



***NEW MEXICO CLIMATE ADAPTATION
AND RESILIENCE PLAN***

COMMUNITY COMMENTS SUMMARY VERSION
SUMMER 2024

NEW MEXICO CLIMATE ADAPTATION & RESILIENCE PLAN

COMMUNITY COMMENTS SUMMARY VERSION

PREPARED FOR:

NEW MEXICO ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT

PREPARED BY:

ADAPTATION INTERNATIONAL, GROUNDWORK STUDIO, TOOLE DESIGN, CLIMAS, FLOWER HILL INSTITUTE, AND KIM LUNDGREN ASSOCIATES

SUMMER 2024



groundworkstudio



T'OOLE
DESIGN



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- New Mexico Game and Fish Department
- New Mexico Tourism Department
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- Office of Broadband Access and Expansion
- Office of the State Engineer
- Office of the Governor
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ACEQUIA, SANTA CLARA PUEBLO; MAYA PENA, CC

LETTER OF INTRODUCTION

We humans have entered – indeed, created – a new era on the planet. In the Anthropocene, as we weather the brunt of a climate we ourselves have generated, we humans find ourselves both the crafter and the crafted.

This is new terrain for all of us – attempting to simultaneously survive our changing climate, while trying to change it (back). This involves both murmuring – moving together as one, like a flock of birds – while simultaneously each contributing our individual gifts maximally to the cause.

Dangerously, there's a lag time with climate impacts. When we look out the window today at the state's heat, wildfires, droughts, and floods, we are observing the impacts of the emissions from the 1990s. Even if we halted all greenhouse gas emissions tomorrow (which we are furiously trying to do), we still have decades, if not a century, of climate challenges ahead. Now is the time to prepare for more, and for worse.



Fortunately, resilience is not new to the people of New Mexico. Generations of hardworking, creative, often under-resourced New Mexicans have often innovated solutions to challenges threatening our lands, cultures, and ways of life.

And, our government agencies reflect this dauntless spirit too. From supporting communities impacted by our largest wildfire in recorded history, to providing ever-changing services during the COVID-19 pandemic response, state agencies have experienced the impact of cascading hazards, and responded adeptly. Our work with state agencies in drafting this Plan has revealed a strong commitment to make a difference – now including incorporating climate resilience and adaptation practices into our operations.

The New Mexico Climate Adaptation and Resilience Plan is the result of a great deal of work by state agencies to identify risks and vulnerabilities, to develop and prioritize strategies to address them, and to create a path forward to address climate change. As state agencies, we understand that mitigating and adapting to climate change requires complex coordination across all sectors, and building this capacity takes time, funding, and political will.

New Mexicans are hardy, resourceful, diverse, and resilient. We are also largely rural, marginalized, and vulnerable due to decades of discrimination and disenfranchisement. Increasing community resilience in a collaborative effort can improve public health, ensure equity, and buffer our economy. Thus, this plan focuses on six core Resilience Themes to embed and increase resilience in all of our work as state government in order to shield against acute shocks and chronic stressors. The strategies in this plan will allow us to integrate resilience into all our operations and practices, to make smart decisions, and to strengthen our communities and ecosystems' ability to handle new challenges.

Working together, we will innovate, flex, survive, and thrive.



Rebecca Puck Stair, Director, New Mexico State Energy Office
Energy Conservation and Management Division
Energy, Minerals and Natural Resources Department

EXECUTIVE SUMMARY

New Mexico faces changing climate conditions, and state and local entities must anticipate and prepare to meet these climate challenges, which are expected to disproportionately impact the most vulnerable populations and infrastructure. As the state faces mounting challenges, including extreme heat, wildfires, droughts, storms, heavy precipitation, and associated health risks, the Climate Adaptation and Resilience Plan provides a blueprint for a more resilient New Mexico.

A Collaborative Approach

Central to our efforts is a collaborative and multi-faceted approach that starts with bringing together state agencies and will expand to include collaboration with Tribal communities, local governments, academia, the private sector, and various non-profits. By working together, we aim to understand the complex challenges climate change pose to our State and seize opportunities presented by changing conditions. Our goal is to create solutions that are customized to the unique challenges our communities are facing across the state and enhance the resilience of all New Mexicans.

State Commitment and Progress

Our commitment to climate resilience began with Governor Michelle Lujan Grisham's 2019 Executive Order on Addressing Climate Change and Energy Waste Prevention (E.O. 2019-003). This directive established climate action as a broad policy goal across all government functions, setting ambitious targets for reducing the emissions of heat trapping gasses. Through inter-agency collaboration and the development of this Plan, State agencies have begun to incorporate climate adaptation into their programs and operations, aligning with the state's vision for a clean energy future, protection of natural and cultural heritage, and the safeguarding of human health and safety.

Anticipating Climate Change Risks and Impacts

Understanding the climate risks facing New Mexico is paramount to proactively addressing the challenges presented by a changing climate. Communities across New Mexico are already dealing with the wildfires, droughts, floods, and extreme temperatures that come with increasing temperatures and variable precipitation patterns driven by climate change. The unique geography and diverse climates within New Mexico result in a complex climate risk profile, affecting government operations, critical infrastructure, natural resources, economies, culture, and the overall well-being of its residents.

The effects of climate change are not uniform, and certain communities are more vulnerable due to systemic burdens, including environmental and socioeconomic inequities. Factors such as racial discrimination, economic distress, housing insecurity, limited access to healthcare, and chronic health conditions can exacerbate vulnerability. Partnerships with Tribes, local communities, and other stakeholders are essential to comprehensively address barriers impacting communities' ability to adapt and thrive.

Key climate related concerns:

- **Water, Aridity, and Drought:** New Mexico's rich history of water use and management faces challenges as warming temperatures lead to increased evaporation and decreased snowpack. Projections indicate a 25% decrease in surface water runoff and groundwater recharge in the next 50 years, affecting agriculture and ecosystems across the state.
- **Extreme Heat:** Warming temperatures will result in more frequent and severe heatwaves. By 2050, New Mexico may see twice as many dangerously hot days per year, with some areas experiencing even greater increases. Vulnerable populations, including older adults, children, and those with pre-existing health conditions, are at higher risk of heat-related illnesses.
- **Wildfires:** The risk of wildfires, like those experienced recently, is expected to rise. Wildfires can directly impact people and property while also decreasing air quality and enhancing the risk of smoke inhalation and other health impacts.
- **Flooding:** Flooding remains a concern, especially for properties in floodplains and areas susceptible to flash floods and landslides. Vulnerable communities, especially those with limited mobility or transportation challenges, are at the greatest risk.

Resilience Themes

Through a series of workshops held in 2023, attended by representatives from state agencies, we have developed a Climate Adaptation and Resilience Plan. This plan was developed by following the U.S. Climate Resilience Toolkit Steps to Resilience framework. The workshops focused on fostering cross-departmental collaboration, enhancing understanding of climate impacts, and creating a shared framework for resilience efforts. Six major resilience themes were determined during the workshops. The New Mexico Climate Adaptation and Resilience Plan provides a summary of the strategies that support first steps for implementation are organized across the six key themes.

COMMUNITY AND CULTURE

Strategies in this resilience theme focus on empowering communities to preserve and draw upon their cultural heritage and traditional knowledge to enhance social cohesion, community engagement, and collective action for resilience.

ECOSYSTEMS AND NATURAL RESOURCES

Strategies in this resilience theme address the protection, restoration, and sustainable management of natural resources and ecosystems to strengthen ecological resilience and maintain the services these ecosystems provide to our communities.

HUMAN HEALTH AND WELLNESS

Strategies in this resilience theme prioritize public health and well-being to build resilience in the face of public health crises and both chronic and acute environmental health risks, ensuring access to healthcare services, mental health support, and effective disaster preparedness and response.

WATER SYSTEMS

Strategies in this resilience theme are dedicated to strengthening the resilience of water-related infrastructure, encompassing water supply systems, wastewater treatment, and flood management. The primary goal is to enhance water quality and distribution, while protecting or improving equitable access and water security for all.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

Strategies in this resilience theme focus on enhancing the resilience of physical infrastructure, including critical facilities, transportation networks, and social/cultural assets, to withstand and recover from extreme weather events and other disruptions, while also supporting the daily activities of New Mexicans in a sustainable manner.

LOCAL ECONOMIES

Strategies in this resilience theme strengthen local economies by promoting economic diversification and industry mixes that reduce greenhouse gas emissions, support small businesses, foster job creation and workforce development opportunities, and encourage sustainable industry practices.

Moving Forward

Truly building resilience will require a sustained commitment to capacity-building and action across the state. We all need to work together to anticipate, adapt, and respond to climate changes and other related changes. Addressing historical disinvestment and disenfranchisement is critical to ensure equitable resilience efforts that benefit all communities.

The Climate Adaptation and Resilience Plan reflects our commitment to resilience. It provides a framework for action and serves as a next step in our ongoing effort to enhance resilience across New Mexico. State agencies will continue to engage with communities, Tribes, and Pueblos, to gather feedback on this version of the plan and make updates as necessary.

As we face the impacts of climate change, the State of New Mexico is committed to navigating the climate crisis by reducing the emissions of heat trapping gasses and supporting our agencies, communities, and people as we adapt to changing conditions. This Climate Adaptation and Resilience Plan represents a crucial step forward that reflects our dedication to the creation of a sustainable, climate-resilient future for all New Mexicans.

INTRODUCTION

New Mexico is already experiencing the disruptive effects of a changing climate. The state's exposure and risk from extreme heat, wildfire, drought, storms, heavy precipitation, and vector-borne illnesses have increased - dramatically in some instances - as a result. These dynamic events pose a distinct and immediate threat to the economic, social, and cultural fabric of our communities, as well as to the natural environments and ecosystems vital to our survival. As we deal with these changes, this Climate Adaptation and Resilience Plan provides a path toward a more resilient future.

The State of New Mexico is committed to navigating the climate crisis by reducing emissions of heat trapping gasses and supporting our agencies, communities, and people as we adapt to these changing conditions. We must work together to raise the level of resilience for all New Mexicans. Formal state efforts to build climate resilience started with Governor Michelle Lujan Grisham's 2019 Executive Order on Addressing Climate Change and Energy Waste Prevention (E.O. 2019-003). In addition to creating the state Interagency Climate Change Task Force and establishing goals to reduce greenhouse gas emissions, this directive established climate action to be a broad policy goal across all government functions. State agencies continue to work towards this directive, incorporating climate adaptation into programs and operations to ensure a clean energy future, to limit adverse effects on New Mexico's natural and cultural heritage, and to protect human health and safety. Since the issuing of this Order, the State of New Mexico established a Climate Policy Bureau to lead resilience planning and organized interagency climate action teams. In 2023, the State included a climate impacts annex in the State Hazard Mitigation Plan update, incorporating climate hazards and projections into this document for the first time.

This version of the climate adaptation and resilience plan was developed in 2023 through a series of three workshops attended by representatives from a wide variety of state agencies. Workshops followed NOAA's U.S. Climate Resilience Toolkit planning framework, helped build cross-departmental collaboration, enhanced the understanding of climate impacts across the state, and created a shared framework to guide resilience efforts. This draft plan is a living document and represents a next step in an all-of-state-government approach to strengthening resilience across New Mexico. The plan outlines resilience strategies and first steps for implementation in five themes: Community and Culture, Ecosystems and Natural Resources, Health and Wellness, Infrastructure, and Local Economies. It also outlines cross-cutting principles that express how the state will approach climate change resilience initiatives across New Mexico.

To successfully meet current and future challenges and take advantage of new opportunities, it is important to anticipate and proactively prepare for changing conditions in ways that not only address vulnerabilities and reduce risk but help create the future that New Mexicans hope for their communities. Strengthening resilience will require a sustained and multi-faceted collaborative effort across state agencies. It will also require strong partnerships with Tribes and Pueblos, local governments, academia, the private sector, and other entities to understand the challenges and take advantage of the opportunities. Solutions must be customized to the challenges communities across the state are facing. These solutions need to support all residents in ways that support equitable outcomes so that we can build a better future for all.



