

50-YEAR WATER ACTION PLAN



Office of the Governor
MICHELLE LUJAN GRISHAM





Office of the Governor
MICHELLE LUJAN GRISHAM

MESSAGE FROM THE GOVERNOR

There are few places in the world where water holds such profound significance as here in New Mexico. The original inhabitants of the southwest have recognized the life-sustaining import of water for thousands of years. Today, it also holds immeasurable cultural, agricultural, ecological, economic, and recreational value. The effects of climate change now threaten this precious resource. By the time a Class of 2024 high school graduate reaches retirement age, New Mexico will have 25% less water than we do today in our already over-stressed communities, farms, and wilderness areas.

The science is clear: Precipitation will be more variable and extreme. Snowpack, runoff, and aquifer recharge will decline, stressing surface water and groundwater supplies. Higher temperatures and greater aridity will dry landscapes, leading to more extreme wildfires and increased erosion.

We cannot wait to act – and we are not.

We have the time, resources, and technology to secure a strong water future. We will draw upon New Mexico's rich heritage of forward-thinking water management. We will build on the vital work of the 2022 New Mexico Water Policy and Infrastructure Task Force and harness expertise from water stewards across our diverse state, as well as from some of the finest research institutions in the world, including New Mexico universities and national laboratories. We will continue to use science, innovation, and cultural history as our reliable guides to navigate these water challenges while fostering greater economic opportunities and resilience for future generations of New Mexicans.

By following the path laid out in this plan, we not only ensure that New Mexicans have clean water now and into the future, but also that an advanced clean energy economy can continue to thrive, farmers and ranchers continue to grow the food that sustains us, and our rivers remain swift and clear.

Using the knowledge gained over countless generations and the cutting edge innovation of today, we are rising to meet this moment.

Sincerely,

A handwritten signature in black ink that reads "Michelle Lujan Grisham". The signature is fluid and cursive, written in a professional style.

Gov. Michelle Lujan Grisham

WATER IN NEW MEXICO

WATER SUPPLY:

New Mexico relies on surface water and groundwater

Over **170** lakes and reservoirs

Over **1 million** acres of wetlands

WATER USE:

New Mexico uses nearly 10 billion gallons of water per year

Nearly **200,000** miles of rivers and streams

Over **30** groundwater basins

On average, New Mexico residents use

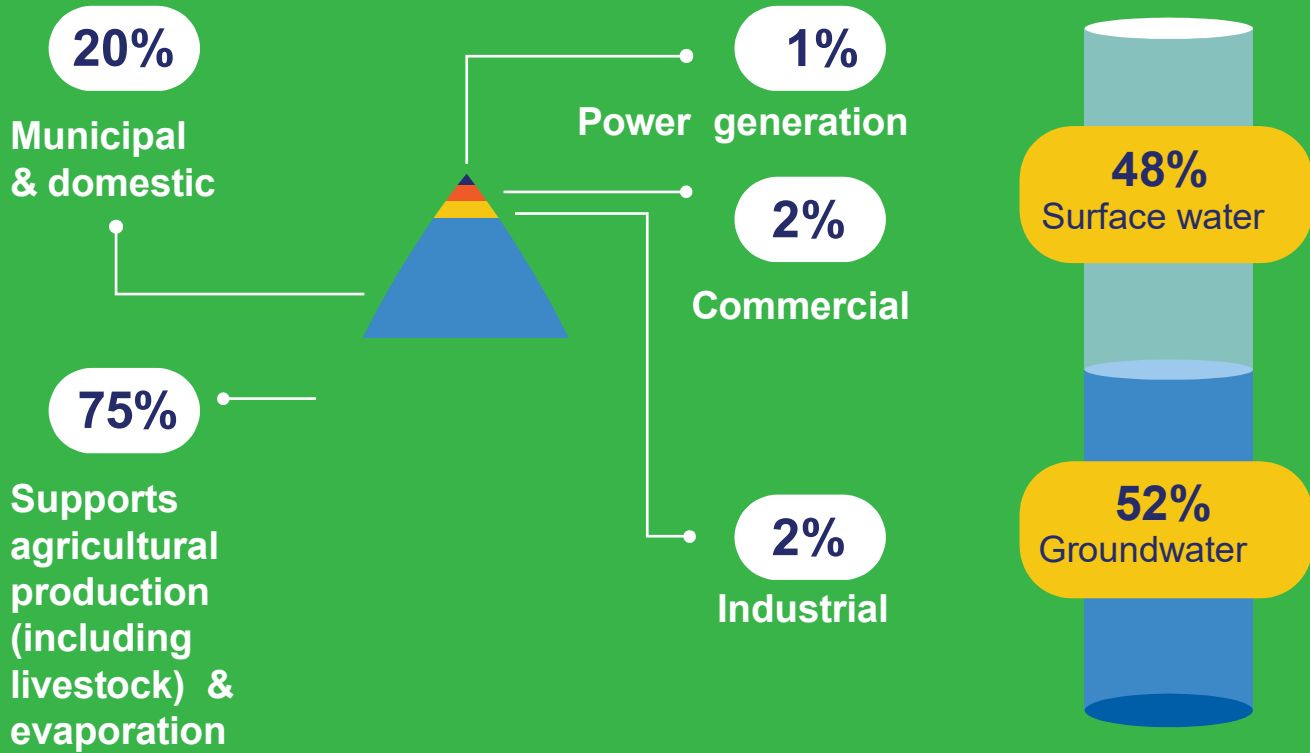
81 gallons per person per day in and around the home

