NGWS, scheduled for 9 a.m. on Friday, June 16. “We are working in a new reality, a new normal, where every year it feels like a record is broken—record heat, record dry, record snow,” said Hagekhalil. “We must manage this climate whiplash so that we can provide reliable water supplies. That means prioritizing storage,

building on our progress in conservation, and investing in new, local supplies like water recycling and stormwater capture. Working through integrated solutions as part of the ‘One Water’ approach, we can build a stronger, more resilient future for our communities and our region.”

Water is increasingly scarce. Growing the supply through reuse has to be part of the solution, even though in some locales it is not preferred. Furthermore, promoting conservation during both drought and non-drought conditions is necessary. Hagekhalil’s perspective seeks to disrupt the siloed practices of today’s water management with a more inclusive and holistic approach.

Hagekhalil is responsible for leading the Metropolitan Water District’s daily and long-term operations and planning to provide safe, reliable water to Southern California. He served nearly 10 years as assistant general manager of the Los Angeles’ Bureau of Sanitation, led the city’s wastewater collection system, stormwater and watershed protection program, water quality compliance, advance planning and facilities. He also helped develop the city’s 2040 One Water LA Plan, an award-winning regional watershed approach to integrate water supply, reuse, conservation, stormwater management and wastewater facilities planning.

Santa Fe area residents are eligible for free virtual admission to the event. Registration is required (WWW.NEXTGENERATIONWATERSUMMIT.COM).

The summit will feature more than 25 live sessions with speakers around the U.S., in addition to an on-demand library of educational offerings. All sessions will be viewable online and available for up to 30 days after the summit.

Hosts of the NGWS are the Santa Fe Green Chamber of Commerce; Green Builder® Coalition; City of Santa Fe; KUELwater and the Santa Fe Area Home Builder’s Association. The Presenting Sponsors are PNM and AVANGRID. The education partner is Santa Fe Community College, and the national media partner is Green Builder® Media. ■

NEXT GENERATION WATER SUMMIT SCHEDULE

NGWS SCHEDULE

To register and for more information, visit WWW.NEXTGENERATIONWATERSUMMIT.COM

JUNE 14 5:30 PM

Mayor’s Reception at the Drury Plaza Hotel
Network with speakers, city staff and the summit’s co-founders. Free

JUNE 15

1 PM: Challenges in the Commercial Sector (Bill Hoffman and Doug Pushard)

4 PM: Closing Plenary—What Happens When the Water Runs Out? (Louis Trujillo and Glenn Schiffbauer)

JUNE 16

8:45 AM: Keynote—Reuse and Conservation: The New Paradigm (Adel Hagekhalil)

10:15 AM: Net Zero Water Homes—Lessons Learned (Laureen Blissard and Darrel McMaster)

10:15 AM: New Product Innovations (Doug Pushard)

11:30 AM: Graywater: What Is Happening in the West? (Laura Allen and Doug Pushard)

11:30 AM: Saving Water with WaterSense-Labeled Home v2 (Jonah Schein)

1 PM: Residential Blackwater Reuse in the West—What Is Possible? (Michael Broussard and Paula Kehoe)

1 PM: Multifamily Water Demand Calculator (Christoph Lohr and Dan Cole)

2 PM: What Can a Water Rating Tool Do for You?

3 PM: Saving Energy/Saving Water (Amanda Hatherly)

4 PM: Closing Plenary—Recap of the 2023 NGWS (Glenn Schiffbauer, Doug Pushard, Mike Collignon)

THREE TOURS, JUNE 17

Live, online and on-demand sessions are being offered by the Next Generation Water Summit. Santa Fe (city and county) residents can attend for free, thanks to sponsorship from the City Water Conservation Office and Santa Fe County Office of Sustainability.

FROM 9 TO 11 A.M., you can take a self-guided tour of the City of Santa Fe’s native plant and pollinator gardens and cactus garden at the Water Conservation Office on San Mateo (across from Midtown Bistro). City staff will answer questions, and give away seed and water conservation swag. WWW.SAVEWATERSANTAFE.COM

FROM 12 TO 2 PM, Santa Fe Community College’s Trades and Advanced Technology Center (6401 Richards Ave.), a LEED Platinum Certified facility, will showcase its commercial greenhouse, a living laboratory where students manage aquaponic and hydroponic production systems. The greenhouse features a new rainwater collection and delivery system. SFCC’s Alternative Fuels and Algae Cultivation programs provide students with skills to produce climate-friendly energy. The lab is researching the use of algal cultures in bioremediation, the processing of diverse wastewater streams. For more information on visiting SFCC, call 303-579-1543.

Light Shining Through the Cracks: New Approaches to Infrastructure

Urban areas are built to shed rain, rather than capture and use it.

BY MARTHA DAVIS

In 2000, I joined the staff of the Inland Empire Utilities Agency. My first assignment was to attend a workshop with other water utility leaders where we debated the reliability of developed water systems. Were they 98 percent reliable? 100 percent? Whatever the precise answer, we were proud that water flowed whenever our customers turned their taps. We were committed: Water, sewer and other services would be ready to meet all of our communities' needs, come what may. To stay true to that commitment, we worked hard to be prepared for economic and population growth. In developing our plans, we assumed that California's water future would look like the past. That's not what happened.

Good News and Bad News

Few of us anticipated how completely climate change would disrupt our imported water systems that are engineered to take advantage of the most historically generous snowpack and runoff. Nor did we understand how fast our centralized water systems could turn upside down as persistent high temperatures sucked moisture from vegetation and out of the ground.

Now, each day brings new headlines about dwindling imported water supplies and predicted shortfalls in water deliveries. Yet, imported and centralized systems are only part of California's water supply. Shouldn't the water that literally falls in our backyards be used to enhance water resilience?

Community members raised that important question at a September 2021 drought workshop in the northern California town of Mendocino. The community had run out of water. Residents wanted to know if there was something they could do other than trucking in expensive emergency supplies from distant rivers that were also suffering with too-low flows.

The speaker, Regina Hirsch of Watershed Progressive, responded, saying, "The good news is that even though this was the driest year in a century for Mendocino, it had rained." In fact, the town received more rainfall than the total amount of water normally used in one year. Mendocino had enough water. Then she hit them with the bad news: the community was not prepared to use the rain it received.

A Modest Shift in Mindset

The idea that there could be an abundance of water available to communities in the midst of severe drought will surprise some. But a modest shift in our mindset—seeing local rain as an essential part of our water supply and water efficiency as vital to reducing unnecessary water waste—opens up a wide range of opportunities to improve water resilience despite the climate crisis.

Consider how urban areas are built to shed the rain, rather than to capture and use it. All the while, supplemental water is brought in at great expense and environmental cost from distant watersheds. Frequently, this imported water is treated to drinking water standards, used only once (largely for outdoor irrigation), and then thrown away.

Some California communities have already started to reverse engineer their urban landscapes to reconnect their underlying hydrology. Street curbs are being cut to redirect stormwater into planters; pavement is being replaced with more permeable surfaces. Unneeded and underused lawns are being eliminated and replaced with

Even during a drought, it rains. Are we prepared?

climate-appropriate trees and plants, and rooftop rainwater catchment systems are being installed to augment outdoor irrigation.

Many of these changes are small in scale, but mighty in their capacity to transform how landscapes absorb and process water. When these actions are implemented across many parcels, they have the power to restore entire watersheds.

Similarly, some of our largest urban areas sit atop huge groundwater basins that have been ignored or mistreated. Investments in groundwater recharge infrastructure, flooding zones and well-head water treatment are beginning to undo some of the infiltration and water quality damage caused by decades of neglect. These actions are rehydrating local water storage capacity and reinvigorating underground flows, benefiting nearby stream habitat and fisheries.

Initiatives to improve the soil health in both urban and rural areas are also taking hold. Decision-makers are increasingly aware of the importance of healthy soils in retaining moisture, regenerating native plants and absorbing carbon emissions. Adding organic material and reducing the use of artificial fertilizers and pesticides will mark a huge step forward—using natural systems to build a climate-resilient future.

The City of Santa Fe is one of the New Mexico communities started on this journey. Infiltration basins have been built along the Santa Fe River. Tours of some of these will be showcased in June during the Next Generation Water Summit.

The Efficiency Factor

All these efforts are important parts of the puzzle, but the biggest factor in our water resilience equation will be continued improvements in water efficiency—reducing the amount of water we waste. Simply put, the more efficient we are, the more flexibility we have in managing the water we receive from both imported and local supplies.

California has made huge strides through its building codes and water conservation regulations to improve urban water efficiency. Today, areas like the city of Los Angeles use significantly less water than half a century ago despite substantial population growth. Without those efficiency improvements, the impacts of recent droughts would have been far worse. Still, there remains much more we can do to reduce water waste and its impacts on our water resources.

Climate change is driving us back to the drawing board of what it means to secure water resilience. It is up to us to adapt and to provide the collective leadership our communities need if we are to have a climate-resilient future.

Deep Cracks

A crisis of this magnitude reveals deep cracks within our existing water systems. No, there is no "somewhere else" from which water may be taken without severely impacting those places and communities. No, water is not equitably available or affordable for many people in our communities, and climate change is only making these problems worse. No, we cannot have a resilient future if the ecosystems from which we divert the water are dying because we take too much from them. And yes, we urgently need to give back more water to the people and places that have been deeply impacted by climate change and the legacy problems created by our water systems. Our collective obligation to the future is to ensure that we all come through this climate-changed era together—communities and ecosystems alike.