SOLAR FARM, GALLUP, NM; TROY SANKEY, CC

Resilience in Action:

Leveraging Partnerships: Ramah Navajo Chapter of the Navajo Nation and Animal Protection of New Mexico (APNM)

Caring for the horses who are important to many members of the Ramah Chapter of the Navajo Nation (RNC) is not easy; chronic drought, expensive feed, lack of animal services, and high energy costs are some of the pressures faced by these communities. In 2019 APNM began partnering with RNC to help them develop programs to humanely manage and care for wild and domestic horse populations in ways that protect fragile rangeland ecosystems. However, during the COVID-19 pandemic, human food access became a more urgent need in the community, so APNM and the RNC pivoted and started partnering on providing plant-based food boxes for isolated families and elders. The flexibility in the partnership has effectively responded to the cascading impacts of the pandemic, including providing emergency feed and low-cost or free veterinary care for the chapter's horses, helping people maintain economic stability, and reducing pressures to sell off horses. To broaden this kind of community partnership, APNM now has a Tribal Affairs Manager who is reaching out to all of New Mexico's Tribal communities and helping coordinate requested services.

Also, during and after the state's devastating 2022 wildfires, APNM saw an urgent need for animal feed assistance in those communities as well. APNM secured funding for and coordinated with the New Mexico Livestock Board to deliver food for equines and other companion animals of those evacuated from the fires. Through both programs, APNM has been able to help protect animals and the people who want to protect them. To learn more: <https://apnm.org/our-publications/annual-report/>

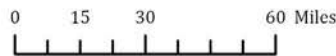
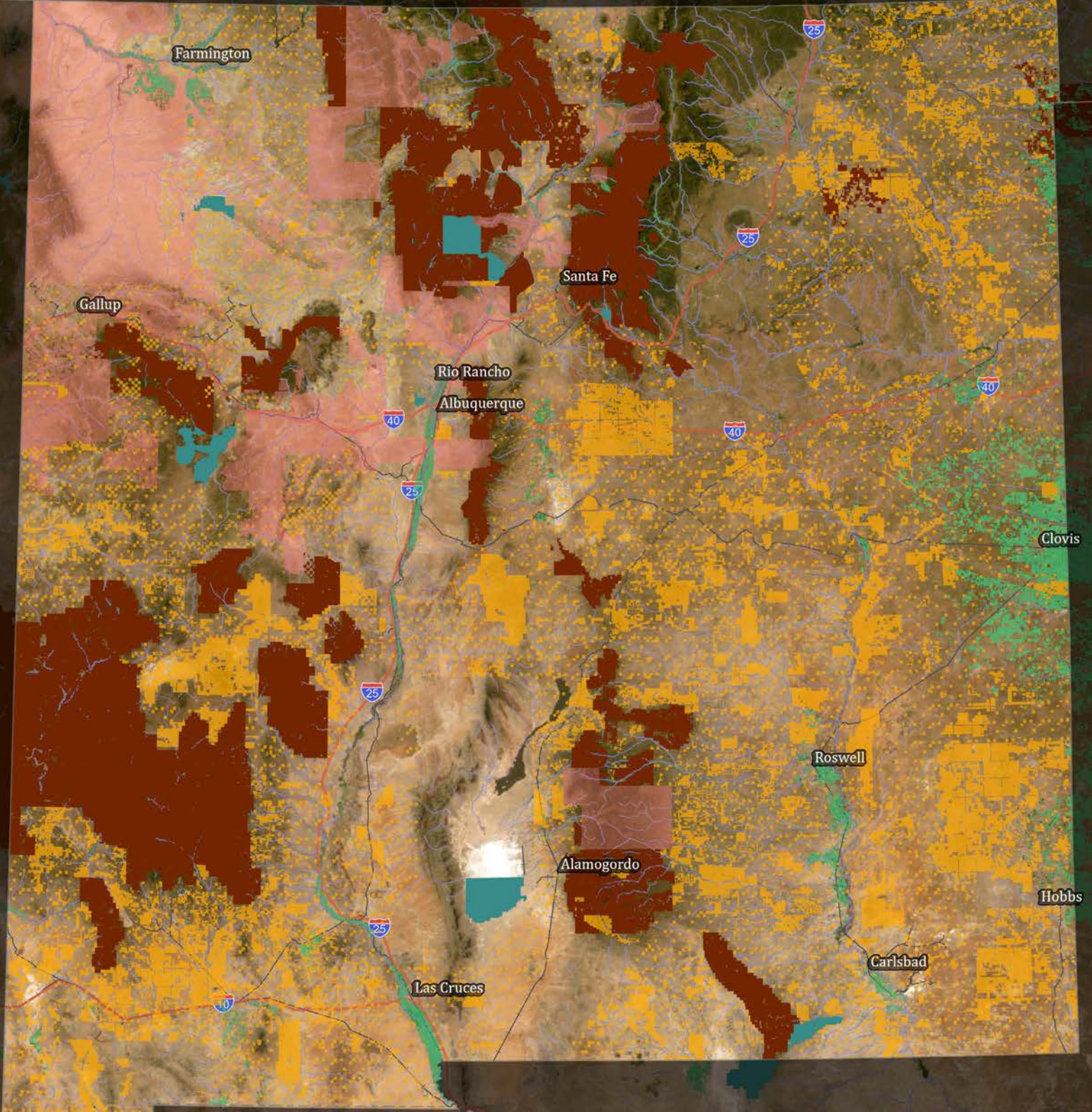


RAMAH NAVAJO CHAPTER HOUSE, NM, APNM



OFFLOADING FEED IN MORA, NM, 2022, APNM

New Mexico Land Ownership



Map Authors: Keith Williams & Trevor Evan, PhD - Adaptation International LLC
Data Credits: ESRI World Imagery and Hillshade; Earthstar Geographics; U.S. Census Bureau TIGER and Tribal Lands Boundaries; USDA 2023 Crop Data Layer; BLM Surface Management Agency




 Tribal Lands

 State Lands

 National Forests

 National Parks

 Croplands 2023 (USDA Estimate)

NEW MEXICO'S CLIMATE RESILIENCE JOURNEY

Resilience is not new to the people of New Mexico. Generations of hard working, creative New Mexicans have developed solutions to challenges threatening our land, culture, and ways of life.

As the climate changes, so do the challenges and extreme events that we must be prepared to address. The role of state government is to ensure that agencies and residents are prepared to adapt to new challenges and support local communities. To date, New Mexico has taken important strides to reduce the heat-trapping gasses that warm our planet and has increased its focus on adapting to climate threats and building resilience. In 2019, Governor Michelle Lujan Grisham signed an Executive Order on Addressing Climate Change and Energy Waste Prevention (Executive Order 2019-003) which established greenhouse gas emission reduction targets, created the interagency Climate Change Task Force and instructed state agencies to incorporate climate adaptation into their programs and operations.

Building State and Local Capacity

As New Mexico continues along this trajectory, it is necessary to build state, Tribal, and local government capacity to anticipate, adapt, and respond to projected climate (and other) changes that will continue to affect communities across the state. Also critical to building resilience is addressing historic disinvestment and disenfranchisement that have increased the likelihood that certain communities will be disproportionately impacted by climate change. This plan seeks to enhance the capacity of all partners to support each other and respond to future disasters.

This Climate Adaptation and Resilience Plan is an important next step to address and limit the impacts of climate change on New Mexicans. It expands the conversation around climate action in New Mexico to consider a broader array of contexts and conditions that influence the capacity of communities to respond, adapt, and thrive in the wake of shocks and stressors. The interagency nature of this effort also presents a unique opportunity to truly build an all-of-state-government approach to addressing challenges and opportunities facing the state.

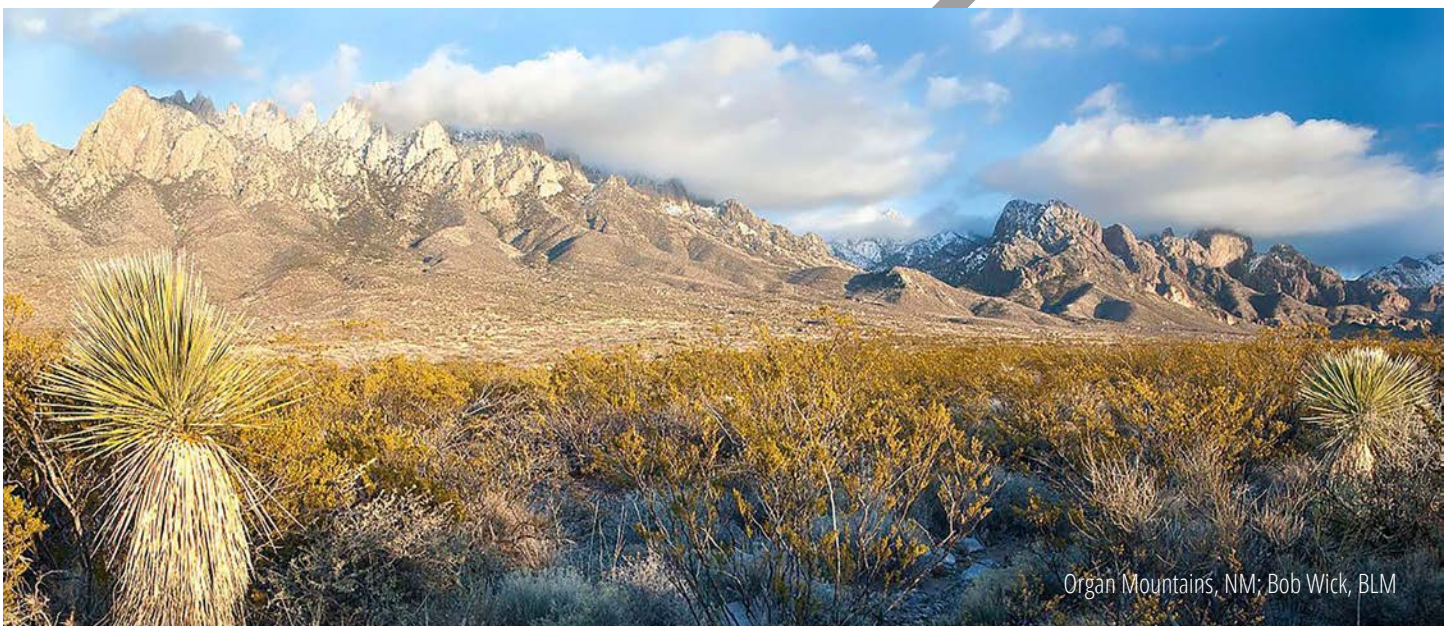
Resilience is the ability to anticipate, prepare for, respond to, and recover from disruptions with minimum damage to social well-being, the economy, and the environment.

New Mexico's Climate Adaptation and Resilience Plan Timeline



Figure 1: Timeline for the development of this Adaptation and Resilience Plan. The 18-month process started with the award of a FEMA BRIC Grant in 2022 and included three inter-agency workshops in the spring, summer, and fall of 2023.

In 2022, the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) secured a Building Resilient Infrastructure and Communities (BRIC) program grant from the Federal Emergency Management Agency (FEMA) to develop a State Climate Change Adaptation and Resilience plan. Where relevant, the resilience strategies from the plan will also be included as the first Climate Annex to the 2023 State Hazard Mitigation Plan. Central to the Resilience Plan development process was an Interagency Climate Adaptation and Resilience Planning Team. This team participated in a series of three workshops between May and September of 2023. The planning process was modeled off the National Oceanic and Atmospheric Administration's (NOAA's) U.S. Climate Resilience Toolkit. During these workshops, participating state agencies identified climate risks and vulnerabilities facing New Mexico, developed strategies to increase resilience and address these challenges, and created a preliminary action plan for implementing selected strategies in each resilience theme. The collaborative workshops built interagency connections and support for statewide resilience efforts.



What is New Mexico's Climate Adaptation and Resilience Plan?

Strengthening the resilience of New Mexico's communities and ecosystems will be critical to ensuring that people and places across the state can thrive amidst climate change and other changes related to social, economic, political, and technological conditions. Building resilience requires that we understand our current context and anticipate change. We do this by considering projections of future climate conditions and learning from past experience so that we can proactively address sources of vulnerability and build our capacity to adapt, recover, and realize a better future for all New Mexicans.