Approximately 60%

There are nearly

25,000 commercial and service branches in New Mexico

CURRENT WATER USE:



HOMEFOOTPRINTS AN

326,000
gallons



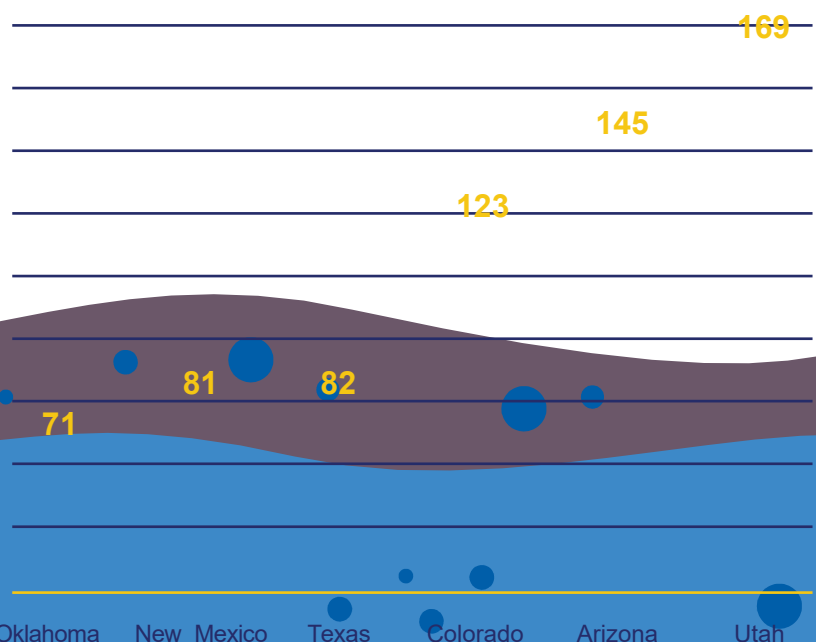
Over 16,000 showers



The water it takes to

Fill a bathtub

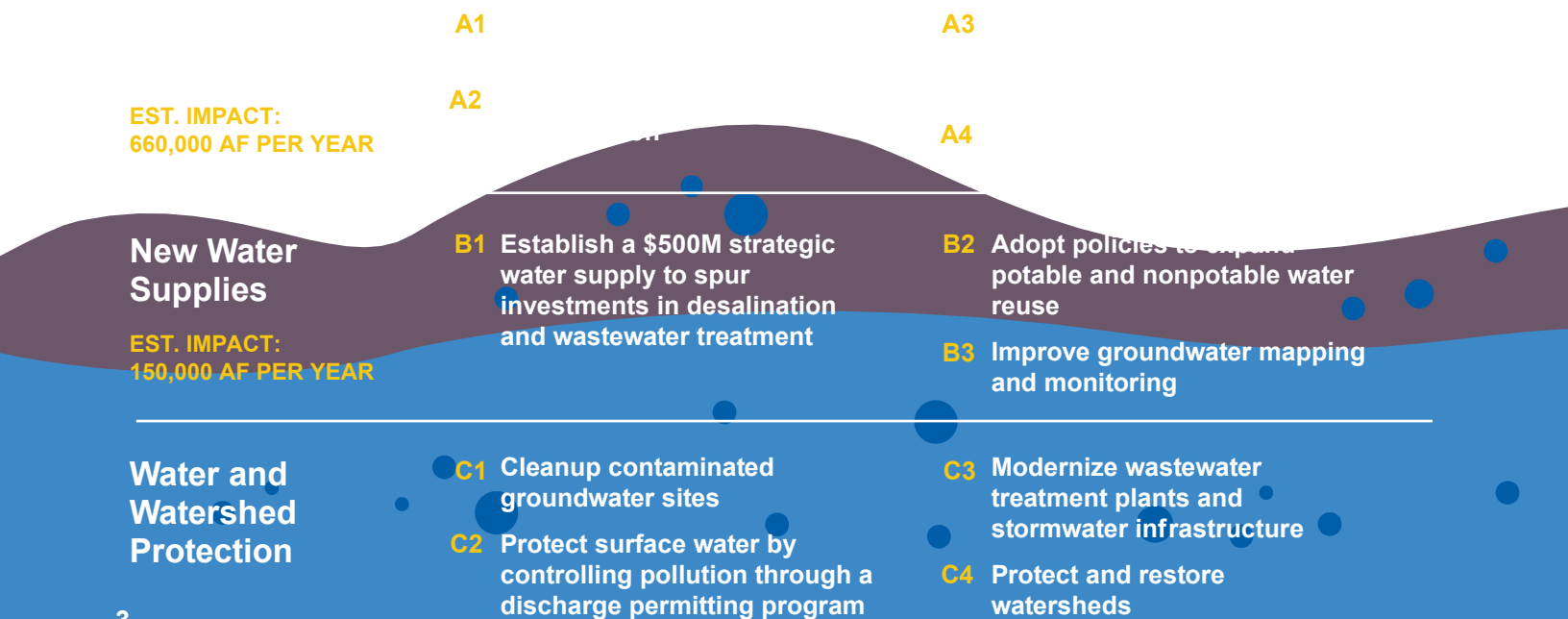
COMPARISON WITH OTHER STATES



NEW MEXICO'S WATER FUTURE:



WHAT WE ARE DOING TO INCREASE WATER SECURITY:





OUR ACTION PLAN TO SECURE NEW MEXICO'S WATER FUTURE

As New Mexicans face increasing water scarcity and emerging threats to our existing resources, we will meet our goal of providing sustainable clean water to communities through the combination of:

- Strategic investments of federal and state funding
- Broad deployment of advanced technology
- Collaboration with community members and leaders across all levels of government
- Utilization of cultural and traditional knowledge of our tribal and acequia communities; and
- Modern policy approaches tailored for 21st century water resource management

TO SECURE NEW MEXICO'S WATER SUPPLY FOR THE NEXT 50 YEARS AND BEYOND, WE WILL PRIORITIZE ACTIONS FOR WATER CONSERVATION, NEW WATER SUPPLIES and WATER AND WATERSHED PROTECTION.

Our efforts will require sustained investments and contributions from everyone to expand upon the effective water programs that currently serve our State, Nations, Tribes and Pueblos, and rural communities. Some of the ongoing efforts that complement the priority actions highlighted in this Plan include:

- Advancing Indian water rights settlements to build on the strong progress made in recent years to negotiate and implement agreements that resolve outstanding claims and secure water supplies for more communities
- Robust regional water planning to implement the Water Security Planning Act of 2023
- Implementing the Land of Enchantment Legacy Fund
- Continued funding and reforms for the Water Trust Board
- Improving opportunities for communities to leverage capital outlay funding to complete water projects
- Advancing regionalization approaches that increase critical capacity for managing drinking water and wastewater systems, including through the Regional Water System Resiliency Act of 2023
- Implementing the New Mexico Water Data Act of 2019; and
- Broader investments in local capacity building and the water workforce

We will also continue our high priority collaborative efforts with federal, Tribal and local partners to complete major drinking water supply projects that transform water security for communities, including the Navajo Gallup Water Supply Project and the Eastern New Mexico Water Utility Authority project. For more information about the many water programs and initiatives that informed this 50-Year Water Action Plan, see the List of Related Resources and the list of the Governor's Water Resilience Initiatives at the end of this document.



WATER CONSERVATION

New Mexico's water conservation traditions have been shaped over the centuries by our Pueblos, Tribes, acequias, rural areas, and cities and we rely on those communities to continue to develop innovative ways to conserve water. It is essential that we take actions together to preserve and protect the unique traditions we have here in the State while we build a platform for future generations through additional water conservation measures tailored to the changing climate.