Restructuring our water systems is challenging but doable. We need to track actual water-use trends more carefully, for one. Doing so will ensure we are planning for less demand and for whiplash weather events. If we are to avoid the potential for stranded water infrastructure, we must step up our game. Let's stop blaming conservation and double down on all the water efficiency

The biggest factor in our water resilience equation will be continued improvements in water efficiency.

programs we can. Similarly, we need better tracking of population growth and shifting demographics to ensure we can afford the projects we want to implement. The economic conditions of the late '60s and '70s no longer exist, and we do not have growth that makes it easy to spread infrastructure costs across customers. New approaches to agency rate structures are needed to ensure water affordability for our customers—and to reward efficient water use while generating stable revenue to cover the cost of our water services.

In his song “Anthem,” singer-songwriter Leonard Cohen enjoins his listeners: “Ring the bells that still can ring / Forget your perfect offering / There is a crack in everything / That’s how the light gets in.” Cohen said of his lyrics that the point is not to look for some type of perfect Eden. That part of living on Earth is living in messiness.

Well, we are in a mess. There are plenty of “cracks” in our existing water systems, and no solution will return us to the garden of Eden. Climate change is shaking the very foundation of these systems. We need to shift our thinking about what a more affordable, ecologically balanced and resilient future looks like. We are the ones, in collaboration with our communities, who can make that future a reality. There are times when I despair over climate impacts to the communities and ecosystems I love. Some have literally disintegrated into ashes. But that is when I hear Regina’s voice reminding me that even during a drought, it rains. Are we prepared? Working together, we can find the light as well as the courage to create the climate-resilient future we want. ■

Martha Davis, a speaker at the Next Generation Water Summit (NGWS), is the former executive manager for policy development at the Inland Empire Utilities Agency in Southern California. During her 17-year tenure, she led planning and initiatives promoting water efficiency, renewable energy, stormwater capture, green infrastructure, recycled water and climate resiliency.

Regina Hirsch, a speaker at the NGWS, is founder of Progressive Watershed. This article is reprinted with permission from the March-April 2023 edition of Water Resources Impact, Journal of the American Water Resources Association.

Simplified Graywater Permitting Coming Soon

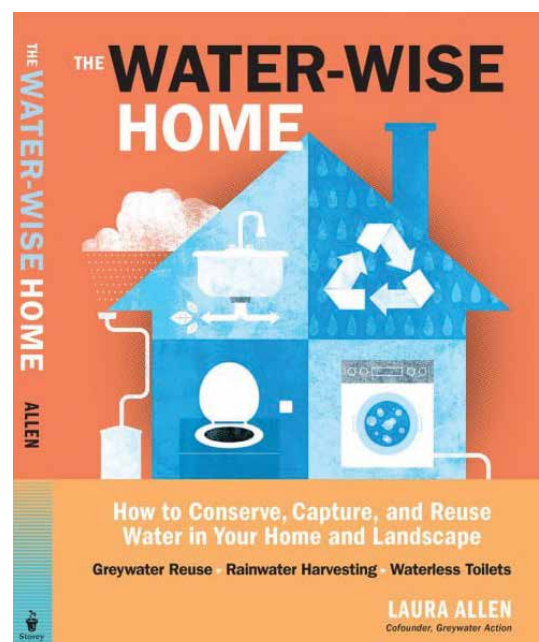
Simple graywater systems in New Mexico under 250 gallons per day that meet a specified set of criteria laid out by the New Mexico Environment Department (NMED) in most cases do not require a permit. However, in Bernalillo County, a variance application is required for all graywater systems, and some municipalities, such as the City of Santa Fe, require a permit. These criteria were reviewed at a widely attended public forum in June 2022. Local jurisdictions can pass more stringent requirements.

The current NMED graywater regulation is NMAC 20.7.3.809 and 810 and can be found at WWW.ENV.NM.GOV/LIQUID_WASTE/GRAYWATER. The statute enabling NMED to regulate these systems was the New Mexico Graywater Act, passed in 2003.

- The stipulations for no permit by NMED include:
- No direct contact with graywater allowed
- Must be discharged below the surface
- Is not used to irrigate food crops, except fruit and nut trees
- Does not contain any hazardous waste including diapers or other infectious garment wash water
- Ponding of graywater is not allowed
- Graywater piping must be clearly marked
- Does not come within 5 feet of the top of the high season groundwater table
- Is not closer than 100 feet from a waterway or private well
- Is not closer than 200 feet from a public well
- If the system includes a tank, it must be covered to restrict access and eliminate habitat for mosquitoes
- It must not be located in a floodway
- If the system becomes blocked, the system must overflow to an onsite septic disposal or sewer collection system

Larger systems or systems not meeting all these stipulations require a permit statewide. Regulation NMAC 20.7.3.809 and 810 is the same regulation covering septic systems and blackwater advancement treatment systems. There is one application that covers all these types of systems. It must be carefully navigated to be filled out correctly.

At the public input forum last June, all the above were reviewed and input was solicited to make the process to increase adoption of graywater systems in the state easier. Over the past 10 months, a team consisting of representatives of NMED, Bernalillo County, Santa Fe Area Home Builders Association, a private contractor and an installer of graywater reuse systems have met regularly to simplify permitting small residential graywater systems. This team has created a new, standard application for small systems to make it easier to file. The team is also attempting to remove some differences between NMED’s and Bernalillo County’s small system application process.



For systems requiring a permit, NMED is proposing a lower fee for graywater system required applications. The graywater regulation is also being updated to cover systems in tiny homes, including kitchen waste in a graywater stream.

Another public input forum (live and virtual) is scheduled for June 5, 11 a.m. at the Santa Fe Area Home Builders Association, 2520 Camino Entrada. To register, contact Doug Pushard at DOUG@KUELWATER.ORG.

At the Next Generation Water Summit (NGWS), Laura Allen, renowned author of *Greywater Green Landscape* and co-founder of the Greywater Action, and Doug Pushard, owner of HarvestH2o and an installer of graywater systems, will review all the graywater regulations in the West and recommend changes that would increase adoption of the use of graywater. ■

Santa Fe's Certified Waterwise Commercial Program

BY **GLENN SCHIFFBAUER**

What would you say if someone offered you a way to do something sustainable, both for you and for your community—and save you money? And it was free. As a business owner, you likely get these come-ons regularly and respond with a “thanks, but no thanks.” That is how the City of Santa Fe's Certified Waterwise Program began. Thirty early adopters signed up at the onset of this award-winning program, but more businesses were sought to conserve our most precious resource. Enter the Santa Fe Green Chamber of Commerce. Because of the chamber's members and business connections, Waterwise now includes 90-plus businesses, with more in the pipeline (pun intended) as commerce continues its recovery from the impacts of COVID-19.

What Is the Certified Waterwise Program?

The Certified Waterwise Program helps businesses save water and money while also doing the right thing for the environment. It provides businesses with water-saving tips and strategies. Resources, support and incentives are provided for installing low-flow fixtures and water-efficient appliances, and for implementing water-efficient landscaping.



The process is simple. With the help of the Green Chamber, a business fills out a simple questionnaire. Then a Certified Water Auditor visits the business and assesses how much, how and where water is used. The auditor checks every device and appliance that uses water, looks for leaks (20 percent of restaurants have had some type of leak), measures water flow and changes out fixtures' aerators and nozzles for greater efficiency. The auditor then creates a report, incorporating the procedures and behaviors of the business pertaining to water. This makes possible

recommendations for further steps that the business can take to reduce its water footprint, including a projected return-on-investment if equipment upgrades are suggested. The report also explains how the City of Santa Fe's rebates can be applied.

Some of the business benefits of participating in the Certified Waterwise Program include:

1. Lower water bills: By implementing water-saving strategies, businesses can reduce their consumption and lower monthly bills.
2. Improved efficiency: By identifying and addressing areas of inefficiency, businesses can improve overall operations and reduce water usage.
3. Environmental benefits: By using less, businesses help conserve water and reduce their environmental impact.
4. Positive branding: The City of Santa Fe and the Santa Fe Green Chamber of Commerce have created a Certified Waterwise Badge for participating businesses to display. Look for it at businesses, particularly restaurants. The badges are also featured on City and Green Chamber websites and promoted in ads and social media. This branding demonstrates a commitment to sustainability and responsible water use, which can help enhance a business's reputation and attract environmentally conscious customers.

Why It Matters

Without water, our businesses could not exist. Conservation is essential, particularly in regions like northern New Mexico, where water resources are limited and in high demand.

Businesses in Santa Fe's Certified Waterwise Program have already saved millions of gallons. Some 90 businesses have demonstrated their commitment to our community; reward them with yours. If your favorite spot doesn't have a Certified Waterwise badge, ask them why they wouldn't want to participate in saving water. Did I mention that it's free? They can sign up by contacting the Santa Fe Green Chamber of Commerce:

GLENSCHIFFBAUER@GMAIL.COM. ■

Glenn Schiffbauer is executive director of the Santa Fe Green Chamber of Commerce and co-chair of the Next Generation Water Summit.