This plan is intended to be a living document that reflects the State of New Mexico's commitment to resilience through an all-of-state-government approach. It provides a framework for considering multiple facets of resilience and action and should be understood as a next step in a sustained effort to enhance the resilience of communities across New Mexico. The State will engage communities, local governments, Tribes, Pueblos, and Nations in dialogue on building resilience and will incorporate this feedback into the plan.



Building Resilience: *To prepare for changes New Mexico is likely to face, it is important to anticipate a community's risk of experiencing events such as natural hazards, cybersecurity attacks, pandemics, and economic transitions that impact the ability of people and natural systems to maintain their livelihoods, health, and wellbeing. To reduce the potential destructive impacts of extreme weather events, it is important to proactively identify and address vulnerabilities or factors that increase the likelihood that communities will experience adverse impacts in the wake of disasters and other changes. Learning from existing information and drawing from past experience to create innovative, resourceful solutions to new and changing conditions is also critical. Investing in and building upon community sources of strength to create access to resources and opportunities that enable people to thrive plays a big role in building capacity to weather challenges and environmental changes.*



RIO GRANDE BRIDGE, TAOS COUNTY, NM; DYLAN MAUSTIN, CC

ANTICIPATING CLIMATE CHANGE RISKS AND IMPACTS

To enhance resilience and better prepare New Mexico to proactively tackle the challenges arising from a changing climate, it is crucial to anticipate what the future holds for the state. This section utilizes information from existing reports and assessments to outline climate-related trends that are expected to impact New Mexico. It discusses who will likely be affected first and worst by these changes and provides examples of associated risks, vulnerabilities, and impacts.

Extreme Weather and Climate Change

Communities throughout New Mexico are already experiencing extreme weather events and other effects of a changing climate.^{1,2} Increasing temperatures and greater variability in precipitation have profoundly influenced the level of exposure, likelihood, and impacts of several of the state's climate hazards – including wildfire, drought, floods, and extreme temperatures. New Mexico's size and geographic diversity result in a complex climate risk profile. The state's arid lowlands and forested peaks experience very different climatic pressures (both shocks and stressors), including temperature, precipitation, wind, and other extreme weather. All hazards manifest in distinct ways based on location and the unique local environment. Government operations, critical infrastructure, natural resources, economies, culture, and the health and vitality of all New Mexicans are being affected.

This plan builds off previous work done by the State and others to better understand these current and future risks.

***Shocks** refer to acute environmental, social, or economic events that challenge human and environmental systems that communities rely on. Shocks might include things like natural disaster events, pandemics, abrupt economic transitions, and cyber security attacks.*

***Stressors** refer to chronic pressures that affect people and natural, managed, and socioeconomic systems. Multiple stressors can have compounding effects. Stressors include things like racial discrimination, chronic health conditions, economic distress, housing insecurity, uninsured status, eroding infrastructure, and prolonged drought.*

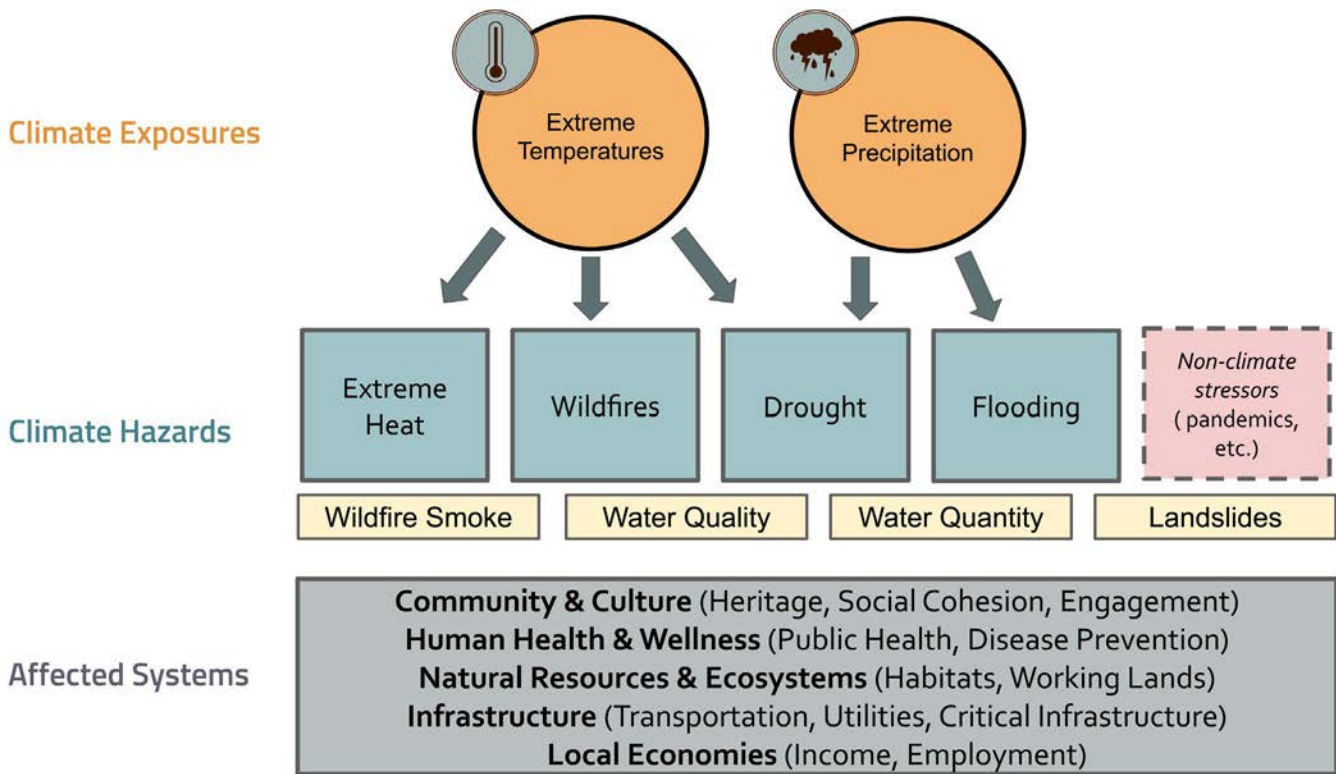


Figure 2: Schematic overview of how changing climate exposures (increasing temperatures and changing precipitation patterns) influence climate hazards, which, in turn, can affect all aspects of our New Mexican communities. The diagram is meant to be illustrative and not exhaustive of the connections between these drivers of change and their impacts.

New Mexico is no stranger to the shock and devastation of extreme weather-related disasters. The 2022 Hermit's Peak/Calf Canyon Fire, the largest and most destructive in the state's history, burned 534 square miles and was exacerbated by unseasonably hot and dry conditions and high winds.^{3,4} Congress allocated almost \$4 Billion to support New Mexicans affected by these events and FEMA has paid out more than \$84 Million in Public and Individual Assistance Program funding to homeowners, businesses, Tribes, and local governments.^{5,6} The National Centers for Environmental Information states that since 1980, there have been 36 confirmed weather/climate disaster events with losses of more than \$1 Billion each in New Mexico.⁷ Drought and wildfires are the most common contributors to these events, with an average of two events a year occurring over the last five years. While significant, these financial figures do not capture the true extent of impacts on New Mexico communities. Infrastructure, homes, economies, livelihoods, and nearly every aspect of the state's social and cultural fabric are being affected.⁸

Adaptation refers to adjustments to human and natural systems that leverage opportunities and moderate adverse impacts of actual or expected climate or other changes.^{16,17}

Mitigation refers to actions to reduce the emissions of heat trapping gasses or enhance absorption of these gasses to avoid the long term and most severe impacts of climate change.

Disproportionate Impacts, Equity, and Resilience

Not all New Mexico communities will be affected equally by these changing conditions. Some individuals and communities are more likely to experience adverse impacts due to factors that go beyond mere exposure to a hazard or other disruption. For example, it can be challenging for under-resourced community members to prepare for and recover from events like extreme heat, flash flooding, wildfires, and economic transitions. High energy costs have been shown to disproportionately increase the financial burden on individuals or households in low-income or rural areas.^{10,11,12} Structural inequities such as limited access to healthcare, limited energy access and security, and housing instability as well as chronic stressors such as racial discrimination, linguistic isolation, and chronic health conditions affect an individual's or community's access to resources, services, and opportunities. This can be true for overly burdened communities across the state including Tribes and Pueblos.

Additionally, climate exposures, sensitivity, and the ability to adapt will vary among populations and between communities given economic factors, relative availability of resources, and local and individual capacity. Climate (and other disruptions) coupled with various systemic challenges, limit overly burdened communities' capacity to prepare for and respond to upcoming climate and environmental challenges. Bolstering sources of community strength like economic stability, housing security, mental health support, cultural connections, and social connectivity is important so that our communities have the capacity to meet current needs, avoid adverse impacts, and adapt when a shock occurs.

As the State of New Mexico works to reduce the impacts of climate change, it is important to identify and support the communities that will be hit first and worst and to ensure that policies, programs, and investments benefit all New Mexicans equitably. Data can help identify communities' baseline vulnerability as well as areas that can be strengthened to prepare for the future and build resilience. There are several data-related tools available that can be used to help identify potentially overly burdened communities around the state. For example, the New Mexico Department of Health (NMDOH) has a tool that tracks heat-related illness across a variety of demographics.¹⁴ The Centers for Disease Control and Prevention's Social Vulnerability Index combines social and economic indicators to examine a wide range of factors affecting social vulnerability to natural hazards and other shocks and stressors.¹⁵

An Overly Burdened Community is a community or population for which multiple systemic burdens (including environmental and socioeconomic inequities) negatively affect their health, economic prosperity, and environment. These populations include, but are not limited to, people of color, women, Tribal communities, immigrants, youth, low-income or no-income earners, rural communities, and communities dependent on extractive industries.⁹

Partnerships with Tribes, local communities, and other entities are critical to understanding and proactively addressing challenges and barriers that impact the ability of communities to access resources and opportunities that enable people to adapt and thrive.

Examining historical climate and weather patterns and exploring future climate projections offers valuable insights into present trends and future conditions. Planning at all levels will need to focus on a resilient future, emphasize climate-informed policymaking, and ensure resource allocations address both current and long-term concerns to adequately address these challenges. It is important to both reduce the emission of heat-trapping gasses (referred to as climate mitigation) and prepare for future efforts to effectively respond to a changing climate, reduce risk, and support all New Mexican communities (referred to as climate adaptation).