As we face diminished surface water and groundwater supplies in the coming decades, we can work together to prioritize actions that translate to decreased water use – even as we grow our communities and advance new industries, such

as clean energy production and manufacturing and diversified crops. New Mexico's farmers and ranchers produce products that are an essential element of the State's food supply and the economy that forms the lifeblood of many of our rural communities. And, as the largest water users throughout the State, agricultural producers understand the need to conserve and protect the State's water resources in order to sustain a vibrant agricultural sector for generations to come. As drought and other effects of climate change impact food production in the Southwestern U.S., having a secure, locally produced food supply will be increasingly critical for New Mexico's future.



Over the coming decades, through implementation of the actions below and other parallel efforts, New Mexicans will conserve water through broader education on water issues and actions we take can do at home and work to preserve our most precious resource, as well as through adoption of new irrigation technologies and tools for sustainable agriculture and upgraded municipal water infrastructure. We will leverage unprecedented levels of federal funding, available through 2026 and beyond through the Bipartisan Infrastructure Law, the Inflation Reduction Act, the Farm Bill and other programs, for everything from fixing leaks in community drinking water distribution lines to upgrading dams, reservoirs and conveyance systems to ensure secure sup-

plies with decreased water loss. In the first two years of BIL funding, New Mexico has already received over \$800 million from federal agencies for water infrastructure investments, and we are just getting started.

New Mexicans have a strong track record of residential water conservation, as evidenced by trends in some of our largest cities; however, we know that we will need to continue to employ water conservation and education to enhance these positive trends as our communities grow and freshwater supplies decline.

Actions

Action A1 Develop Education and Outreach Campaign (AMP) to increase awareness about the need for water conservation and how each individual can conserve water.

Immediate Next Steps: Develop a plan for the campaign and begin outreach efforts.

Return on Investment:

By 2040, decrease water consumption in rural and municipal communities by 10% through the combination of water education, water planning, and local incentives for water conservation at homes and businesses.

Action A2 Develop tools and policy incentives to expand water conservation and resilience in the agricultural sector through initiatives that increase producers' voluntary adoption of high-efficiency irrigation technology (e.g., soil moisture sensors, remote controlled equipment, and application of satellite-based evapotranspiration data) and drought resilient, low water-demand crops.

Immediate Next Steps:

In 2024, expand outreach to farmers, agricultural businesses, and irrigation districts on all available state and federal funding to support costs associated with water conservation practices, including the State's Healthy Soil Program and federal Farm Bill programs for efficient irrigation systems, voluntary crop conversion, and conservation practices. In 2025, continue to advocate for greater federal investments in water conservation research and development and establish State fiscal incentives, such as an economic development incentive program, and other programs developed in coordination with agricultural producers, including acequias, to make adoption of water conservation practices more affordable for New Mexico farmers. Starting in 2025, use regional water planning to identify programs and projects for state funding that will increase agricultural resilience and preserve landscape health while decreasing depletions on a basin-wide scale.

Return on Investment:

By supporting producers to adapt farming and ranching to a future with less freshwater, decrease water use in the agricultural sector statewide by 10% by 2035 and 20% by 2050 while maintaining economic viability and protecting ecosystem services that benefit from crop irrigation.

**Action
A3**

Build and repair resilient public drinking water infrastructure to address water loss, thereby ensuring a greater volume of water is conserved and that safe and affordable drinking water is available in all communities. Today, some drinking water systems in New Mexico are losing 40-70% of all treated drinking water due to breaks and leaks throughout aging infrastructure, such as underground distribution pipes. Many of these problems stem from chronic underinvestment in the infrastructure and water workforce that communities rely upon for clean drinking water.

Immediate Next Steps:

In 2024, deploy innovative technology and remote sensing techniques to complete a statewide inventory of water loss across 1,000+ public water systems in New Mexico, including analysis of planned and active infrastructure projects, in order to quantify the extent of water loss and inform further investments in water conservation through federal and state funding.

Return on Investment:

Return on Investment: Decrease statewide water loss from public drinking water infrastructure by 25% by 2040 through routine and targeted projects to repair and replace failing and leaking pipes, pumps, hydrants and other facility components, saving municipalities and ratepayers millions of dollars while saving water.