Neighborhood Water Conservation Pilot Projects in Santa Fe

BY **CHRISTINE Y. CHÁVEZ**

Reflecting the City of Santa Fe's interest in collecting data that informs the Water Conservation Office's educational materials and programming, over the past three years, pilot projects have been conducted in eight neighborhoods in various sections of town. This has sparked other neighborhood water conservation opportunities and incentives.

Santa Fe's Water Conservation Program is advised by the city's Water Conservation Committee. Marketing strategies have included inserts in a monthly newsletter, board and annual meeting presentations, and direct messaging such as a door-hanger project promoting the city's rebate program and EyeOnWater app.

The Nave Ade community is hosting one of the pilot projects. Nave Ade is unique in its governance, landscaping requirements and active subcommittees. In response to Nave Ade's desire to plant more trees, the project there has included tree and rain barrel giveaways.

A new neighborhood pilot project has been developed to assess what the city can continue to do to incentivize water-efficient landscapes. The program is partnering with YouthWorks, a nonprofit organization dedicated to helping youth overcome barriers and develop life skills necessary to develop their full potential so they can access opportunities for employment, higher education and meaningful community connections.

This partnership will educate and train young adults through the Santa Fe Community College's EnergySmart Academy, so they can evaluate outdoor landscapes, looking for opportunities to make them more water-efficient. The students will earn micro-credentials toward a Water Efficiency Rating Score Auditor certification. They will then be able to be hired to conduct assessments on new homes. They will also be able to take additional training to qualify for conducting water-efficiency audits on commercial facilities such as restaurants, hotels and shopping centers.

Escorted by members of our team, these young adults will conduct a landscape audit and write a report on opportunities that a homeowner can pursue to become more efficient. In June, the YouthWorks group will present some of their findings at this year's Next Generation Water Summit, as part of a water conservation poster session. To learn more about the summit and our neighborhood pilot projects, visit SAVEWATERSANTAFE.COM. ■

Christine Y. Chávez is the City of Santa Fe's water conservation manager.

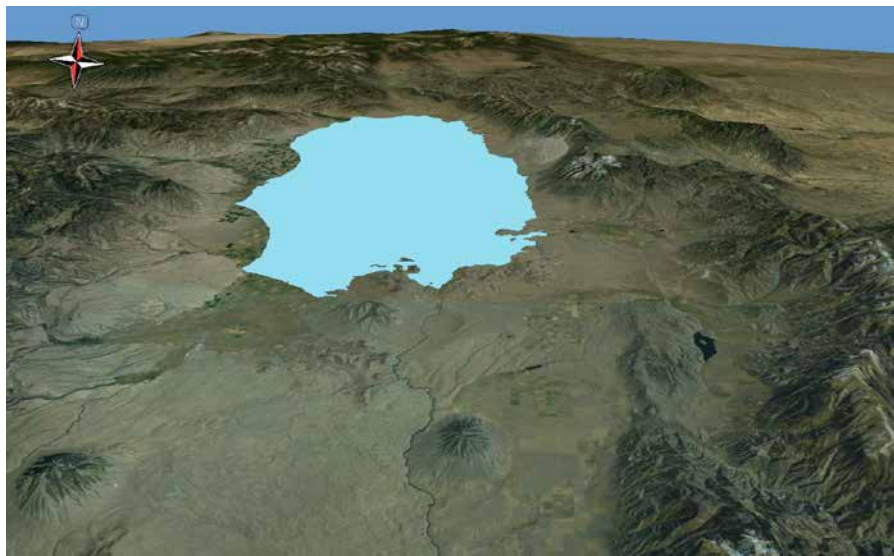


The Pueblos were weaving cotton for 300 years before the Spanish drove sheep into the region.

woolen goods at higher prices. Rather than promoting peace through trade, Spain increased taxes to fortify defensive outposts and patrol borders to stop *extranjeros* (foreigners) from crossing into New Mexico.

Defense of the region's border, not economics, was, in part, justified. A famous encroachment in the Spanish borderlands occurred when American military explorer Zebulon Pike walked into the San Luís Valley in January 1807. Accompanied by an armed escort, Pike had a spyglass, compass, map-making supplies and journals. He documented and traversed a well-traveled road and trails along the southern tributaries in what are now Costilla and Conejos counties in Colorado. Within a month, 50 mounted militia with lances arrived after Ute allies alerted officials at Santa Fe of Pike's stockade, which was flying an American flag in Spanish territory.

Mexican-era land grant settlements recreated Nuevo Mexicano cultural landscapes in the Colorado uplands



Lake Alamosa is also called "Sandy Lake." Sand dunes are on the east edge of the lake.

Pike was arrested, jailed and released. Notes written during his incarceration were smuggled in the gun barrels of his army escorts. While the notes underscored México's weak defenses, Pike's maps, log book and journals were published as guides into Colorado and the San Luís Valley. His impressive itemization of the mountains, trails, rivers and sand dunes was a clear indication that American politicians understood that the uplands were a lightly populated, richly endowed, southern gateway to New Mexico. Within five years, the last Spanish governor of New Mexico described how a manned rock fort in the northern San Luís Valley was ransacked and soldiers killed by foreign trespassers scouting for trails into northern New Mexico.

Forward motion in the frontier was lethargic until it was permeated by economically savvy French colonials, Canadian Québécois and Norteamericanos

who followed trails into the uplands. Allied with Comanche and war bands from the Great Plains, foreigners constructed private forts or rude outposts in strategic areas close to the frontier. Ultimately, their goal was to create kinship through cohabitation and by trade in skins and pelts. Some were unscrupulous and bartered whiskey, ammunition and muskets to tribal bands, creating disastrous outcomes. Entwined with Spanish settlers after the reconquest, the Comanche were initially friendly, sometimes trading with the Apache and Pueblos. But they were merciless raiders and became skilled, battle-hardened warriors. Under influence of the French, they fought Spanish auxiliaries. In the summer of 1779, a band of seven Comanche and their horses were killed in the Río Culebra Basin after a skirmish with Taos Pueblo. European weaponry used in the attack had likely been traded within Mississippi.

Hostile encounters with allies eventually fractured the Spanish boundary, as the centrifugal forces of globalization came to the doorstep of the province. The feudal

Land granting was a mechanism to settle isolated and dangerous terrain to protect territorial claims.

mentality of the Crown and its bureaucrats, wealthy entrepreneurs and powerful families, stifled New Mexico, keeping the province dependent and disadvantaged. Forced to retreat from its holdings, Spain had to relinquish its power to the Republic of México in 1821.

One goal of the new republic was to open the frontier to commerce. Almost immediately, foreign trappers forged a rough trail via the Arkansas River, crossed present-day Kansas at the southeast corner of Colorado, and over Ratón Pass into México via New Mexico. The trickle of scouts became a flood of beaver trappers and traders, who settled mostly in the Taos Valley and Questa, nearer to wildlife habitats of the San Luís Valley. The most educated and successful intermarried into wealthy extended families to gain entrance into the patriarchal culture. However, the majority cohabitated with women from settler families who were mostly self-supporting ranchers and farmers. All lived within land grants settled by their ancestors.

Land Granting and Settlement

In Medieval Spain, the elite granted land to peasants to protect its periphery from Muslim rule. The populace was barricaded in defensive outposts, buffering conflicts on the Iberian and Moorish frontier. Like their counterparts in Iberia, colonists in New Mexico were a front line of defense. Never perfect or just, land granting was a mechanism to settle isolated and dangerous terrain to protect territorial claims. Learning a lasting lesson from the revolt by the Pueblos, after recolonization the Crown focused on awarding small tracts to communal applicants who were landless. Each individual family was granted: a *solar* (home site and garden), a *suerte* (agricultural plot), use of the *ejido* or common land, and access to *acequias* (irrigation ditches). Subsistence agro-pastoralists known as *vecinos*, or neighbors, protected the land grant, bartering and living cooperatively within a larger group of interrelated families.

This land granting tradition was radically altered during the Mexican Era (1821-1846). Initially, México believed tariffs, taxation and trade would generate revenue for the beleaguered borderlands. This counterintuitive blunder was rarely beneficial to frontier villages because of bribes and misconduct by foreign traders and local officials alike. To exert control over newcomers who sought to acquire land and resources in New Mexico, California and Texas, the Republic of México passed five Colonization Laws, beginning in 1824. To stop the trend of male foreign applicants, many who were hunters and traders, the laws encouraged locally born residents and family groups to apply for land grants by giving them preference, requiring citizenship and limiting the size of their requests to 71 square miles. To skirt the rules, foreigners used Mexicans as partners, married local women and obtained citizenship. Many illegally took land in Texas, while in California, the governors privatized church land and sold the old Franciscans' missions to foreigners.

Mexican rule diminished, which was the worst-case scenario for New Mexico. Failed attempts were made by Texas Freebooters and their saboteurs to invade Taos (and likely Santa Fe) in 1837, 1840 and 1843. Wealthy, prominent foreign merchants were considered sympathetic obstructionists. Their businesses were raided; some were roughed up, and a few left in fear. Three men that were key to this spectacle: Carlos (Charles) Beaubien, Charles Bent, and Ceran St. Vrain, were highly educated partners and experienced businessmen with powerful political links to Washington.