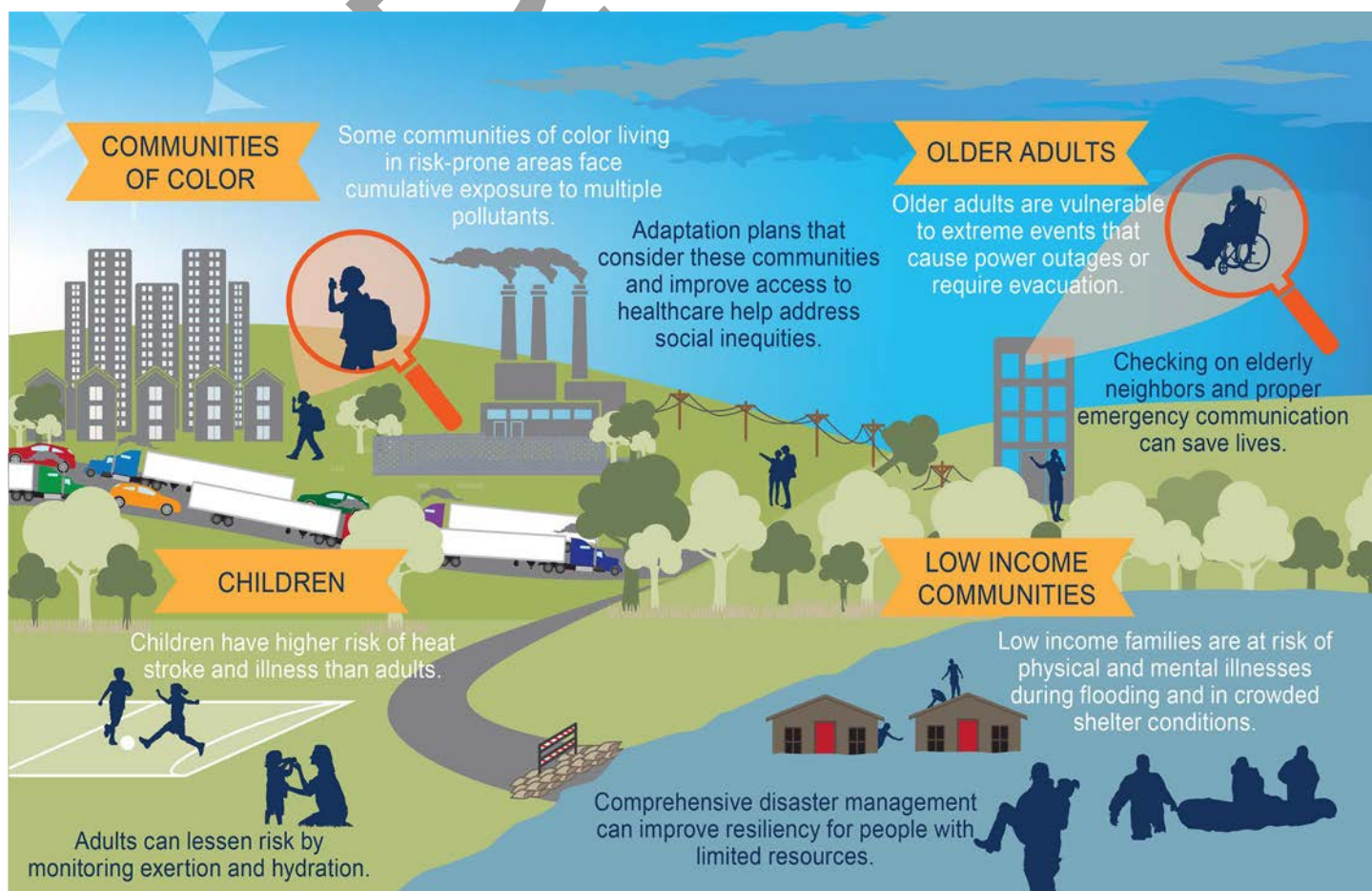


Figure 2: Not all people are affected equally by climate change and extreme weather events. These shocks and stressors have differential impacts on communities based on a variety of factors including socio-economic, demographic, and other social determinants of health which include legacies of discrimination and disinvestment. Image from Health and Human Services Source: <https://www.hhs.gov/climate-change-health-equity-environmental-justice/climate-change-health-equity/index.html>¹³

Observed and Projected Temperature Change

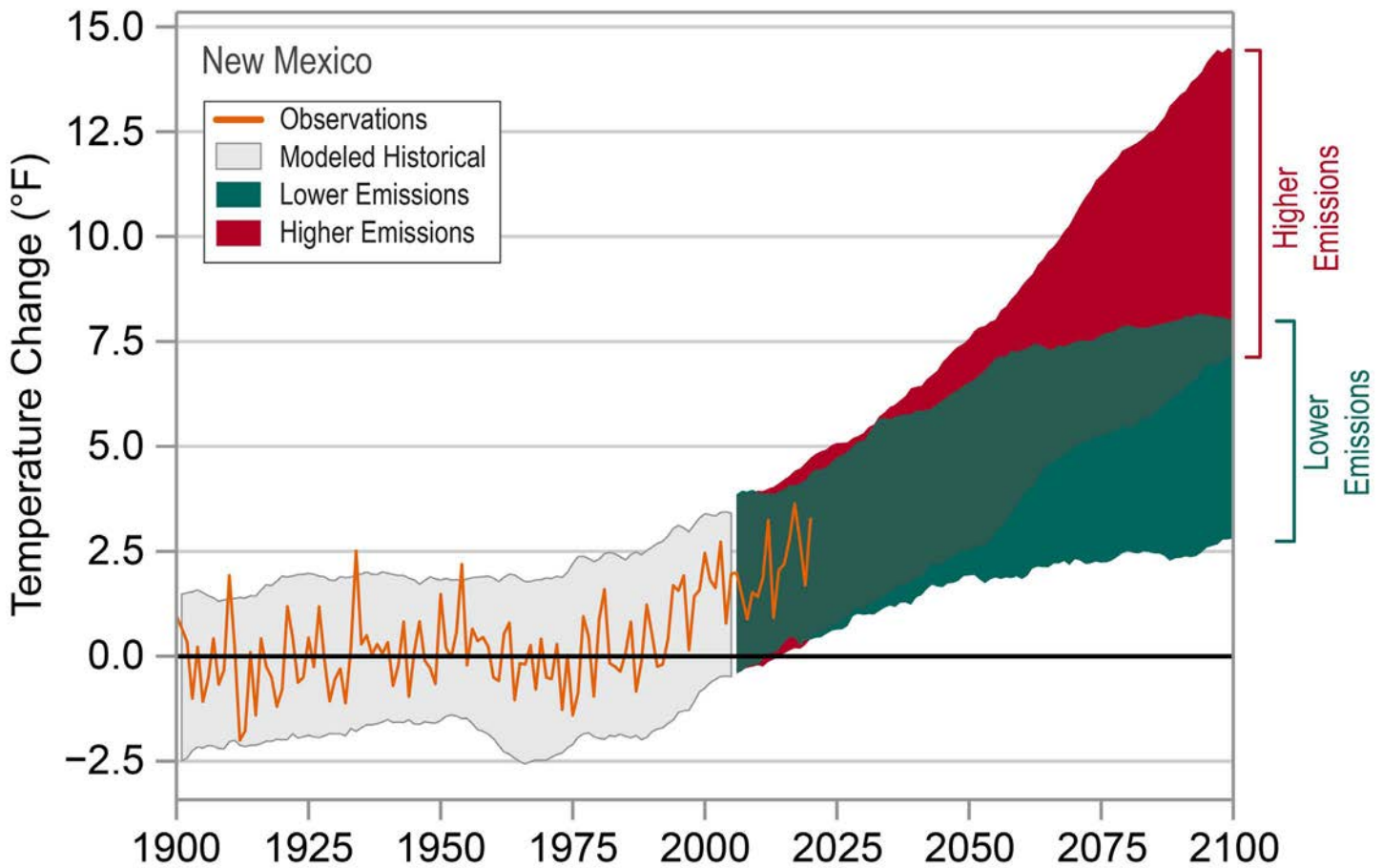


Figure 3: Observed and projected changes for the State of New Mexico. Observed data (orange line) from 1900-2020 show temperatures have risen more than 2°F since the beginning of the 20th century. Projected changes from 2006-2100 for two climate scenarios are shown in the green and red bars. The “higher emissions” scenario (RCP 8.5) represents a future where emissions of heat trapping gasses continue to increase. The “lower emissions” scenario (RCP 4.5) represents a future where emissions increase much more slowly. Temperature change is shown relative to the 1901-1960 average. Source: National Centers for Environmental Information, 2023. State Climate Summaries: New Mexico. NOAA. New Mexico - State Climate Summaries 2022 (ncics.org)¹⁸

Climate Risks and Vulnerabilities

Rising temperatures and changing precipitation patterns are the two primary climate drivers for the state. As temperatures increase (see Figure 3), so will the threat to life and public health, property, and infrastructure, and to the state’s natural resources and agriculture. Along with shifting precipitation patterns, higher temperatures will increase evaporation, shift the timing and amount of snowfall, and affect other aspects of the hydrologic cycle. Periods of too much or too little water will increase in intensity, creating an alternating cycle of flood and drought. Prolonged drought coupled with increasing temperatures can increase the risk of wildfires. Droughts can also contribute to water scarcity and water quality issues, while wildfire smoke and dust storms can decrease air quality and create direct and indirect public health impacts. Heavy rain increases the risk of flooding, landslides, and erosion.

WATER, ARIDITY, AND DROUGHT



Monsoon Storm, Eastern New Mexico, 2011; Leaflet, CC

New Mexico's rich and diverse history of practices around water use will be challenged as the climate continues to warm. By the time New Mexico became a territory of the United States, centuries of water planning and management had already shaped cultures and landscapes in the region. New Mexico is fortunate to have access to wisdom earned through long inhabitation. While the State has been involved in regional drought planning for more than 20 years,¹⁹ Since 2001, New Mexico's Drought Task Force has been engaged in efforts to address drought conditions throughout the State. The Active Water Resource Management initiative launched in January 2004 in response to continued drought conditions in our state and provides tools to manage water resources. With the adoption of the Regional Water Planning Security Act in 2023, the State will continue regional water planning efforts that first began over 30 years ago. The work of modern planners strives to incorporate the expertise of water users and protectors

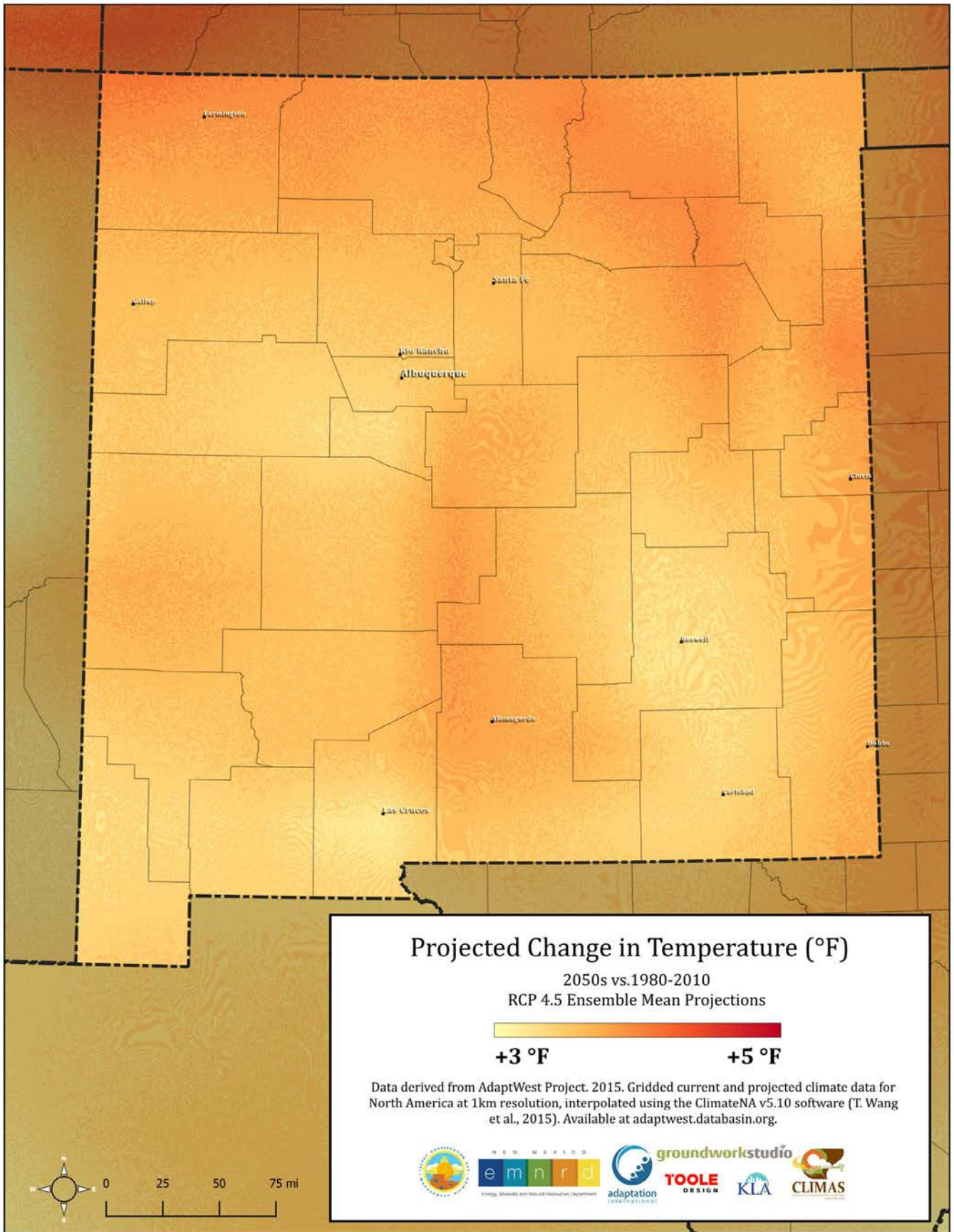
throughout the state and to respect the knowledge and cultures that form the foundation of New Mexico.