**Action
A4**

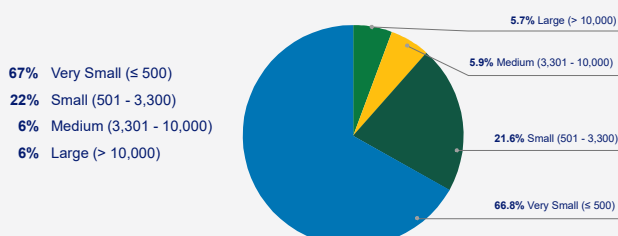
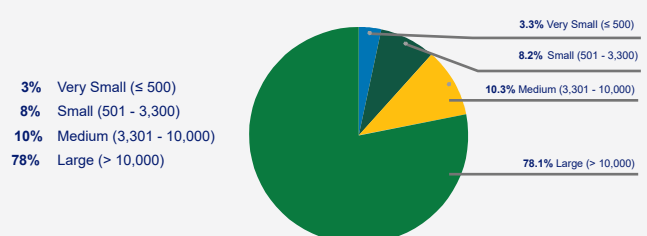
Prioritize water management infrastructure improvements (e.g., dams and reservoirs) and operational efficiencies to meet future demands by developing agreements for flexible management options, continuing progress on completion of Indian Water Rights Settlements, repairing aging infrastructure (e.g., in tribal and acequia communities) and addressing critically important dam safety improvements, while ensuring that environmental flows and compliance will be part of our solutions. Seek and apply federal resources and funding to assist in the completion of many urgent infrastructure projects.

Immediate Next Steps:

Work with partners in 2024 and 2025 to repair and modernize existing infrastructure to improve water use efficiency savings, utilize naturally distributed storage where appropriate, and maximize operational flexibilities and surface water and groundwater storage opportunities to protect up to three-million-acre-feet of water per year for existing and future uses. In addition, establish tools and data to calculate a baseline for system-wide efficiency and to measure future change. In 2025, allocate dedicated state funding to accelerate projects that address infrastructure priorities, including over 70 deficient dams.

Return on Investment:

By 2040, improve system-wide efficiency by 20% and develop additional infrastructure to meet future water supply needs for our communities.

Community Water System in NM - By system size

Community Water System in NM - By population served




NEW WATER SUPPLY

With projections of 25% less water available in 50 years, we must develop new sources of water while we conserve and protect our freshwater resources. Technological advances continue to make water treatment safer and more economically viable. This includes safely tapping and treating ancient underground reserves of brackish water to remove salt and other naturally occurring constituents, as well as the treatment of wastewater from industrial processes to remove harmful pollutants so the treated water may be used to offset demand for freshwater.

New Mexico will become the first state in the country to establish a State Strategic Water Supply through a program that offers advanced market commitments to mitigate market risks through State commitments to purchase treated water from selected projects to build new desalination plants and produced water treatment plants in New Mexico. Depending on the quality of the treated water and associated regulatory standards, the State would be able to use or sell the auxiliary water for a range of specified purposes, for example, recharge a depleted freshwater aquifer with desalinated brackish water or use treated wastewater to develop



and store renewable energy. In other words, among other benefits, we will better meet the water demands of our clean energy transition without reducing the availability of freshwater for human consumption, growing crops and raising livestock, and cultural and ecological purposes.

Our policy innovations will spur huge capital investments in new water treatment infrastructure and help to accelerate ongoing research and development for inland desalination and produced water treatment and reuse. In addition, the priority actions below demonstrate

our commitment to ensuring each new investment in new sources of water is grounded in strong science and data and subject to regulatory frameworks that protect public health and foster accountability. As we expand utilization of a wider range of water resources and continue to conserve, it is important to closely monitor existing groundwater supplies. Building a dedicated water resource monitoring network will help New Mexico track the impacts of our water management decisions, thereby better informing state, tribal and local water managers for decades to come.

Actions

Action B1

Establish the State Strategic Water Supply and \$2025 bill new revenue to apply to the oil and gas sector. The City of Austin is a leader in the oil and gas sector, and the City is looking to create a new revenue stream to fund the water supply program. The City is looking to create a new revenue stream to fund the water supply program.

Immediate Next Steps:

In 2024, create the program framework and guidelines, and launch concept paper competition for advanced market commitments for desalination and wastewater treatment/reuse. In 2024 and 2025, secure \$500 million in program funding through revenues from severance taxes collected on oil, gas, and other natural resource extraction.

Return on Investment:

By 2028, 100,000-acre-feet of new water is available for State use and resale for clean energy production, storage and manufacturing and for other zero-discharge industrial processes. By 2035, 50,000-acre-feet of treated brackish water is available and/or applied to active projects to recharge freshwater aquifers and otherwise augment the supply of freshwater for communities, farms, aquatic ecosystems, and interstate compact compliance.

Action B2

Develop and implement a water reuse program to protect the environment and public health. The City of Austin is a leader in the oil and gas sector, and the City is looking to create a new revenue stream to fund the water supply program. The City is looking to create a new revenue stream to fund the water supply program.