Gov. Manuel Armijo initially fought against foreigners, but as a merchant, he became mired in conflict, and advocated for annexation by leaving New Mexico. La Frontera, (the frontier), was founded in 1853 by *pobladores*, pioneering settlers, moving into the northern mountains in the borderlands known as El Valle de San Luis. Knowing of the ecological niches where survival was possible, a string of small fortified plazas and *fuertes* (log forts) were built along rivers near clay and sandy deposits close to cottonwood and piñon forests, at the foot of volcanic rock mesas. Construction during a time of violent occupation happened in steps, and not as quickly as once thought. Genetically interrelated, extended family groups lived the first years in a raw frontier in close quarters barricaded in fortified earthen walls. ■



Maria Mondragón-Valdez's family have been multi-generational residents of the Sangre de Cristo Land Grant, though some of her ancestral roots stem from the Taos and Chama valleys. Mondragón-Valdez earned a Ph.D. from the University of New Mexico's Dept. of American Studies. She served on boards of the Land Rights Council and the Regional Development Planning

Group. Her activism was acknowledged in "500 Years of Chicana Women's History." Mondragón-Valdez and her husband, Arnold, live on a family homestead in the Río Culebra Basin.

References Cited

Raymon A. Gutiérrez "When Jesus Came the Cornmothers Went Away: Marriage, Sexuality, and Power in New Mexico, 1500-1846," 1991.

López-Tusbar, Olibama. "The People of El Valley: A History of Spanish Colonials in the San Luis Valley," 1975.

Alfonso Ortiz: "Through Tewa Eyes: Origin, 1491 America Before Columbus," *National Geographic Society*, October 1991: 6-13.

Andrew Valdez "A 3D Geological Tour of the San Luis Valley," *Great Sand Dunes National Park and Preserve*, "n.d."

Maria Mondragón-Valdez "The Río Culebra Villages of Costilla County, Colorado." *National Registry of Historical Places*, 2000.

"Challenging Domination: Local Resistance on the Sangre de Cristo Land Grant." *University of New Mexico*, 2006. (Dissertation).

CONT. FROM PAGE 9

The window of opportunity is passing to harvest \$100 million of timber for commercial use.

process to create outcomes that improve the landscape and opportunities for local people—not just return to the status quo. In San Miguel County, we're developing a pilot project to demonstrate that process, which can, in turn, be expanded across the region.

Reframing the Reframing

From recent months' experience, three core points emerge:

- The window of opportunity is passing to meet our goal of harvesting \$100 million of timber in the Calf Canyon-Hermit's Peak burn zone before it is no longer usable for commercial use.
- Infrastructure alone (e.g., mills, forestry operations, etc.) will not get us where we need to be—we also need to revitalize our communities and landscapes to avoid the situation that created the fires.
- New governance institutions are needed to span the public/private divide and create the synergies to enable long-term community and landscape recovery. In short, the problem framing has shifted from a linear quest to move \$100 million of biomass in a few months—to

New governance institutions are needed to span the public/private divide and enable long-term community and landscape recovery.

how to reconceive the whole system and devise a self-supporting, regenerative, circular economy. This has led us to pivot toward using economic development coupled with landscape conservation, shared stewardship principles and community empowerment. In partnership with Mark Lautman and his team from the Community Economics Lab and his Economic Engineering initiative, we're working to create systems in which forestry and landscape recovery serve as a foundation for renewal.

Such a renewal requires a process that responds to local communities' long-term goals. Detailed community-based economic assessment can yield realistic targets—and a strategy to get there. Meanwhile, we're working with New Mexico's Economic Development Department and its partners to explore new governance arrangements that allow integrated county- and region-wide recovery. All the while, we're testing assumptions, evolving and learning through a balance of convergent and divergent inquiry. Creating outcomes that improve rather than maintain what existed before the fires will require humility and being guided by the long view, rather than quick fixes. ■



Charles Curtin has over two decades of experience designing or managing place-based conservation projects. He is author of Science of Open Spaces (2015) and Complex Ecology (2018). His forthcoming book is Proclience: Channeling the Capacity for Positive Change. Curtin lives in the Mora Valley of New Mexico. His author webpage is CHARLESCURTIN.COM.

BPUBLICPREFAB.com
prefab for green homes • netzero • passive house



NEW MEXICO IS MAKING A DOWN PAYMENT ON INFRASTRUCTURE

BUT A LONG-TERM STRATEGY IS NEEDED FOR LASTING IMPROVEMENTS

In their 2021 Report Card for America's Infrastructure, the American Society of Civil Engineers (ASCE) rated the nation's infrastructure with a C- grade average. While this was a slight improvement over recent decades, there remain substantial issues in all major categories, particularly as it relates to funding and capacity shortfalls. Many of our essential systems, including water, wastewater, bridges and dams, are reaching or exceeding their designed useful lives, considerably increasing repair and replacement costs and heightening risk of critical failure. The coming decade will see a \$2.5 trillion funding gap nationwide for infrastructure improvements, and that number will continue to grow without significant intervention. Good asset management can help maximize available resources to minimize this risk; however, most communities lack the staffing and technology necessary to effectively manage all systems.

New Mexico follows the majority of the national trends when it comes to the status of its infrastructure (<https://infrastructurereportcard.org/state-item/new-mexico/>), requiring billions of dollars of investment in the coming years to address deficiencies in all major systems, especially water and wastewater. There are some notable characteristics that make addressing these issues even more challenging in the state. The current water crisis is forcing communities to replace aging infrastructure at a time when they must also reevaluate water sources and delivery systems entirely to ensure redundancy. Extreme drought and wildfire risk have only added to the pressure on existing water sources, and both appear to be a result of changing climatic conditions that will require permanent adaptive measures.

In addition, the state regularly ranks at or near the bottom nationally with regard to the condition of other critical infrastructure systems, including broadband, healthcare and education ([HTTPS://WWW.USNEWS.COM/NEWS/BEST-STATES/NEW-MEXICO](https://www.usnews.com/news/best-states/new-mexico)). The ability to deliver on these basic needs is critical for economic competitiveness and strongly contributes to residents' overall well-being and quality of life. Infrastructure underinvestment in communities across New Mexico has stacked up over the past several decades, creating a significant challenge for the state. To make significant and sustained progress in addressing these needs, leaders from all levels and sectors must work together to develop larger, more consistent investment strategies.

Such a coordinated effort was one of the central topics at the recently concluded legislative session in New Mexico. Hundreds of bills were debated over the course of the 60-day session and, ultimately, more than 200 became law. Of these, a meaningful number are designed to help address the infrastructure needs of New Mexicans, including: expansion of broadband access, funding for rural healthcare facilities, improvements to water and wastewater systems, and, perhaps most urgent, wildfire recovery support. Additionally, this year's

The water crisis is forcing New Mexico communities to replace aging infrastructure at a time when they must also reevaluate water sources and delivery systems.

the challenges of moving large amounts of government funding and general capacity shortages in the state, it will take years to see full implementation of the projects envisioned in these state-funded programs. Even coupled with the federal funding provided through recent major bill packages, such as the Infrastructure Investment and Jobs Act and the Inflation Reduction Act, these historic investments will fall short of the support to successfully complete the size and scale of projects needed in New Mexico. Add to this issue the inevitable price escalations over time and ongoing deferred maintenance costs, and the state is facing a multi-billion-dollar funding gap over the coming decades.

Fortunately, there are some simple ways leaders at all levels of government can minimize this gap and improve outcomes in their communities. First, officials can streamline processes and prioritize efficiencies to reduce undue burden on agencies and developers who are implementing infrastructure improvements, most of whom are already stretching limited resources to complete their projects. There are many ways of building accountability into funding programs without making them prohibitively complicated. Doing so will lead to more successful projects, lower overhead expenses and, ultimately, greater impacts within the community.

This year's capital outlay bill dwarfed those put forth in recent years, providing over \$1.2 billion for hundreds of projects across the state.

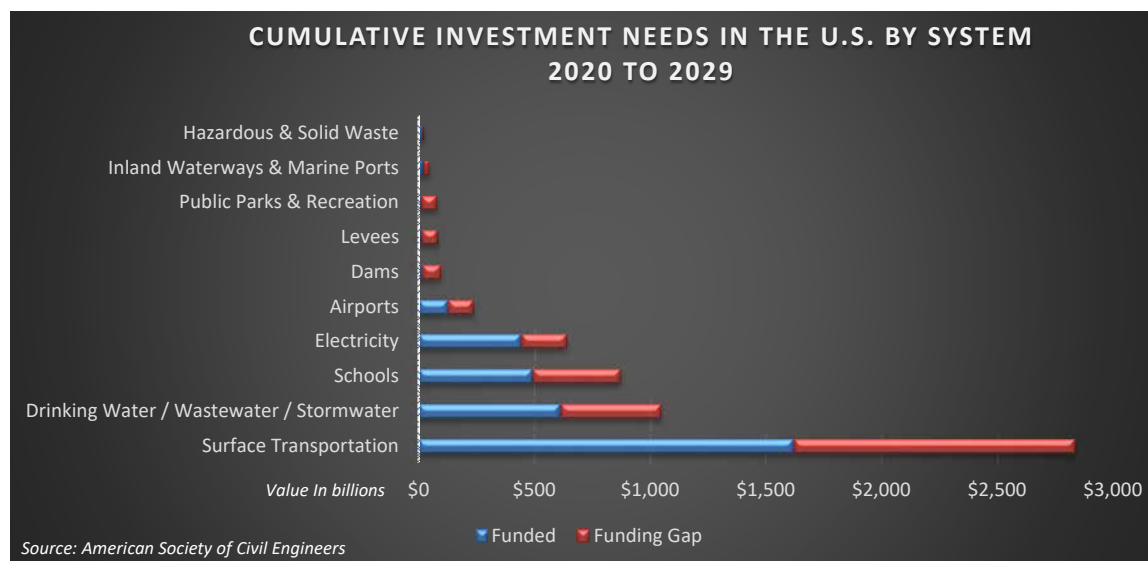
reliable infrastructure systems ([HTTPS://WWW.OECD.ORG/GOV/INFRASTRUCTURE-GOVERNANCE/RESILIENCE-MAINTENANCE/](https://www.oecd.org/gov/infrastructure-governance/resilience-maintenance/)). Leveraging this generational investment to address our most critical infrastructure needs while also ensuring that such systems are robust and cost less to maintain over time is both a practical and cost-effective way to approach infrastructure improvements.