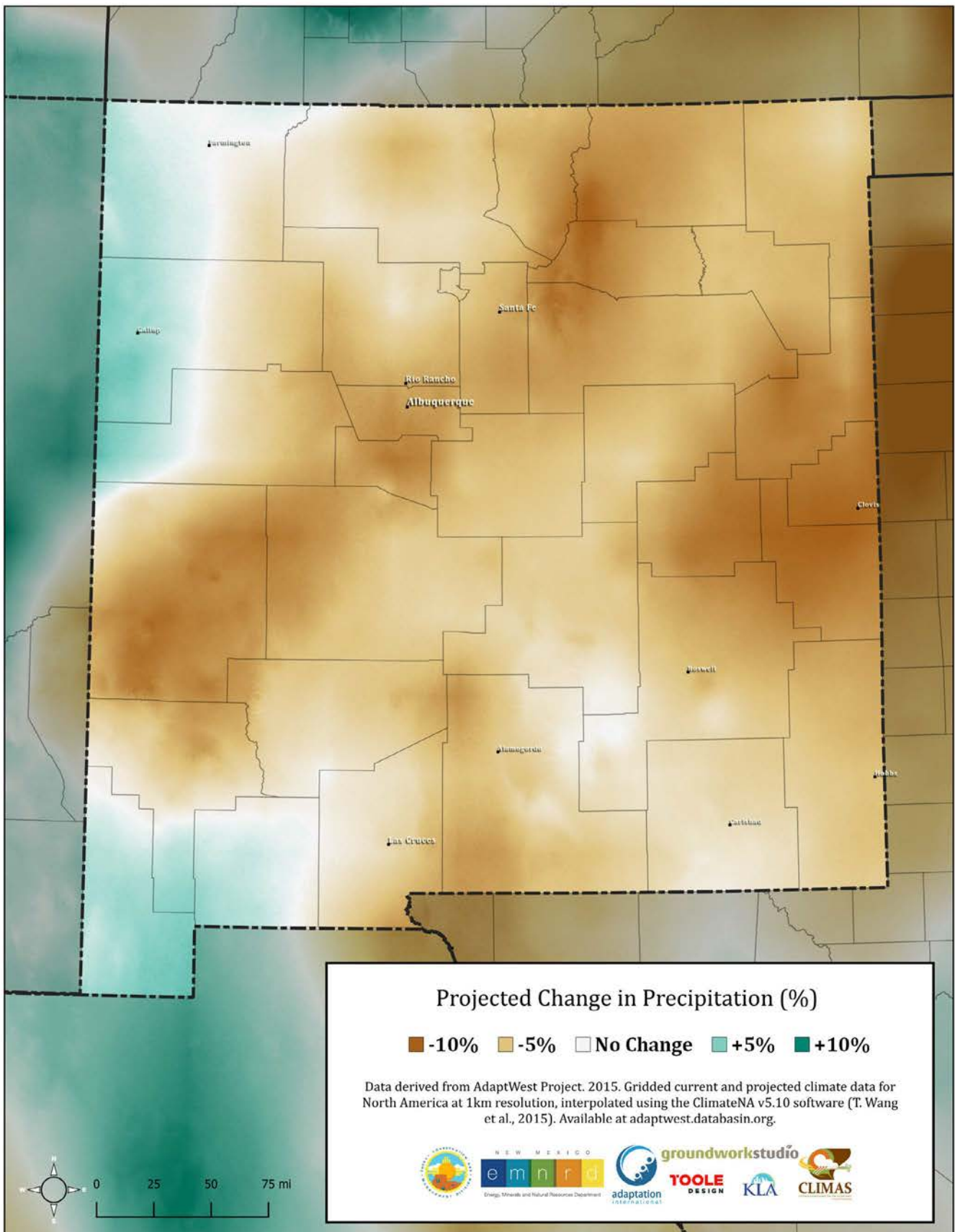
Multi-year droughts have been a consistent part of New Mexican history for hundreds of years. Warmer temperatures will lead to more evaporation, transpiration (water used and evaporated by plants), and less snowpack.²⁰ Climate-driven hydrological modeling summaries in the LEAP Ahead Report (2022)²¹ indicate a 25% decrease in surface water runoff and groundwater recharge in the next 50 years. This will affect the quantity of water available for agriculture, working lands, and our communities. Increasing aridity will make growing some crops less feasible²² and will affect the health and vitality of ecosystems across the state, making them more susceptible to disease and pest outbreaks, wildfires, and other changes.^{23,24} Decreases in vegetative cover can accelerate erosion, speed up the loss of topsoil, and exacerbate dust storms, with direct impacts on infrastructure,²⁵ water quality,²⁶ transportation,²⁷ and health.²⁸

Rural communities, particularly those reliant on agriculture, often bear the worst socioeconomic impacts of drought through crop failures and reduction in income.²⁹ Households that experience property damage or financial fallout from droughts are more likely to experience adverse mental health impacts like anxiety and stress.³⁰ Drought conditions can cause water stagnation and concentrate pollution, increase the likelihood of transmission of vector-borne diseases, and negatively affect those with chronic health conditions such as asthma or immune disorders.³¹



Drought Stricken Sheep, Rio Arriba County, 2002; Jeff Vanuga, USDA, CC





EXTREME HEAT



Lake Valley, Sierra County, NM; QKC, CC

Warming temperatures will also make extreme heat days or heat waves more frequent and severe. Extremely hot days can hamper economic productivity and impact public health by causing illness or even death.^{32, 33} Extreme heat is the number one natural hazard related cause of death in the United States and is a significant cause of death worldwide.³⁴ By 2050, New Mexico is projected on average to see at least twice as many dangerously hot days per year, with some areas in the southern part of the state increasing even more. For example, in Doña Ana County, days over 100°F are projected to more than triple in the next 30 years.³⁵ Statewide, there were ten times as many heat-related deaths in 2021 than 2013.³⁶ In 2020, the New Mexico Department of Health received reports of 340 heat-related illness hospital visits. Heat-related emergency visits and hospitalizations in New Mexico are predicted to double by 2030.³⁷

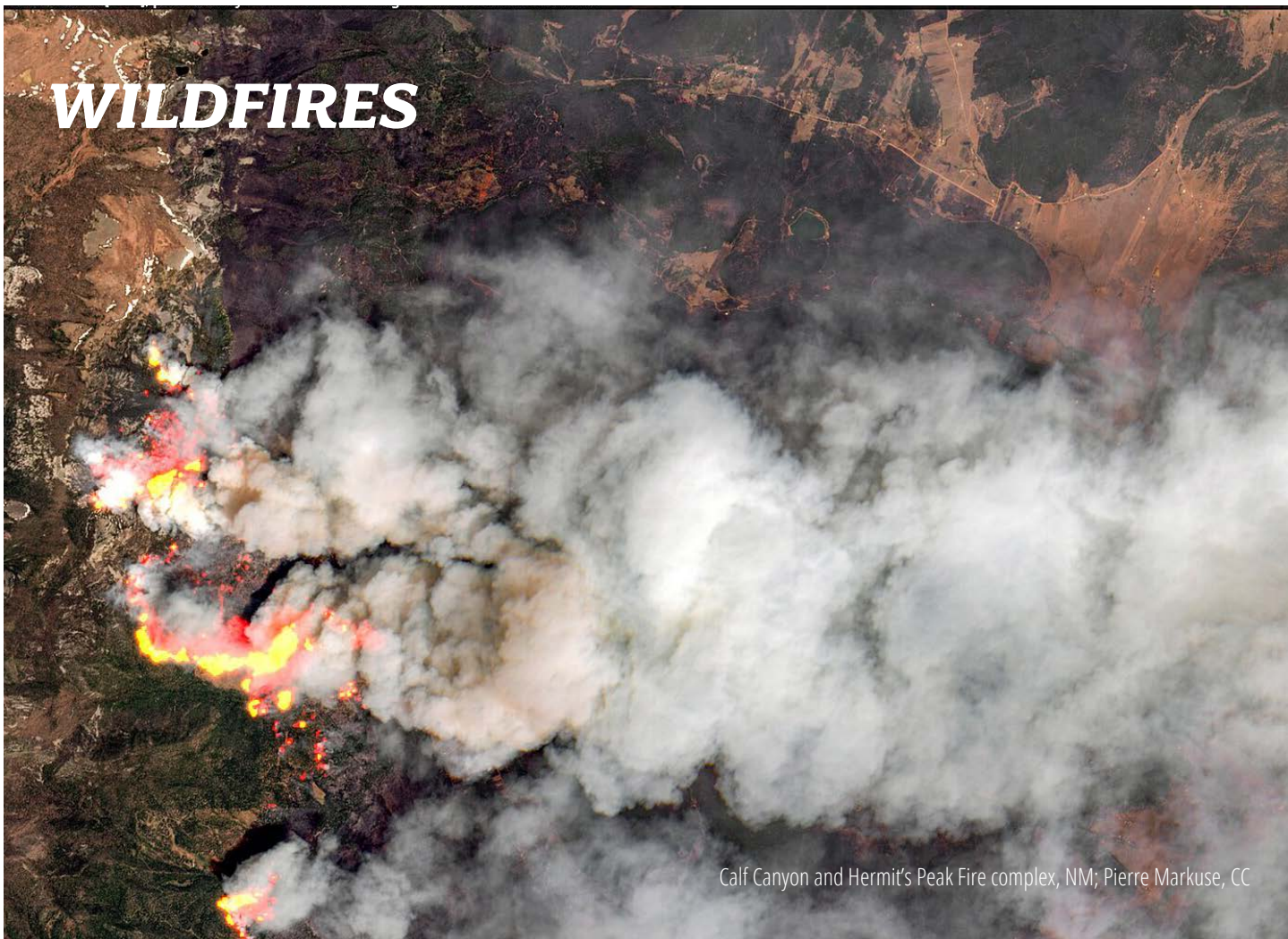
The public health impact from heat depends on the make-up of a community or population. For example, older adults, children, and individuals with pre-existing health conditions are more likely to experience adverse health effects from heat.³⁸ People with certain health conditions,

such as cardiovascular diseases, respiratory diseases, and diabetes, are more susceptible to the effects of extreme heat.³⁹ People who work outdoors, such as agricultural workers, construction workers, and landscapers, are at higher risk of heat-related illnesses due to prolonged exposure to high temperatures. The people who occupy these jobs are more likely to be from overly burdened groups. Low-income residents may also face disproportionate adverse health effects from extreme heat if they do not have access to adequate air conditioning due to energy costs or appropriate home weatherization.⁴⁰



Dog in Shade; Coastal Elite, CC

WILDFIRES



Calf Canyon and Hermit's Peak Fire complex, NM; Pierre Markuse, CC

The risks associated with wildfires, like the ones experienced in the last few years, are likely to increase. New Mexico already experiences 50 more days a year of extreme wildfire risk than it did in the 1970s.⁴¹ Wildfires can directly impact people and property damaging homes and infrastructure, injuring or killing people, pets, and animals, and destroying forests and other ecosystems. The indirect effects of wildfires, including smoke inhalation, poor air quality,⁴² disruptions to critical infrastructure, environmental degradation, and other problems, can and often do have an impact on the lives, economy, and health and well-being of New Mexicans. The State has explored these risks in greater detail in the 2020 Forest Action Plan.⁴³

New Mexicans who live in the Wildland Urban Interface (the areas that contain a mix of human development and forested lands) or in forested areas are more likely to be directly affected or face physical harm from wildfires, but wildland fires are no longer constrained to mountainous areas. Residents with transportation or mobility challenges may be less able to move out of harm's way during a wildfire event. Residents and visitors for whom English is not their primary language may face difficulties interpreting evacuation and other emergency related communications. This can quickly turn into a public health threat. Smoke from local and regional wildfires can travel long distances and can be particularly challenging and harmful for older adults, children,⁴⁴ and residents with respiratory disease or heart failure.⁴⁵

FLOODING



Flood Debris Barrier, FR263, Montezuma, NM; Matthew Kolar, 2016

Flooding can impact infrastructure, buildings, and people located in and around floodplains or in areas susceptible to landslides or debris flows post-wildfire. Currently, 17% of New Mexican properties (144,816 properties) have a greater than 26% chance of being flooded in the next 30 years,⁴⁶ and flash floods, particularly from summer thunderstorms and monsoon rains, pose real risks to people and property.^{47,48}

Residents living in floodplains or low-lying areas are the most likely to be in the path of flooding and experience the direct impacts of these floods,⁴⁹ but flood impacts are common outside FEMA designated flood zones.⁵⁰ Those individuals or families with limited mobility or transportation challenges, who are unable to receive timely notifications in the appropriate language, or who are living in substandard housing are likely to experience the worst impacts. The long-term effects of flooding and the associated trauma related to the loss of property, loss of sense of place, and the burdens of dealing with under-supported recovery efforts can affect the mental health of those affected.⁵¹

It is critical for the State to develop effective and trusting relationships with Tribes, community based organizations, and individuals across the state to identify partnership opportunities and enable effective resilience-building initiatives. Many agencies actively involve community organizations and other stakeholders from underserved areas of the state, many of whom

represent communities that are among the most affected by natural hazards worsened by climate change. Equity is a cross-cutting resilience principle of this plan. Equity Principles⁵² that were developed for the Climate Change Task Force by a climate equity working group comprised of community advocates and environmental justice experts from around the state will help guide the development of climate policy actions.