Immediate Next Steps:

By 2024 adopt preliminary water reuse rules to create a consistent and science-based regulatory program for treatment and reuse of produced water outside of the oil and gas sector. By 2026, adopt necessary revised and sector-specific water reuse rules pursuant to the Water Quality Act, the Produced Water Act and the Environmental Improvement Act to establish clear regulatory pathways for potable (direct and indirect) and fit-for-purpose non-potable reuse of all relevant sources of wastewater, including from domestic/municipal and industrial sectors.

Return on Investment:

The necessary regulatory frameworks are in place by 2026 to maximize utilization of the new water supplies identified in Action B1 above.

A 25 million gallon per day brackish water treatment plant could produce up to 27,900 acre-feet of potable water a year. For comparison, this would cover approximately 70% of the annual consumptive water use in the Albuquerque area, which is roughly 40,000 acre-feet.

Action
B3

Water and Mineral Monitoring of the Groundwater
The Regional Water and Mineral Monitoring Program is a critical component of the state's water and mineral management strategy. It is designed to provide a comprehensive understanding of the state's groundwater resources, including their quantity, quality, and distribution. The program is a key element of the state's water and mineral management strategy, and it is essential for ensuring the sustainable use of these resources.

Immediate Next Steps:

In 2024 and subsequent years, fully fund the Bureau of Geology and Mineral Resources' request for recurring funding (i.e., an increase of \$1.25 million) and any requested nonrecurring program funding. Utilize federal infrastructure funding to help cover costs to drill wells and build an improved groundwater monitoring network.

Return on Investment:

By 2037, after 12 years fully-funded, the Program has added 100 new dedicated monitoring wells to the statewide network and characterized all major and minor aquifers in the State – freshwater and brackish water – with major aquifers characterized by 2032.



WATER AND WATERSHED PROTECTION

New Mexicans enjoy iconic rivers and aquatic playgrounds at our many beautiful lakes and reservoirs. Yet, many of our precious surface water bodies, forested watersheds, and groundwater resources are polluted or at risk of degradation due to human activity, natural disasters, extreme weather, and other threats. As we face realities of diminishing freshwater supplies in the coming decades, we are reminded that every drop

counts. That means we have a responsibility to keep healthy water from becoming polluted while we double-down on efforts to clean up contaminated groundwater and impaired rivers and lakes in all corners of the State.

The priority actions set forth in this section highlight four key areas of increased focus that will ensure we are working toward access to clean



water for all our communities and prevent certain sources of freshwater from becoming polluted or degraded sacrifice zones. Future generations of New Mexicans and our vibrant agricultural and outdoor recreation sectors depend on New Mexico to protect and restore water quality. As drought intensifies and new water pollutants emerge, we must simultaneously cleanup legacy waste and put strong programs in place to pro -

tect healthy watersheds and pristine aquifers through pollution prevention, forestland restoration, and fixing aging infrastructure.

Actions

Action

C1

Cleanup contaminated groundwater across 15 Superfund sites, hundreds of legacy uranium mining and milling sites, federal facilities (such as Los Alamos National Lab and military institutions), hundreds of petroleum storage tank releases, and up to 200 other pollutant plumes scattered across rural and urban communities where groundwater fails to meet State water quality standards.

Immediate Next Steps:

In 2024, in partnership with the New Mexico Water Data Initiative and the state uranium mining reclamation programs, develop a dashboard of all known contaminated groundwater sites, including the status and estimated cost of cleanup for each site. In 2025, fund and launch a State program to pay for remediation of groundwater contamination at over 100 neglected sites that have no responsible party and that do not rank for the federal Superfund program.

Return on Investment:

By 2035, average federal and private sector investments in legacy uranium cleanup in New Mexico are 500% of 2023 levels; 30 non-uranium groundwater contamination sites are remediated, of which at least 50% are located in underserved or disadvantaged communities; there are zero active petroleum storage tank sites with human health risk; and all active Superfund sites are on schedule with an approved and funded remediation plan.

Action

C2

Determine discharge permits for all regulated discharges of pollution entering New Mexico's rivers, streams, and wetlands.

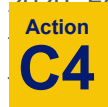
By 2025, NMED is implementing a State permitting program for all types of regulated discharges. By 2040, 20% fewer surface water impairments are caused by point source pollution.

Return on Investment:

By 2030, NMED is implementing a State permitting program for all types of regulated discharges. By 2040, 20% fewer surface water impairments are caused by point source pollution.



Statewide plan in place to protect watersheds in critical water source areas across the State, including mechanical thinning, responsible prescribed burning, and reforestation. The 2020 Forest Action Plan provides detailed steps to reduce the risk of high-intensity wildfires in watersheds that supply the bulk of our State's surface water supplies.