Finally, officials must develop partnerships with the private sector to help alleviate the infrastructure funding gap. There is an abundance of private capital seeking investment in a variety of project types, and such services can be a great option for communities with significant infrastructure needs. Looking beyond the limitations of traditional debt services, there exist a number of infrastructure funding and financing providers that can alleviate upfront capital needs, offer service and maintenance over time, and reduce financial risk and service interruption. Communities should encourage their leaders to increase their engagement with such entities as a means of increasing local investments more quickly and sustainably.

capital outlay bill dwarfed those put forth in recent years, providing over \$1.2 billion for hundreds of projects across the state.

While a big step forward in addressing the state's infrastructure funding gap, a lot more progress needs to occur in the near term to get ahead of the problem. Between

Second, projects should be designed to account for the full life-cycle costs to help avoid the unsustainable cycle of high operating costs and emergency repairs over time. Building in a resilient and sustainable manner is proven to provide the best value and most



New Mexico is at an important crossroads in delivering on critical infrastructure improvements for all major systems. Meeting current and future needs will require engagement across multiple levels of government, sectors and geographies. However, through smart, persistent investment in people, projects and new ideas, this challenge can most certainly be solved. In doing so, we will see positive environmental, economic and health outcomes in communities throughout all four corners of the state. ■

Ryan Mast is an Infrastructure partner and senior adviser for Sustainability Partners, representing New Mexico and the Southwest region. During his career in the public sector, he led the hazard mitigation and sustainability offices in the cities of New Orleans and Albuquerque.

OP-ED: LAWRENCE D. GALLEGOS

WILL THE INFLATION REDUCTION ACT AND 2023 FARM BILL MAKE A DIFFERENCE?

Climate change is having effects in New Mexico, across the nation and around the world. When I was eight years old in 1966, I spent the summer on the family farm with my grandmother in San Antonio, Colorado. I continued to spend every summer there until I graduated from high school. In 1966 it seemed to me that there was plenty of water for everyone to irrigate hay fields and gardens and to water their livestock. However, the truth is that Colorado was already falling behind on water deliveries to the Río Grande Interstate Compact with New Mexico, Texas and México. Things seemed to be going well through the 1990s because of several years of high snowpack, but things have changed since then.

There have only been three or four high snowpack years since the turn of the century, 23 years ago. Now we seem to be in the middle of what scientists have been warning us about—extremes caused by climate change. The summer of 2022 brought us the worst fire season on record, which included the two largest wildfires ever recorded, the Calf Canyon-Hermit's Peak Fire, which burned over 341,471 acres, and the Black Fire, totaling 325,133 acres.

I believe that laws like the Inflation Reduction Act (IRA) and the 2023 Farm Bill can and will help make a difference for the future of our nation and the quality of life for everyone. But there will have to be collaboration among the nations of the world if we are to reverse the effects of climate change. The most important way that we as Americans can make a difference individually is for us to learn how we can reduce our carbon footprint. We need to lead by example if we want the rest of the world to follow.

Our water and food supply depends on us solving this climate crisis.

Here in New Mexico, we are off to a good start on implementing practices that will prevent catastrophic events caused by climate change. Organizations including Western Landowners Alliance, Quivira Coalition, American Lamb Board and others have been awarded Climate-Smart commodities grants, which will assist local farmers and ranchers with implementing Climate-Smart (regenerative) practices on both public and private properties. These producers will also be assisted in marketing their products. Producers' on-the-ground practices will improve the health of their lands and, in time, help prevent catastrophic events like the 2022 fires.

Another program that has been put into action by the New Mexico Legislature is the Land of Enchantment Legacy Fund. This will help improve the health of our forests, watersheds and working lands across the state, and help producers make improvements on their farms and ranches by helping provide the non-federal matching dollars required for most federal grants, including Farm Bill programs through the Farm Service Agency (FSA) and the Natural Resources Conservation Service (NRCS).

A coalition of non-governmental organizations is working together to introduce marker bills, which is how we recommend changes to improve the Farm Bill. The Farm Bill comes up every five years for reauthorization, and this year, 2023, is the year. Some of the changes we are asking Congress to make are:

1. Equitable access to all programs, especially minority and underserved producers who have been historically discriminated against
2. Changes to farm credit programs to work better for beginning, minority and underserved farmers and ranchers
3. Changes to agriculture forestry programs to make programs work for forest producers in Western states where there is a much drier climate
4. Adding regulations for the safety of migrant workers who are doing dangerous jobs in the forests

Another issue we have been working on is trying to convince our senators in New Mexico that legislation to remove cattle from USFS and BLM allotments permanently is a very bad idea. In 2022, Sen. Martin Heinrich introduced SB2980, which would have allowed up to 10 permittees per year in New Mexico to sell their permits to willing environmental organizations that would be allowed to permanently retire them. We believe this legislation is bad policy and will hurt farmers and ranchers, as well as our forests and other public lands. Several of our forests, watersheds and rangelands have become disasters waiting to happen. There are many reasons why some of our lands are in poor health. We do have to get to work restoring unhealthy lands, and well-managed regenerative livestock grazing is the best tool available to get the job done.

We need to do everything we can to improve the health of our lands if we are going to get through what is shaping up to be a climate crisis. Our water and food supply depends on us solving this. ■



Lawrence D. Gallegos is the New Mexico field organizer of the Western Landowners Alliance and is on the governing board of the New Mexico Food & Agriculture Policy Council.

Legislative Wins for NM's Food, Agriculture and Land Stewardship

BY PAM ROY

The 2023 New Mexico legislative session concluded with major advances toward strengthening and expanding our local food system. Major resources were committed to the state's local food and agriculture economy, ensuring that we have the greatest access to fresh, locally grown foods from our farmers, ranchers and food businesses. Tens of thousands of children and seniors will benefit from schools, senior centers and early childcare programs buying New Mexico-grown and-raised food for their meal programs. Food banks and pantries will have funding to buy local products for those in the greatest need. Farmers' markets and roadside farm stands will have more resources to expand the Double-Up Food Bucks program. Our farmers and ranchers will have more opportunities to expand their businesses, keeping more dollars in New Mexico's economy.

Several major wins that are priorities of the Office of the Governor and many legislators are foundational to the health and well-being of New Mexicans and the land that provides us with food, fiber and nature.

A major win for New Mexico is the **Healthy School Meals for All Students**, a \$45.1 million investment for nourishing meals in schools and early childhood environments. Sponsored by senators Michael Padilla and Leo Jaramillo, this

CONT. ON PAGE 37

REZO, I PRAY

JAIME CHÁVEZ POETA

That we have brought many ingredients to the table. Amaranth, corn, beans and squash. Collard greens and sweet potatoes. Carrots, peas and flowers. A cauldron of hope. A vision of change.

It is time to seize the moment! Stand up for Mother Earth!
Bring the best of yourself to the table!

Together, the seeds began to germinate, change form, point to the sky.

A trickle of water on the ground, the Acequia, el río grande, is enough for me, gently placing seeds in the ground.

It is time for the people of the land and the water to stand up for what is right, to right the wrong.

Watch our prayers rise from the skirt of the mountain, to the eagle flying, where anything is possible.

We can walk together in beauty on this journey, nishoni, call for rain, with the spirit of our ancestors, all together.

The council of the fire is being lit, a slow blaze for life and humanity on the road, Together.

Tu eres mi otro yo, you are my other self!
Together.

Companion planting the horizon, listening to the water flow...

*Para National Latino Farmers & Ranchers and the Rural Coalition
Dia 2 de April, Viernes Santo
Mitakue Oyasín – All My Relations*

AGROFORESTRY HAS POTENTIAL IN NEW MEXICO

MICAH ROSEBERRY

Agroforestry is the intentional integration of trees and shrubs into crop and animal farming systems so that biological interactions are intensively managed to create environmental, economic and social benefits. Annual and perennial crops can be intercropped amongst trees to produce fruits, vegetables, grains, herbs, timber and more. This approach to agriculture has been practiced in the United States and around the world for centuries.