Flooding, Pueblo Alto Neighborhood, Albuquerque, Groundwork Studio



SPRING, GILA LOWER BOX CANYON WILDERNESS STUDY AREA, NM; MIKE HOWARD, BLM

RESILIENCE THEMES, STRATEGIES, AND ACTIONS

Applying a Resilience Framework to Help Communities Thrive

Building resilience requires considering the nexus of human and ecological factors that underpin community functions and employing a holistic, systems-oriented approach to action. For example, a resilience approach to the economy focuses not only on successful and resilient industries and businesses but also on workers' needs for personal, family, and community resilience. It considers the policies, physical infrastructure, telecommunications, healthcare, food security, housing, equity, and other factors that are important to support a thriving economy. It also considers the ecological underpinnings that communities and economies depend on and how economic and other human activities affect ecological functions.

This plan outlines a series of themes and associated strategies as a framework for building a more resilient New Mexico. The State will continue to develop actions as it engages with Tribes, local governments, non-governmental organizations, and communities across New Mexico to collaboratively strengthen resilience statewide.

Qualities of Resilient Systems

State agencies drew from the Rockefeller Foundation's 100 Resilient Cities Initiative and the Qualities of Resilient Systems⁵³ identified during that project. Consideration of these qualities helped guide thinking about strategies that could increase resilience in each thematic area. The original description for each quality has been adapted to reflect what state systems might look like if they embodied these qualities.

Flexible - administration, operations, policies, programs, and actions can evolve on multiple time scales and readily adapt to change.

Inclusive - there is broad inclusion and engagement with communities - particularly those that are overly burdened and haven't participated in planning processes or operations in the past.

Integrated - state agencies work together across different spatial and time scales to exchange information and respond quickly to needs or challenges. They also work directly with local programs and other relevant entities.

Robust - systems can handle shocks and stressors without significant damage or loss of function.

Redundant - agencies, departments, and systems are not overly reliant on single assets or resources and have multiple pathways and avenues for fulfilling system needs

Reflexive - state systems are designed to learn and improve over time. They are able to share this learning across departments and agencies and with local partners.

Resourceful - state agencies and departments can anticipate future conditions, set priorities, and come up with novel and innovative solutions to new or emerging challenges.

Cross Cutting Principles for Resilience

Over the course of the planning process, the interagency climate adaptation and resilience planning team identified cross-cutting principles that express how the state would like to approach resilience-building initiatives. These cross cutting principles are important to building resilience in New Mexico and are intended to be applied across all resilience strategies and actions.

Use Data: Data-informed initiatives can help us understand the challenges communities face so that we can develop effective solutions. We acknowledge the value of both quantitative and qualitative data, including community stories and local and traditional knowledges⁵⁴, to gain a holistic understanding of important contexts, create meaningful measures of success, monitor progress, and continuously improve our work. Collaborating with various state agencies, Tribes, communities, and other partners can help access valuable information, fostering an informed approach to building resilience across the state.

Focus on Outcomes: A focus on outcomes can help us track where we are in relation to our goals. Identifying and specifying metrics and outcomes can inform choices about what we can do to get us from where we are to where we want to be. As we approach resilience work across the state, we strive to identify and pursue targeted outcomes that lead to a thriving New Mexico.

Enhance Equity: We maintain a commitment to equity, recognizing that successfully building resilience in all communities will ultimately increase resilience statewide. We acknowledge the disproportionate impacts of natural and other hazards our state faces and the multiple social, political, and economic factors that increase vulnerability for overly burdened communities. We aim to ensure that resilience-building opportunities are accessible to all, consider the distribution of costs associated with efforts we undertake, and enable an inclusive approach to improving community outcomes as we co-create a more resilient future for every New Mexican.

Customize for Communities: New Mexico is home to a rich and diverse cultural landscape with communities operating in unique contexts. In order to effectively build resilience statewide, Tribal and local community engagement and collaboration is critical. It will be essential for the State to meet communities where they are, customize support and resources to regional or community needs, enhance communication, and develop programs and resources that effectively build local community resilience.

Respect Tribal Sovereignty: Tribes are sovereign nations with the inherent right to govern their people and lands. Tribal sovereignty has existed since time immemorial and is recognized by Article 1, Section 8 of the U.S. Constitution. It is also affirmed through a variety of executive orders, treaties, statutes, and Supreme Court decisions. New Mexico's State Tribal Collaboration Act (SB 196) requires government-to-government interactions between the State and Tribes, Pueblos, and Nations, and it is important to continue to maintain and build strong relationships to enhance resilience.⁵⁵

Build Capacity: Capacity at the state and local levels is needed to make plans and strategies actionable. We acknowledge the critical importance of capacity building to meet community needs and our shared visions for the future. We strive to implement the education, technical support, and trained personnel necessary as a critical component of resilience-building initiatives across New Mexico.

Collaborate: Different agencies, organizations, and sectors possess unique knowledge, relationships, jurisdictions, and expertise needed to address the complex challenges and opportunities facing New Mexico. As we aim to build a more resilient future, the State of New Mexico recognizes the value of leveraging the potential of networked capacity, strives to operate on an interagency basis, and endeavors to create partnerships across sectors and with Tribes and local communities.

Resilience Themes

The interagency adaptation and resilience planning team identified five resilience themes that represent important focus areas for building resilience statewide. Working across these five themes, we can develop an integrated approach that strengthens the resilience of our communities as they navigate the complexities of climate change, extreme weather events, and other disruptions that impact their ability to thrive and adapt. These themes were developed by grouping critical assets at risk of being adversely impacted by anticipated climate trends, followed by identifying opportunities to build resilience. The six resilience themes are:

- **Community and Culture**
- **Ecosystems and Natural Resources**
- **Human Health and Wellness**
- **Water Systems**
- **Infrastructure**
- **Local Economies**

These resilience themes can be used as a tool to think about what is needed for associated systems to effectively support well-being and to identify interconnections among themes. For example, in considering wildfire impacts, people rely on infrastructure for shelter, food, transportation, and healthcare services. If this infrastructure is damaged, it affects a community's ability to thrive. Damage to ecosystems and amenities critical to local economies impacts economic security. Temporary or permanent relocation can impact mental health as people encounter stresses around access to basic necessities and are separated from important and meaningful social and cultural assets and resources.

When considering programs and initiatives focused on enhancing resilience in one thematic area, it can also help identify secondary co-benefits to other resilience arenas. For example, a road project might create a route from point to point but also enable multiple evacuation and supply distribution options and better connect community members to services and opportunities in a region.

COMMUNITY AND CULTURE

Strategies in this resilience theme focus on empowering communities to preserve and draw upon their cultural heritage and traditional knowledge to enhance social cohesion, community engagement, and collective action for resilience.

ECOSYSTEMS AND NATURAL RESOURCES

Strategies in this resilience theme address the protection, restoration, and sustainable management of natural resources and ecosystems to strengthen ecological resilience and maintain the services these ecosystems provide to our communities.

HUMAN HEALTH AND WELLNESS

Strategies in this resilience theme prioritize public health and well-being to build resilience in the face of public health crises and both chronic and acute environmental health risks, ensuring access to healthcare services, mental health support, and effective disaster preparedness and response.

WATER SYSTEMS

Strategies in this resilience theme are dedicated to strengthening the resilience of water-related infrastructure, encompassing water supply systems, wastewater treatment, and flood management. The primary goal is to enhance water quality and distribution, while protecting or improving equitable access and water security for all.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

Strategies in this resilience theme focus on enhancing the resilience of physical infrastructure, including critical facilities, transportation networks, and social/cultural assets, to withstand and recover from extreme weather events and other disruptions, while also supporting the daily activities of New Mexicans in a sustainable manner.

LOCAL ECONOMIES

Strategies in this resilience theme strengthen local economies by promoting economic diversification and industry mixes that reduce greenhouse gas emissions, support small businesses, foster job creation and workforce development opportunities, and encourage sustainable industry practices.

Resilience in Action:

San Ildefonso Pueblo Community Climate Action Plan

Climate change is already affecting the lands and ecosystems that Tribes and Pueblos across the state have stewarded for generations. Tribal leaders are very concerned about the impacts of climate change to their land and livelihoods. The potential loss of access to culturally important resources is an unprecedented challenge to community wellbeing.

Tribal members had already brought up their observations of environmental changes to Tribal Leadership ahead of the climate resilience planning process. They had noticed increases in temperature, wind, dust, and fires, as well as declines in different bird species, particularly hummingbirds and native bird species. Elders recounted vegetation changes due to climate change, decreases in traditional herbs, and the negative impacts wildfire has had on soil health over the years. Decades of Los Alamos National Lab nuclear research and operations had introduced contamination to Tribal water resources.

Recognizing this concern and the need to build on community sources of strength, the San Ildefonso Pueblo initiated a series of community workshops to envision what a climate-resilient future would look like and chart a path forward so that future generations could thrive. The community workshops tapped into the knowledge and perspectives of youth and elders to glean valuable multi-generational perspectives. Outreach to Tribal members was tailored to create an inclusive approach and included translation services and meeting people in places they were most comfortable. With a foundation of proactive planning and an inclusive engagement process that generated community buy-in, the community is working together to support a more resilient future for the Tribe. To learn more: <https://abtmeetings.com/climatechangeplan/index.html>

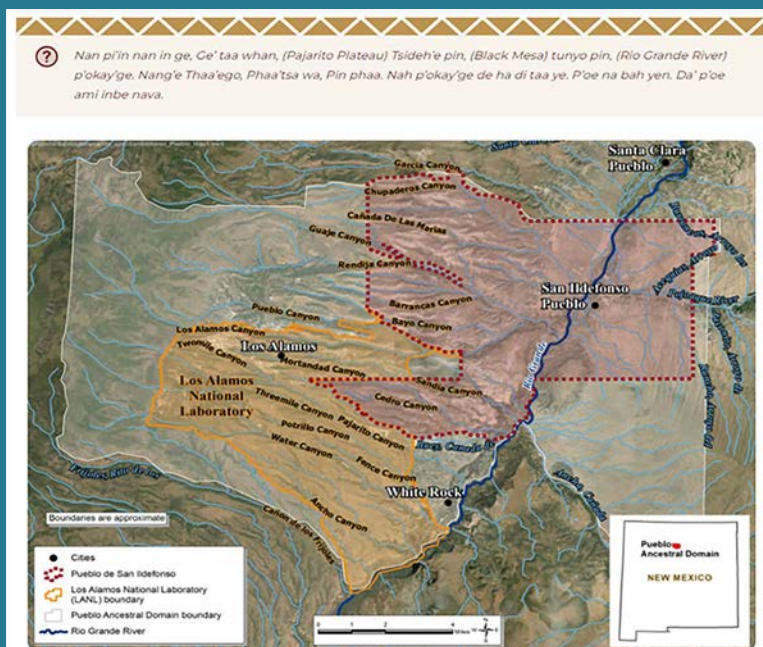


Image from San Ildefonso Pueblo Website

COMMUNITY AND CULTURE

Strategies in this resilience theme focus on empowering communities to preserve and draw upon their cultural heritage and traditional knowledge to enhance social cohesion, community engagement, and collective action for resilience.