State, including mechanical thinning, responsible prescribed burning, and reforestation. The 2020 Forest Action Plan provides detailed steps to reduce the risk of high-intensity wildfires in watersheds that supply the bulk of our State's surface water supplies.

Immediate Next Steps:

In 2024 and 2025, develop a list of community wastewater treatment facilities in need of repair or replacement to protect water quality and work with local communities to develop tailored capacity and funding strategies to plan, design and construct projects. In addition, continue state, regional and local efforts to support adoption of regionalization approaches that mitigate local capacity shortfalls to operate and maintain wastewater systems.

Return on Investment:

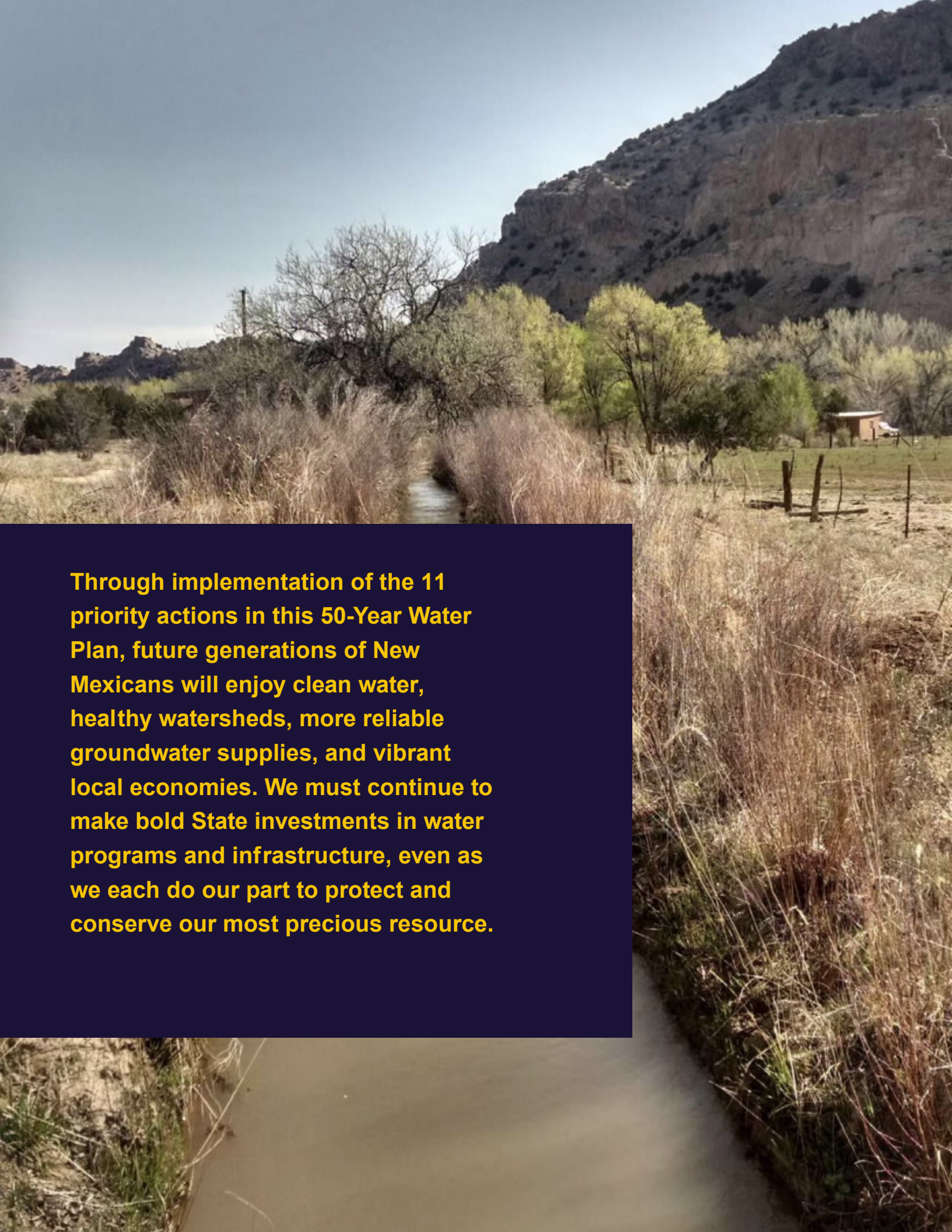
By 2040, the pollution control compliance rate at municipal wastewater treatment plants is 95%. By 2045, major stormwater management and flood prevention projects, including those that utilize green infrastructure practices, are complete or substantially underway in all cities, towns and villages.