Agroecological systems can benefit private and public lands and integrate the unique knowledge and needs of traditional tribal, land-grant and acequia communities. Climate change is increasingly making it necessary to find equitable solutions that support the preservation of historic, cultural, land-based communities. Reparation can be part of a solutions-based effort to bring our communities together. In New Mexico, we can create a program that provides education and supports both forest restoration and sixth-generation ranchers who are increasingly at risk of losing traditional grazing leases that are essential to their economic viability. Studies indicate regenerative grazing and agroforestry are viable, essential tools for forest management.

Micah Roseberry is a farmer and owns the Farmhouse Café in El Prado, north of Taos.

IN-PERSON OR VIRTUAL
Santa Fe Community Convention Center Register for login info



CITY OF SANTA FE



JUNE 15TH AND 16TH • 9AM TO 5PM (MT)

2023 NEXT GENERATION WATER SUMMIT

WATER REUSE AND CONSERVATION: THE NEW PARADIGM

Session tracks will focus on regional and national challenges, with topics ranging from water policy to innovative approaches for reuse, including:

- Residential Blackwater Reuse Systems in the West – What is Possible?
- Real World Water Savings with WaterSense-labeled Homes 2.0
- Multifamily: Emerging Tools and Regulations
- Lessons Learned in Getting to Net Zero Residential

Wed. June 14 • 5:30pm
**PRESENTING SPONSORS
KICKOFF RECEPTION**

Inn and Spa at Loretto
211 Old Santa Fe Trail

Thurs. June 15 • 5:30pm
MAYOR'S RECEPTION

Drury Plaza Hotel
828 Paseo de Peralta

REGISTER NOW: NEXTGENERATIONWATERSUMMIT.COM

FOR MORE INFORMATION VISIT

NEXTGENERATIONWATERSUMMIT.COM



FOLLOW US FOR UPDATES

NEXTGENERATIONWATERSUMMIT



is the most comprehensive program in the nation that includes kitchen improvements, staff training and the ability for institutions to buy New Mexico-grown and-raised products.

Senior nutrition programs will benefit from \$3.5 million to support access to high-quality New Mexico grown foods in senior centers, rural food pantries, Medicaid-funded produce prescriptions and the Senior Farmers' Market Nutrition Program.

Farmers, ranchers and food businesses will benefit from \$1.9 million for the **Healthy Food Financing Initiative Healthy Soils Program** and **Agriculture Workforce Program**.

SB9, Land of Enchantment Legacy Fund, an initial \$100 million, is a major investment in conservation, soil health and recreation programs. Sponsored by senators Wirth and Neville and Rep. Nathan Small, this legislation was years in the making. Led by a very diverse coalition of organizations and partner agencies, it provides a major investment to steward our land and natural resources for the long term and will leverage federal dollars.

Bills That Did Not Finish the Session, but Are Worthy of Continued Support:

HB205, Creating a Meat Inspection Program Act, had bipartisan support in the House and Senate, yet didn't quite cross the finish line in the last days of the session. The program sets the stage for the New Mexico Livestock Board to establish a state meat inspection program equal to the federal USDA inspection program. The New Mexico Livestock Board has done its due diligence to initiate and implement much of the program.

SM43, Pollinator Protection Plan

We want to commend the New Mexico Beekeepers Association (NMBA), Melanie Kirby and Amy Owen, for bringing the Pollinator Protection Plan Memorial, SM43, sponsored by Sen. Bobby Gonzales, from inception to fruition and as far as possible through the legislative process. The memorial is helping educate organizations, farmers and the public about the importance of pollinators in our food systems. With the support of the New Mexico Department of Agriculture (NMDA), the intent of the plan will continue to evolve.

SB358, Healthy Food Financing Act

Sponsored by Sen. Carrie Hamblen, this bill had plenty of support but simply ran out of time. The good news is that it is now a formative program in the New Mexico Economic Development Department with funding. It provides opportunities for communities to apply for resources to invest in food retail initiatives that provide healthful options in rural, tribal and underserved urban communities. It also leverages federal funding for New Mexico initiatives.

This is collective work that is coordinated and led by many organizations, committed agencies, tribal communities, the Office of the Governor and advocacy groups such as the New Mexico Food and Agriculture

Policy Council. We are very grateful for the collective work and care that many have given to this process and all of the planning, coordination, advocacy and years of work that larger, more comprehensive initiatives need to find their way to fruition and to our communities. ■



Pam Roy is executive director of Farm to Table New Mexico and coordinator of the New Mexico Food & Agriculture Policy Council.

WHAT'S GOING ON

ALBUQUERQUE / Online

THROUGH MAY 6

ARTISTS AS KNOWLEDGE CARRIERS

516 ARTS, 516 Central Ave.

NM art professors (NMSU, UNM, CNM, IAIA, SFCC) as mentors of the next generation of artists. Plus, in-person and livestreamed programs and workshops. 505-242-1445, 516ARTS.ORG

MAY 6, 11 AM-7 PM

ALBUQUERQUE TURKISH FESTIVAL

Raindrop Albuquerque, 7901 Mountain Rd. NE

Turkish-Mediterranean cuisine, cultural exhibits, music, performances, children's activities. Free. [HTTPS://WWW.FACEBOOK.COM/EVENTS/1776111869426223/](https://www.facebook.com/events/1776111869426223/)

MAY 10, 9 AM-2 PM

CENTRAL NM STEM AND MANUFACTURING HIRING EVENT

CNM—Smith Brasber Hall, 717 University Blvd. SE

For JTIP-employers and job seekers at all education & skill levels. Presented by NM Economic Development Dept., Job Training Incentive Program, CNM Community College, NM Workforce Connection, STEM Boomerang NM, and Workforce Connection of Central NM. Register: EDD.NEWMEXICO.GOV/HIRING-EVENT

MAY 20, 10 AM-2 PM

STATE OF THE CITY

Albuquerque Rail Yards, 777 1st St. SW

Mayor Tim Keller's State of the City Address and community celebration. Free. CABQ.GOV/SOTC

MAY 20, 10 AM START

NATURE FESTIVAL & BLOCK PARTY

Wilson Park, 6000 Anderson Ave. SE

Live music, storytelling, hands-on activities, games, urban wild birds, bike repair clinic and more. Free. City of ABQ Parks and Recreation. [HTTPS://AMPCONCERTS.ORG/EVENT/412846/NATURE-FESTIVAL-AMP-BLOCK-PARTY](https://ampconcerts.org/event/412846/nature-festival-amp-block-party)

THROUGH MAY 22

CLAY LINE OF THE RED WILLOW PEOPLE

Indian Pueblo Cultural Center, 2401 12th St. NW

Taos Pueblo artists—micaceous potter Angie Yazzie, painter Brian Taaffe and photographer Deborah Lujan—represent the resilience and beauty of the pueblo, a World Heritage Site. WWW.INDIANPUEBLO.ORG

JUNE 14, 10 AM-2 PM

11TH ANNUAL JOB FAIR

Harrison Middle School, 3912 Isleta SW

W2 Employers. Presented by State Sen. Michael Padilla. MICHAEL.PADILLA@NMLEGIS.GOV

JUNE 23

MAYOR'S DAY OF VOLUNTEER RECOGNITION

So. Broadway Cultural Center

The ABQ Volunteers Advisory Board recognizes folks who step up for others. Nominations from nonprofits, city departments, neighborhood associations, public boards, coalitions, etc. are due by May 12 (WWW.CABQ.GOV/NOMINATE).

THROUGH JULY 23

INDIGENOUS ART, CULTURE AND COMMUNITY

Albuquerque Museum, 2000 Mountain Rd. NW

Ceramics, beadwork, prints, paintings and other artwork by award-winning Native American (mostly Santa Fe Indian Market) artists, from a collection recently donated to the museum. \$3-\$6 admission. 505-243-7255, HOLDMYTICKET.COM, ALBUQUERQUEMUSEUM.ORG

THROUGH AUG. 27

JOURNEY WEST: DANNY LYON

Albuquerque Museum, 2000 Mountain Rd. NW

Photographer's lifelong exploration of people, places, land and history of the West, particularly his community of Bernalillo. 505-243-7255, ALBUQUERQUEMUSEUM.ORG

OCT. 18-21

NATIONAL INDIAN EDUCATION ASSOCIATION CONVENTION & TRADESHOW

Albuquerque Convention Center

Education Sovereignty: It Begins with Us. WORKSHOPS@NIEA.ORG, [HTTPS://WWW.NIEA.ORG/2023-CALL-FOR-PRESENTERS](https://www.niea.org/2023-call-for-presenters)

THROUGH JAN. 10, 2024

CONVERSING WITH THE LAND: NATIVE NORTH AMERICAN BASKETS

Maxwell Museum of Anthropology, UNM Campus, 500 University Blvd. NE
Baskets from the museum's collection. Free. WWW.MAXWELLMUSEUM.UNM.EDU

APRIL 17-21, 2024

**77TH ANNUAL INTERNATIONAL CONFERENCE
SOCIETY OF ARCHITECTURAL HISTORIANS**

Albuquerque Convention Center

Architectural and art historians, architects, museum professionals, preservationists and those working in allied fields will share research on the history of the built environment. Paper sessions, keynote talks, social reception, tours. WWW.SAH.ORG