Community engagement, social cohesion, capacity building, and equitable access to resources are all integral to resilience.

Resilience should be considered at every state agency and requires a thorough understanding of both the challenges and potential solutions that may be applied at the state-level. To truly be successful, resilience initiatives should draw from local knowledge, build upon community sources of strength, including social and cultural support systems, and empower communities to adapt and evolve to changing conditions. By fostering strong social connections, empowering local leaders, and investing in community-driven initiatives, the strategies identified in this theme aim to enhance the overall resilience of New Mexico's communities. This theme underscores our commitment to building a socially cohesive and connected society for all New Mexicans that can collectively navigate the challenges of climate change while ensuring that no one is left behind.

CC_1. Build the capacity of state agencies to incorporate resilience into programs and operations.

Augmenting New Mexico's capacity to continue to build resilience requires developing the support necessary to help state agencies enhance their programs and increase their capacity to meet the needs of New Mexican communities and residents now and into the future. Capacity-building efforts could include developing common definitions of resilience, defining metrics of success, and hiring additional staff to support agency operations.

CC_2. Work with local communities and utilize data-informed approaches to create equity-focused, culturally responsive policies, resources, and opportunities that enhance resilience.

Developing programs and resources that meet communities where they are will help address the diverse resilience needs across New Mexico. Utilizing a variety of information sources, including quantitative and qualitative data such as community stories and traditional knowledges, will help incorporate important contexts, develop measures of success to track progress, and update initiatives over time. Sharing data for decision making, as with the Water Data Act of 2019 is already happening in some departments. Collaborating with communities and Tribes to enhance capacity via diverse strategies (including initiatives like climate ambassadors) will enable this work at the local level.

CC_3. Provide education, technical assistance, data-informed analysis, and capacity-building support to local communities as they work to enhance resilience through planning, programs, and initiatives.

Providing targeted and useful support, data, information, and training that local communities can use to identify shocks, stressors, and trends, and proactively plan to address climate-related risks can help make local resilience planning more effective and efficient. While data is critical, it is important to acknowledge that every community faces a unique set of challenges. Resilience planning support will need to be customized to address local challenges and opportunities.

CC_4. Coordinate and streamline state agency outreach and engagement to Tribes and local communities.

Local communities and Tribes will benefit from coordinated and streamlined outreach and engagement efforts that enhance collaboration between them and state agencies. For example, preventing duplicative outreach, providing materials in multiple languages, working with communities to identify ways to more efficiently and effectively communicate information, and taking a holistic multi-agency approach to engagement around specific topics such as workforce attraction and retention are all important efforts that will take additional investments of time and resources. This coordinated approach can decrease the volume of communication and make agency information more accessible and useful to communities. Engagement with Tribes will be done in coordination with the New Mexico Indian Affairs Department.

CC_4: Initial Priority Actions

1. Identify priority focus areas for each Resilience Plan theme.
2. Identify and convene relevant state agencies to identify community and other partners who should participate in a consortium for each thematic area.
3. Establish consortiums in statute and then refine a scope of work and strategic community engagement plan for each resilience theme.

State Agency Leads

To be determined depending on priority focus areas for each resilience theme. For example OSE/ISC can lead water focused outreach.

Implementation Timeline

< 18 months

CC_5. Create an aligned, interagency approach to allocating and administering federal funds that maximizes resilience benefits statewide.

Investing in an interagency approach that builds on shared and overlapping work responsibilities between agencies will help the State be more efficient and effective in securing federal funding to support these efforts. There are “once in a generation” federal funds that states nationwide will be administering. Understanding resilience needs statewide and applying that knowledge to funding allocation decisions and how best to coordinate funds administered across multiple agencies can help ensure these investments truly build resilience for all New Mexican residents.

CC_6. Identify and build local community capacity to access funding and implement programs for resilience, adaptation, and greenhouse gas emissions reductions.

While funding and programs that support preparedness planning and resilience may be

available, limited staff time or resources sometimes prevent communities from learning about or accessing these funds. Administrative requirements around applying for funds, developing and implementing new initiatives, and grant reporting requirements can be challenging for communities. State agencies can support communities by finding ways to efficiently provide information about existing resources and address capacity gaps that prevent communities from accessing and utilizing these resources. This state and local collaboration will help ensure funding is used effectively and equitably to build resilience.

CC_7. Create statewide agency specific performance criteria and review processes to monitor the integration of resilience into state agency programs and operations.

As the climate continues to change, it is critical to evaluate the success of initiatives and programs. Developing performance standards with annual reporting and monitoring mechanisms can help integrate resilience into state agency programs and operations. Programs that are working well can be enhanced or expanded, while those that are not achieving the intended results can be adjusted, reworked, or discontinued.

CC_8. Identify and conduct meaningful Tribal engagement around resilience initiatives.

Tribes and Pueblos are sovereign nations, and it is important to maintain and build strong government-to-government relationships through meaningful State-Tribal engagement around resilience initiatives. This State-Tribal engagement, consultation, and collaboration will apply to all of the relevant resilience initiatives.



Scouting Fire Containment Lines, Gila National Forest, US Forest Service, CC

ECOSYSTEMS AND NATURAL RESOURCES

Strategies in this resilience theme address the protection, restoration, and sustainable management of natural resources and ecosystems to strengthen ecological resilience and maintain the services these ecosystems provide to our communities.



Ecosystem and natural resource resilience require that we steward our state's natural and working lands in ways that are sustainable and maintain ecosystem services.

Strategies in this theme are intended to help safeguard and restore the health, productivity, and resilience of New Mexico's ecosystems and landscapes. Ecosystems and natural resources include both the wild and working lands that play a role in ensuring the long-term prosperity and sustainability of our communities. Initiatives and interventions include those that seek to protect and enhance biodiversity, promote sustainable land management practices, and preserve important habitats. Watershed preservation, reforestation, wetland restoration, agriculture practices, and land-use planning will all need to be adjusted to consider climate change. These efforts will not only seek to sequester carbon and reduce greenhouse gas emissions, but also conserve water resources, support wildlife habitats, and contribute to community well-being. Strategies in this thematic area reflect our state's commitment to stewarding our land resources in a way that promotes climate resilience, biodiversity conservation, and sustainable livelihoods for present and future generations.

ENR_1. Create interagency programs to encourage land management practices that support local communities, traditional uses, biodiversity, and ecosystem services for both current and future generations.

Healthy ecosystems are critical to maintaining natural and cultural resources. Interagency collaborative approaches to land management that build connections between departments (and with federal agencies) can simultaneously streamline and strengthen programs. For example, the Department of Agriculture, State Land Office, NMED Surface Water Quality Bureau, and Office of the State Engineer are working together to enhance landscapes and remove invasive species. Ideally, these programs can augment agency specific programs and help New Mexico better manage various individual resources and preserve holistic ecosystem functions in the short and long term.

ENR_2. Work with Tribes and local communities to build upon and further develop a broad range of interconnected policies and programs to conserve surface water and groundwater to meet the needs of New Mexicans and our ecosystems.

Conserving surface and groundwater in a changing climate will require coordinated policies and programs. Building on the work done by the Water Policy and Infrastructure Task Force in 2022-2023, input from Tribes and local communities can support these efforts by coordinating and focusing water conservation efforts, tracking the effectiveness of water efficiency investment, and expanding the scale of these programs and initiatives.

ENR_3. Involve local communities and Tribes in state-wide natural resource planning

Involving Tribes and local communities in natural resource planning can help New Mexico respect Tribal sovereignty and allow those affected by natural resource management decisions to participate in decision-making. It also helps develop the strong partnerships needed for the successful implementation of any conservation, restoration, or resilience projects. Projects such

as riparian restoration can be used to slow stormwater run-off, allow for infiltration, limit erosion during floods, and provide shade to keep waters cool.

ENR_4. Identify ecosystems and regions that are the most threatened by climate-related and human disturbance and customize conservation, adaptation, and monitoring in response to anticipated stability and instability.

Data-informed approaches to identifying ecosystems and geographies most threatened by climate change can help New Mexico utilize available resources more efficiently and effectively. Prioritizing the use of finite resources can help support resources and ecosystems that are being challenged by change. Data such as remote sensing, historical climate and future climate projections, and local long-term data sets can also identify where long-term investments are most likely to be successful. New Mexico Water Data is one example of how agencies are working together to share data and information to inform planning.

ENR_4: Initial Priority Actions

1. Identify ecosystems and regions that are the most vulnerable to changing conditions as well as those that are projected to be more stable in a changing climate.
2. Understand landscape needs across the state and develop initiatives to enhance ecosystem functions and protect landscapes.
3. Develop resilient investment criteria and prioritize projects that support our ecosystem now and in the future.
4. Define what success looks like for individual projects and for ecosystem wellness.

State Agency Leads

NMDGF, NMSLO, EMNRD, OSE/ISC

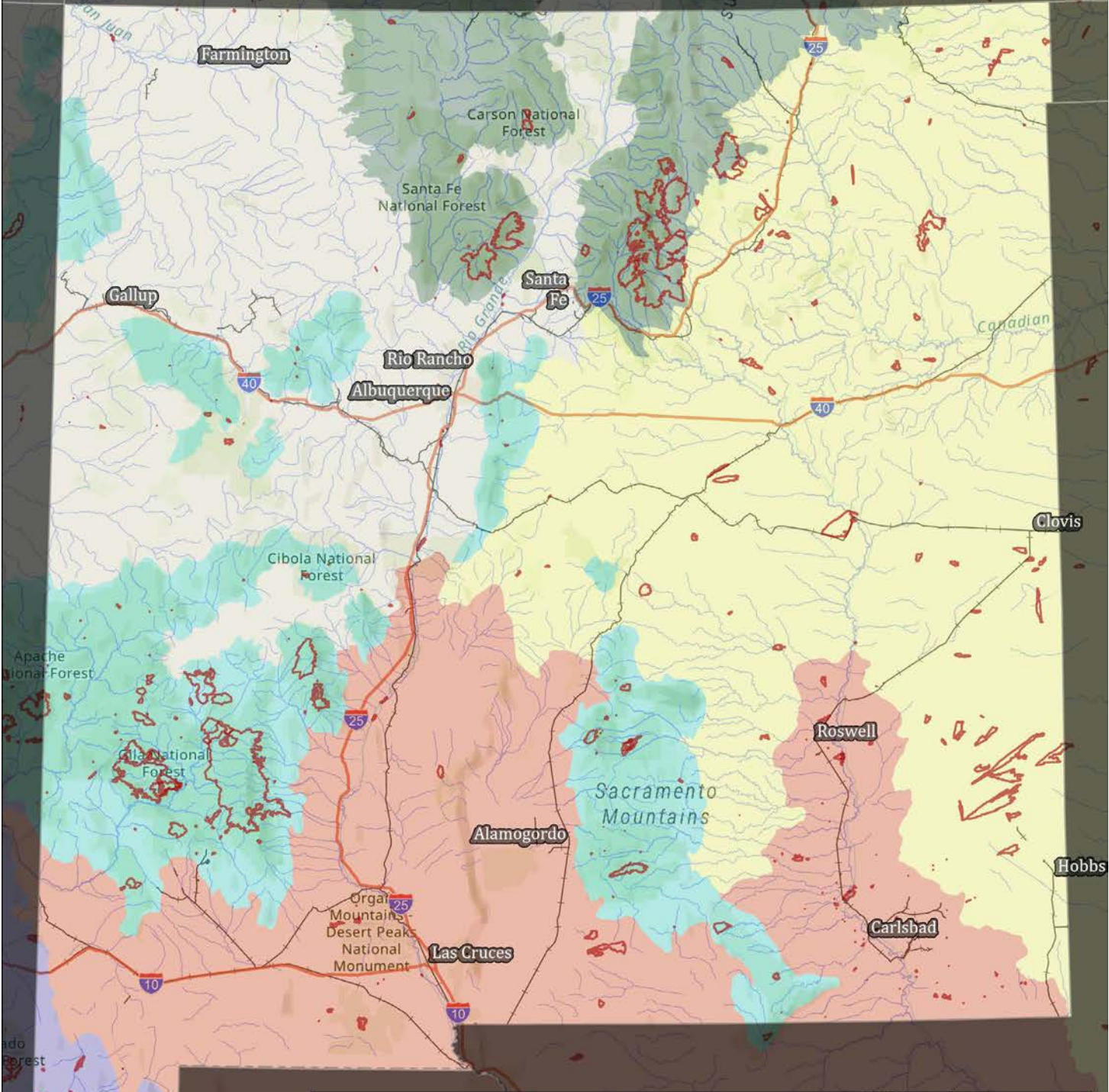
Implementation Timeline

2-3 Years

ENR_5. Enhance data-driven monitoring, early warning, and dynamic multi-stakeholder management of ecosystems.