Immediate Next Steps:

In 2024 and 2025, continue implementation of the 2020 Forest Action Plan to accelerate the pace and scale of water source protection projects. Secure additional federal funding for New Mexico projects and utilize Good Neighbor and other cooperative agreements with the U.S. Forest Service and Department of the Interior agencies to manage wildfire risk on federal lands across New Mexico. Use the Land of Enchantment Legacy Fund and other State appropriations to increase conservation work on private, Tribal, and public lands. Continue investment in the New Mexico Reforestation Center to expand post-fire reforestation and mitigate the risk of permanent forest loss posed by climate change.

Return on Investment:

By 2035, New Mexico collectively restores and reduces wildfire risk on 300,000 acres annually per year in critical watersheds and water source areas, including 140,000 acres per year of treatments on State and private lands. New Mexico's capacity to reforest burned areas increased from 300,000 seedlings per year to 5 million.



Through implementation of the 11 priority actions in this 50-Year Water Plan, future generations of New Mexicans will enjoy clean water, healthy watersheds, more reliable groundwater supplies, and vibrant local economies. We must continue to make bold State investments in water programs and infrastructure, even as we each do our part to protect and conserve our most precious resource.

Governor Michelle Lujan Grisham Administration's Water Resilience Initiatives (2019-2023)

Over the past five years, the State has made great progress in tackling New Mexico's water challenges.

Ongoing and completed priority work since 2019 includes:

- | | |
|--|--|
| <ul style="list-style-type: none"> ✓ Climate Change Task Force and Executive Order 2019-003 | <ul style="list-style-type: none"> ✓ Land of Enchantment Legacy Fund (2023) ✓ Water Security Planning Act (2023) |
| <ul style="list-style-type: none"> ✓ Expanded state agency capacity, including NMED Climate Change Bureau, EMNRD Climate Change Bureau, NMISC Acequia Bureau, NMOSE Pueblos, Tribes, and Nations Bureau | <ul style="list-style-type: none"> ✓ Regional Water System Resiliency Act (2023) |
| <ul style="list-style-type: none"> ✓ New Mexico Produced Water Research Consortium | <ul style="list-style-type: none"> ✓ Forest Conservation Act Amendments (2023) |
| <ul style="list-style-type: none"> ✓ NMOSE/NMISC Tribal Water Working Group | <ul style="list-style-type: none"> ✓ Hermits Peak-Calf Canyon Fire Recovery Funds (2023) |
| <ul style="list-style-type: none"> ✓ Produced Water Act (2019) | <ul style="list-style-type: none"> ✓ Funding and workplan for State Surface Water Permitting Program |
| <ul style="list-style-type: none"> ✓ Water Data Act (2019) | <ul style="list-style-type: none"> ✓ Litigation against U.S. Department of Defense for groundwater contamination in Curry and Otero Counties |
| <ul style="list-style-type: none"> ✓ New Mexico 2020 Forest Action Plan | <ul style="list-style-type: none"> ✓ Remediation of groundwater contamination Kirtland Air Force Base, Los Alamos National Laboratory, and other federal facilities |
| <ul style="list-style-type: none"> ✓ NMBGMR Leap Ahead Report (2022) | <ul style="list-style-type: none"> ✓ Settlement of all Gold King Mine claims with total of \$50 million for water projects and other cost recovery |
| <ul style="list-style-type: none"> ✓ New Mexico Water Policy and Infrastructure Task Force (2022) | |

LIST OF RELATED RESOURCES

NM Water Policy and Infrastructure Task Force Report.
bit.ly/NM50WAP_Utton

Climate Change in New Mexico Over the Next 50 Years: Impacts on Water Resources (Leap Ahead Report).
bit.ly/NM50WAP_Leap

Recommendations from Tribal Water Working Group.
bit.ly/NM50YAP_TribalWaterReport

Recommendations from the Acequia Water Planning Working Group.
bit.ly/NM50WAP_Acequia

Water Security Planning Act.
bit.ly/NM50WAP_WSPAct

New Mexico Water Use by Categories.
bit.ly/NM50WAP_WaterByCat

NM Aquifer Mapping Program.
bit.ly/NM50WAP_Mapping

EPA Drinking Water Infrastructure Needs Assessment.
bit.ly/NM50WAP_EPA

New Mexico 2020 Forest Action Plan at
<https://www.emnrd.nm.gov/sfd/forest-action-plan/>