INDIAN PUEBLO CULTURAL CENTER

TUESDAY-SUNDAY, 9 AM-4 PM

2401 12th St. NW

"Gateway to the 19 Pueblos of N.M." Museum galleries, exhibits and restaurant. Cultural dance program Sat., Sun. 11 am, 2 pm. Tickets \$10/\$8/\$7. 505-843-7270, WWW.INDIANPUEBLO.ORG

SANTA FE / Online

MAY 2-3

NORTHERN NM WORK-BASED LEARNING SUMMIT

SF Community Convention Center

Educators, workforce leadership and businesses collaborate for the future of youth and young adults. Northern NM Coalition for Work-Based Learning. \$99-\$149. [HTTPS://WWW.EVENTBRITE.COM/E/MAY-2-3-NORTHERN-NM-WORK-BASED-LEARNING-SUMMIT-TICKETS-519870094447](https://WWW.EVENTBRITE.COM/E/MAY-2-3-NORTHERN-NM-WORK-BASED-LEARNING-SUMMIT-TICKETS-519870094447)

MAY 5, JUNE 2, AUG. 18, 5-9 PM

INDIGENOUS WAYS FESTIVAL

Santa Fe Railyard Park

Celebrate Native arts, culture, music and food. WWW.INDIGENOUSWAYS.ORG

MAY 6, 9 AM

LOVE YOUR WATERSHED DAY

Frenchy's Field/SF River Trail, 2001 Agua Fria St.

Clean-up efforts watershed-wide as well as fun, interactive, educational activities for all ages. 505-820-1696, [HTTPS://WWW.AMERICANRIVERS.ORG/RIVER-CLEANUP/LOVE-YOUR-WATERSHED-DAY/](https://WWW.AMERICANRIVERS.ORG/RIVER-CLEANUP/LOVE-YOUR-WATERSHED-DAY/)

MAY 7, 2 PM

HIGH DESERT WINDS SPRING CONCERT

St. Francis Auditorium, 107 W. Palace Ave.

Free, donations accepted. WWW.HIGHDESERTWINDS.ORG

MAY 13

CANYON ROAD SPRING ARTS FESTIVAL

THROUGH MAY 15, FRI., SAT., 1-5 PM

"ART AS INQUIRY" EXHIBITION

Vital Spaces Gallery, 1604 St. Michael's Dr. (SW Annex, Midtown Campus)

SciArt Santa Fe celebrates ways the art-science process enables questions that lead to new knowledge. Artists represented practice physics, mathematics, engineering, biology, ecology and consciousness. SCIARTSANTAFE.ORG

MAY 19-21

SANTA FE INTERNATIONAL LITERARY FESTIVAL

SF Community Convention Center

More than 30 events with literary legends, free community state and more. \$15-\$50. SFINTERNATIONALLITFEST.ORG

MAY 26-28

2023 NATIVE TREASURES

SF Convention Center

More than 200 Native artists, juried by Museum of Indian Arts and Culture staff. Entertainment, educational activities. Proceeds go to MIAC. \$5 admission, under 18 free. [HTTPS://WWW.EVENTBRITE.COM/O/MUSEUM-OF-INDIAN-ARTS-AND-CULTURE-27750123561](https://WWW.EVENTBRITE.COM/O/MUSEUM-OF-INDIAN-ARTS-AND-CULTURE-27750123561)

MAY 27, 9 AM-4 PM

PUEBLO FIBER ARTS SHOW

Poeh Cultural Center, 78 Cities of Gold Rd., Pueblo of Pojoaque

Presented by the Poeh Center in partnership with the School for Advanced Research and the NM Pueblo Fiber Arts Guild. 505-455-5041, POEHCENTER.ORG/FIBERARTS

MAY 27, JUNE 3, 11 AM TO 3 PM

FREE COMMUNITY ART WORKSHOPS FOR FLOW

Wise Fool NM, 1131 Siler Rd.

See FLOW listing below. Drop in for all or part. WWW.WISEFOOLNEWMEXICO.ORG

THROUGH MAY 29

GROUNDED IN CLAY: THE SPIRIT OF PUEBLO POTTERY

Museum of Indian Arts & Culture, 710 Cam. Lejo

60-plus members of tribal communities chose unique pots spanning 1,000 years. Exhibition will move to the Metropolitan Museum of Art in NYC. [HTTPS://GROUNDEDINCLAY.ORG](https://GROUNDEDINCLAY.ORG), Admission \$12. Discounts available. INDIANARTSANDCULTURE.ORG

JUNE 3-4, 10 AM-4 PM

SPRING AND FIBER FESTIVAL

El Rancho de las Golondrinas, 334 Los Pinos Rd., La Ciénega

Fiber-arts market, demos, vendors and hands-on crafts for children. \$8, \$6, 12 & under free. GOLODRINAS.ORG

JUNE 6-8

ENERGY STORAGE SYSTEMS SAFETY & RELIABILITY FORUM

Eldorado Hotel & Spa

Sponsored by the DOE Office of Electricity Energy Storage Program. Attendees span academia, government, manufacturers, utilities and first responders. [HTTPS://WWW.SANDIA.GOV/ESS/ESSRF-2023](https://WWW.SANDIA.GOV/ESS/ESSRF-2023)

JUNE 10, 9:30 -11:30 AM

FLOW: PARTICIPATORY PROCESSION

Alameda & Paseo de Peralta, down Water St. to SF River at Guadalupe.

Music, giant puppets, street art. Wear blue, green and/or white, honor the Santa Fe River. Sponsored by the City of SF, SF Watershed Assoc., ArtSmart and individual donors.

JUNE 15-16

NEXT GENERATION WATER SUMMIT

SF Convention Center/Online

"Water Reuse and Conservation: The New Paradigm" The building and development community, water reuse professionals and policymakers share best practices and learn about water conservation and reuse techniques. [HTTPS://NGWS.VFAIRS.COM](https://NGWS.VFAIRS.COM)

JUNE 15-17

SF BOTANICAL GARDEN 10TH ANNIVERSARY EVENTS

Garden Conversations with landscape architect W. Gary Smith, opening reception with music by Ronoldo Baca and Gypsy Magique, lecture & lunch with speaker/ecologist Jan-Willem Jansens. [HTTPS://SANTAFEBOTANICALGARDEN.ORG/EXPLORE/](https://SANTAFEBOTANICALGARDEN.ORG/EXPLORE/)

JULY 6-9

INTERNATIONAL FOLK ART MARKET SANTA FE

Santa Fe Railyard Park

505-992-7602, FOLKARTMARKET.ORG

JULY 9-14

WESTERN ASSOCIATION OF FISH AND WILDLIFE AGENCIES

Eldorado Hotel & Spa

Summer meeting. [HTTPS://WAFWA.ORG](https://WAFWA.ORG)

JULY 18, 25

**BEYOND ADOBE
WALLS TOUR**

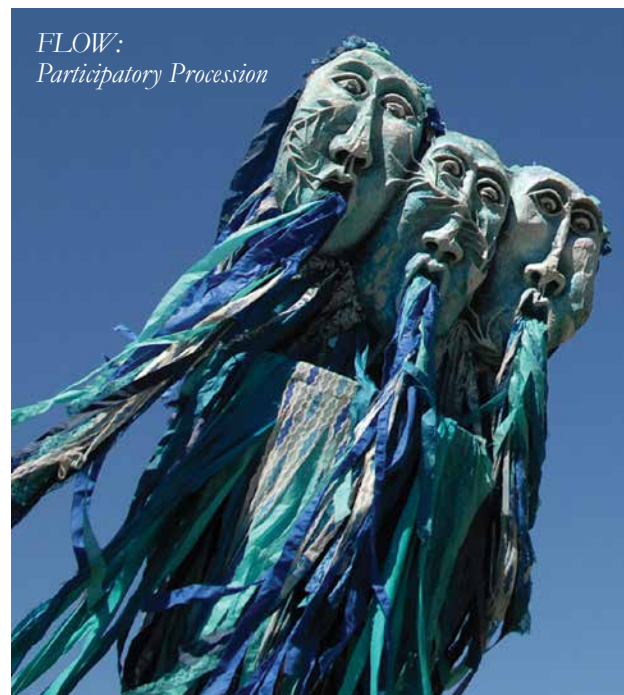
Ticket proceeds benefit Santa Fe Garden Club community education and conservation projects. 505-660-2393, [HTTPS://SANTAFEGARDENCLUB.ORG/HOME-AND-GARDEN-TOURS/](https://SANTAFEGARDENCLUB.ORG/HOME-AND-GARDEN-TOURS/)

JULY 29-30

**TRADITIONAL
SPANISH MARKET**

Santa Fe Plaza

Handmade traditional art from hundreds of regional Hispanic artists, as well as live music, demonstrations and regional foods. Runs concurrently with Contemporary Spanish Market on Lincoln Ave.





Pueblo Fiber Arts Show

**THROUGH JULY 31
GOING WITH THE FLOW: ART,
ACTIONS AND WESTERN
WATERS**

SITE Santa Fe, Railyard Park and locations across SF
Group exhibition, talks, performances explore the role of water in the arid Southwest during the current droughts. SITESANATAFE.ORG

**THROUGH SEPT. 4
WITH THE GRAIN**

NM Museum of Art, 107 W. Palace Ave.
Exhibition tracing the relationship between Hispanic, northern NM wood carvers and their use of incorporating natural wood in their carvings. 505-476-5072, NMARTMUSEUM.ORG

**SEPT. 13-15
EARTH USA 2024**

International conference on architecture and construction with earthen materials. WWW.ADOBEINACTION.ORG

**MON.-FRI.
POEH CULTURAL CENTER AND MUSEUM**

78 Cities of Gold Rd., Pueblo of Pojoaque
Di Wae Powa: They Came Back: Historical Pueblo pottery. The Why, group show of Native artists. Nah Poeh Meng: core installation highlighting Pueblo artists and history. 505-455-5041

**MON.-SAT., 8 AM-4 PM
RANDALL DAVEY AUDUBON CENTER & SANCTUARY**

1800 Upper Canyon Rd.
Free walks to see birds, Sat., 8:30 am. RSVP for Randall Davey House tours. RANDALLDAVEY.AUDUBON.ORG

**TUES., SAT., 8 AM-1 PM
SANTA FE FARMERS' MARKET**

1607 Paseo de Peralta
505-983-4098, SANTAFEFARMERSMARKET.COM

**WEDS-SAT., 10 AM-6 PM; FRI.-SAT., 10 AM-6:30 PM
SANTA FE CHILDREN'S MUSEUM**

Interactive exhibits, play areas, weekly programs. Masks required for ages 2 and older. \$10/\$8/\$7/\$3/one & under free. 505-989-8359, SANTAFECHILDRENSMUSEUM.ORG

**THROUGH AUGUST, WEDS-FRIDAYS
MUSEUM OF SPANISH COLONIAL ART**

710 Camino Lejo
Trails, Rails and Highways: How trade transformed the Art of Spanish New Mexico. MUSEUM@SPANISHCOLONIAL.ORG

NM FOOD AND WATERSHED RESTORATION INSTITUTE

Summer Jobs in the outdoors for grads and undergrads. Join NMFWR's Ecological Monitoring team. Get paid to camp and learn about fire impacts on the landscape. CARMEN@NMHU.EDU, <https://nmfwri.org/projects/summer-student-internships/>

SANTA FE HABITAT FOR HUMANITY

Seeking land, donated or for sale, to build affordable housing. Low-income homeowners help build homes and make mortgage payments to the nonprofit HFH. Property owners can qualify for 50% Affordable Housing tax credit through the NM Mortgage Finance Authority. 505-986-5880, ext. 109

STATE MUSEUMS

Museum of International Folk Art (10 am-4 pm), Museum of Indian Arts and Culture (10 am-4 pm), N.M. History Museum (10 am-4:30 pm), N.M. Museum of Art (Tues.-Sun., 10 am-4 pm). NEWMEXICOCULTURE.ORG/VISIT

YOUTHBUILD / YOUTHWORKS!

Paid training for Youth 16-24. Construction, Culinary, GED. 505-989-1855, WWW.SANTAFEYOUTHWORKS.ORG/SANTA-FE-YOUTHBUILD/

TAOS / Online

**MAY 5-7
EARTHSHIPS SEMINAR**

Tours, Q&A and lectures by Michael Reynolds. \$500. OUTREACH@EARTHSHIP.COM, [HTTPS://WWW.EARTHSHIPGLOBAL.COM/SEMINAR](https://www.earthshipglobal.com/seminar)

**MAY 19-21
TAOS LILAC FESTIVAL**

Kit Carson Park, 211 Paseo del Pueblo Norte
Arts & crafts booths, window displays and self-guided tours of historic district. 11 am-5 pm. TAOSLILACFESTIVAL.COM

**JUNE 2023-JANUARY 2024 (WEDS-SUN., 11 AM-5 PM)
HARWOOD MUSEUM CENTENNIAL**

238 Ledoux Street
Exhibition fills nine galleries, narrating the comprehensive Harwood story. Over 200 works of art from the Harwood's collection, along with works loaned from other institutions. 575-758-9826, [HTTPS://HARWOODMUSEUM.ORG/EXHIBITION/CENTENNIAL/](https://harwoodmuseum.org/exhibition/centennial/)

**AUG. 12-13, 10 AM-5 PM
QUESTA ART TOUR**

Explore studios of inspired artists and craftspeople. Painting. Printmaking, wood carving, quilting, ceramics, jewelry, metalwork, stained glass, fiber art and more. For a downloadable map of hubs, artists description and venues, visit QUESTACREATIVE.ORG.

LA HACIENDA DE LOS MARTÍNEZ

708 Hacienda Way
Northern NM-style Spanish colonial "great house" built in 1804 by Severino Martínez. Open daily. TAOSHISTORICMUSEUM.ORG

MILLICENT ROGERS MUSEUM

1504 Millicent Rogers Rd.
Tuah-Tah/Taos Pueblo: Home, highlighting the pueblo's culture and artistic achievements. Pop Chalee! Yippee Ki Yay! paintings. Open daily. MILLIF4N65OY45E.ORG

HERE & THERE / Online

**MAY 8-10, 10 AM-12 PM
GOVERNOR'S CONFERENCE ON HOSPITALITY AND TOURISM**

Las Cruces Convention Center, Las Cruces, NM
[HTTPS://NEWMEXICOHOSPITALITY.ORG](https://newmexicohospitality.org)

**MAY 9-10
CORRIDORS, CONNECTIVITY AND CROSSINGS**

Tucson, Ariz.
Interdisciplinary conference dedicated to the latest science and policy developments in wildlife corridor conservation. Western Association of Fish and Wildlife Agencies.

**MAY 10, 5 PM
CLIMATE INNOVATION CHALLENGE SHOWCASE**

[HTTPS://WWW.YOUTUBE.COM/C/CAVUORG](https://www.youtube.com/c/cavuorg)
Youth-led climate change solutions. Award-winners from worldwide student video submissions. Streaming Online from Reunity Resources Farm in Santa Fe.

**MAY 17, 12 PM APPLICATION DEADLINE
HEALTHY SOIL PROGRAM GRANTS**

Funding for on-the-ground projects in NM that focus on one or more of the five soil health principles. Pueblos, tribes, nations, acequias, land grants, soil & water conservation districts, and other local governmental entities that manage land are eligible. [HTTPS://NMDEPTAG.NMSU.EDU/HEALTHY-SOIL-PROGRAM.HTML](https://nmdeptag.nmsu.edu/healthy-soil-program.html)

**MAY 20, 9 AM-5 PM, MAY 21, 9 AM-1 PM
LAND HEALTH AND INDIGENOUS HISTORY**

Abiquiú, NM
Erosion control workshop with Flowering Tree Permaculture Institute. Presented by the Quivira Coalition. [HTTPS://QUIVIRACOALITION.ORG/EVENTS/FLOWERING-TREE/](https://quiviracoalition.org/events/flowering-tree/)

**JUNE 5-30, JULY 1-31, AUG. 8-24
EARTH KNACK SCHOOL**

Crestone, Colo.
Outdoor living immersion classes and programs. Summer internships. Other dates TBA. WWW.EARTHKNACK.COM

**JUNE 28-JULY 1
SAN JUAN JAZZ SOCIETY 2ND JAZZ FESTIVAL**

Farmington Civic Center, Farmington, NM
A family event. Concerts and workshops will uplift the area's Indigenous and Latin cultures. [HTTP://NWNMAC.ORG](http://NWNMAC.ORG)



WATER REUSE & CONSERVATION

THE NEW PARADIGM

June 14 - 17

Next Generation Water Summit

Join us for our annual joint City/County Water Conservation Event

- Learn from national and local water professionals
- Get updates from your elected officials on local issues
- Participate in fun, hands-on outdoor water conservation community tours

Community Tours - Saturday, June 17

9:00 - 11:00 am	<p>Water Conservation Office Demonstration Gardens</p> <ul style="list-style-type: none"> • Native plant and pollinator gardens • Cactus garden installed by the Cactus Rescue Project • Giveaways <p>(located across parking lot from Midtown Bistro off San Mateo Road)</p>
12:00 - 2:00 pm	<p>Santa Fe Community College Trades & Advanced Technology Center (TATC)</p> <ul style="list-style-type: none"> • Aquaponic & Hydroponic production systems • Rainwater collection and delivery system • Phyn smart water meters • Agal technologies <p>(location: southeast end of the campus. For info call 303-579-1543)</p>
3:00 - 5:00 pm	<p>Rain Garden Tour</p> <ul style="list-style-type: none"> • Outdoor, on-site visit of 3 different phases of rain gardens in an urban environment led by Reese Baker. • Each of the rain gardens utilize zuni bowl infiltration basins, edible and wildlife/pollinator attracting plant species, with grasses and fungi for bioremediation of petroleum by-products, pesticides, microplastics, and more. <p>(visit savewatersantafe.com/NGWS for location and topic specific details)</p>

RAIN BARREL RAFFLE

There will be a rain barrel raffle with 5 lucky winners! You can submit entries at every community event, increasing your chances of winning. You don't need to be present at drawing to win.

GIVEAWAYS!

Native seed packets, shut-off nozzles and more!

savewatersantafe.com/NGWS

City & County residents can attend the virtual conference for FREE!



CITY OF SANTA FE