Data-driven monitoring of ecosystems and multi-stakeholder management of ecosystems can help identify how changing conditions are affecting these resources, systems, and species. Expanding the use of and commitment to long-term and community-supported data collection on ecosystem health, species populations, or invasive pest and disease tracking can provide early warning for threats and changes and allow our communities and agencies to respond more quickly. Broadening and strengthening stakeholder collaborations will support effective and multi-faceted coordination, management, and implementation of actions to enhance resilience.

Ecoregions of New Mexico



Map Authors: Keith Williams & Trevor Egan, PhD
 Adaptation International LLC
 Data Credits: ESRI Topographic Imagery and Hillshade;
 U.S. Geologic Survey TIGER; EPA

Wildfires 2000-2023

EPA Ecoregions

- Cold Deserts
- Warm Deserts
- Western Sierra Madre Piedmont
- Upper Gila Mountains
- Western Cordillera
- South Central Semi-Arid Prairies

0 15 30 60 Miles

HUMAN HEALTH AND WELLNESS

Strategies in this resilience theme prioritize public health and well-being to build resilience in the face of public health crises and both chronic and acute environmental health risks, ensuring access to healthcare services, mental health support, and effective disaster preparedness and response.

This thematic area aims to prioritize the well-being and resilience of New Mexico's communities in the face of evolving environmental challenges – both the direct impacts on individuals' physical and mental health, and the ways that public health and medical infrastructure are affected by climate change.

Strategies in this resilience theme address the development of adaptive healthcare systems, enhanced disease surveillance and response mechanisms, and the promotion of community-based social network building activities. A holistic approach to addressing disproportionate impacts is an important part of this work. By integrating climate considerations into our healthcare infrastructure, creatively using community assets (museums, historical sites, and art spaces), fostering public awareness, and strengthening partnerships between healthcare providers, emergency responders, and community organizations, we strive to limit the adverse health impacts of climate change and ensure the continued well-being of residents. Through collaborative efforts and innovative solutions, this thematic area fosters a healthier and more resilient future for all.

HW_1. Support neighborhood organizations and community leaders, through funding and training, to build social connections, proactively prepare, and enhance self-reliance before, during, and after acute crisis events.

Building partnerships with community leaders and developing and providing training on the health impacts of climate change will help augment their understanding of these changes. Weaving this information with local knowledge can help these leaders support their communities and advocate for both short-term and long-term investments in preparedness and response. Priority responses which serve the whole community before, during, and after disasters can help create a more inclusive response that will help ensure community needs are met.

HW_1: Initial Priority Actions

Pilot community climate and health workshops in collaboration with regional health offices and community organizations to address pressing climate and health risks. Workshops could include trainings and resources to make individuals, families and business more self-reliant, better connected, and better informed.

State Agency Leads

DOH, HSD, EMNRD

Implementation Timeline

< 18 months

HW_2. Enhance data driven monitoring and analysis of climate related physical illness, behavioral health, and mental health conditions and trends for overly burdened communities across New Mexico.

By monitoring trends in public health data and using community-based or citizen science where possible, agencies such as the Department of Health will be able to better track and respond to changing climate conditions. The health of our residents, especially those that are affected first and worst by these events, is being affected by extreme weather and other stressors. It is important to gather and share data between state agencies and with local communities to better understand and prepare for those impacts.

HW_2: Initial Priority Actions

1. Create a multi-agency Quantitative Data Taskforce, with local community and academic institutional representation, to assess existing data resources and identify opportunities to merge and share data.
2. Create a multi-agency Qualitative Data Taskforce, with local community and academic institutional representation, to assess existing data resources, identify new potential data sources, and identify opportunities to merge and share data.
3. Update the New Mexico specific social vulnerability index using new data available post COVID-19.

State Agency Leads

DOH, HSD, EMNRD

Implementation Timeline

2-3 years

HW_3. Encourage collaboration across state agencies and with clinics, health centers, and community based organizations, to limit the impacts of extreme heat and drought on overly burdened communities.

Strong, distributed, and diverse health infrastructure is critical to protecting the health and wellness of residents. Interconnected preventative, supportive, and emergency physical, mental, and behavioral health facilities as well as effective management, communication, and community outreach (especially in communities experiencing higher levels of vulnerability, inequity, and that have historically been underserved) can help enhance people's ability to respond, adapt, and thrive.

HW_4. Enhance communication with community based organizations across the State to build trust in State agencies.

Creating opportunities for agencies to interact with the community members and community based organizations before an emergency can help build rapport and trust. Hosting preparedness events and workshops can create spaces for information sharing and collaboration. Partnering and sharing adaptation strategies between state agencies, departments, and local contacts can also help support broader community trust building and engagement efforts.

HW_5. Identify and support community ambassadors in every county to advocate for local health concerns.

Improved communication between state agencies and local organizations enables local knowledge and expertise to guide the application of resources. Key community leaders (such as climate ambassadors or local non-profits focused on community health and wellness) can act as liaisons between local communities and state agencies to articulate community needs, co-design effective strategies, and share data about regional physical, mental, and behavioral health concerns and challenges affecting their communities.



COVID19 Vaccination Clinic, US Navy, CC

WATER SYSTEMS

Strategies in this resilience theme are dedicated to strengthening the resilience of water-related infrastructure, encompassing water supply systems, wastewater treatment, and flood management. The primary goal is to enhance water quality and distribution, with tailored attention to the unique needs of both urban areas (municipal water) and agricultural communities, while protecting or improving equitable access and water security for all.



Water systems, encompassing water supply networks, wastewater treatment facilities, and flood management infrastructure, are essential lifelines for communities, serving both municipal and agricultural needs. These systems are vulnerable to the increasing impacts of climate change, including prolonged droughts, erratic precipitation patterns, and more frequent extreme weather events.

Resilience strategies in this category aim to fortify and adapt water-related infrastructure to enhance water security for all community members and maintain water quality. Additionally, communities play an integral part in the successful operation of water systems. Thus, these strategies promote community engagement, preservation of cultural heritage, and the integration of traditional knowledge to enhance social cohesion and support equitable access to clean and reliable water services. This theme focuses on safeguarding vital water resources, fostering a sense of ownership and responsibility among communities, and supporting the cultural values and practices that are intertwined with water management, all of which contribute to the resilience of communities as they navigate the challenges presented by a changing climate.

WSI_1. Encourage regional approaches to water supply, management, and distribution.

The regionalization of water infrastructure systems can support an integrated approach to water management and distribution specific to the amount of water available, population, and infrastructure system in that region. Local and regional agencies can continue to work with the State on regional water plans and identify opportunities for regional solutions to water supply challenges.

WSI_2. Support regional approaches to building the technical, managerial, and financial capacity of individual water system operators to maintain and upgrade systems across New Mexico.

Water infrastructure is critical to the resilience of local communities across the State. Diverse and distributed water collection, transportation, and purification systems limit single points of failure for large populations. Smaller systems are frequently older, need repairs, and can be inefficient. Enhancing, fortifying, and diversifying regional water infrastructure and providing technical support at the state and regional level can help strengthen these systems and improve system operations. Some initial efforts may include conducting water system audits, identifying and reducing losses, addressing key climate threats, and improving efficiency.

WSI_3. Pursue strategies to limit evaporation in surface water storage facilities.

As the climate warms and temperatures increase, evaporative losses from surface water storage and conveyance facilities will continue to increase. Limiting evaporation by providing shade, or covering ponds and irrigation ditches can limit evaporative losses and make more water available for a variety of users.

WSI_4. Develop a statewide policy on regional stormwater management to support collection, infiltration, and aquifer recharge.

Stormwater management helps control run-off from extreme rainfall events and protect against flooding and erosion. Developing clear procedures and design standards for stormwater management can help guide local community efforts, identify areas that can be used to support groundwater and aquifer recharge, and make technical information and approaches more accessible and useful. This will improve investments in comprehensive stormwater management infrastructure.

WSI_5. Identify and address water infrastructure vulnerabilities to natural hazards in ways that enhance structural integrity and protect water quality for municipal and agricultural uses.

Surface water storage facilities across New Mexico such as dams and reservoirs are important for flood control and serve as storage for domestic water supplies. Systems such as pipes and treatment facilities also play an important role in water delivery and the availability of

WSI_5: Initial Priority Actions

1. Identify gaps in the existing water management systems and adjust and expand resources to cover gaps in the existing system. Gaps for rural systems may include, but not be limited to, insufficient staffing, training, or basic knowledge of the mechanics of their water system.
2. Encourage efficiency and reuse of water statewide.

State Agency Leads

DFA, OSE, ISC, NMED, NMDA

Implementation Timeline

18 months

high quality water for human consumption and various agricultural uses. Identifying risks and protecting this infrastructure against long-term decreases in water availability and increases in hazards can preserve water supplies and protect water quality for all New Mexicans.

WSI_6. Create resilient water utility systems through long-term resource planning, efficiency improvements, conservation efforts, water reuse, and flexible operations.

Many communities across New Mexico have successfully reduced domestic water consumption through improvements in efficiency, changes in landscaping practices (such as conversion to native and drought tolerant species), and water conservation. Efficient use of available water resources is critical as the long-term supply of surface water decreases and creates the need to further reduce municipal and agricultural consumption and find ways to reuse water. Using the American Water Works Associations Water Audit approach can help identify and reduce water losses in systems and is good first step to conserving this vital resource.

WSI_7. Collaborate with communities to enhance acequia functions during extreme weather events and projected changes in water supply.

Acequias are a centuries old technique for distributing surface water resources for agricultural purposes and are part of the cultural history of New Mexico. Extreme events such as wildfires and flooding are decreasing the functionality of acequias and reducing the quality of the water they distribute. Decreases in water availability further threatens the viability of traditional agricultural practices. The State can collaborate with acequia associations to access funding, provide training, and improve the management of acequias. With these resources, our communities that depend on acequias can enhance the economic vitality of their region and maintain cultural traditions.



Acequia Turnout, Adobe Stock Photos

INFRASTRUCTURE & THE BUILT ENVIRONMENT

Strategies in this resilience theme focus on enhancing the resilience of physical infrastructure, including critical facilities, transportation networks, and social/cultural assets, to withstand and recover from extreme weather events and other disruptions, while also supporting the daily activities of New Mexicans in a sustainable manner.



Infrastructure, broadly defined, includes transportation networks, energy grids, water supply systems, communication systems, and other critical facilities, as well as social and community assets, healthcare facilities, and cultural institutions. These assets and networks are critical for both daily life and effective responses to extreme weather events.

Strategies in this thematic area intend to fortify, diversify, and enhance infrastructure systems to make them better able to withstand and recover from climate-related exposures and impacts. Critical infrastructure is distributed throughout every county and community and the ability to perform many societal functions are dictated by the capacity of that infrastructure to remain viable during and after extreme events. Investments in innovative climate-informed infrastructure designs, new construction materials and techniques, enhancing and expanding use of nature-based solutions, as well as the distribution and diversification of infrastructure will be critical for these systems to continue to operate and ensure that our communities can thrive as the climate changes.

IBE_1. Support land use and transportation planning decisions that promote mixed use developments in places with low vulnerability to natural hazards and that are connected by multimodal transportation corridors.

Ensuring that the built environment is resilient involves consideration of both where growth occurs and the form that land development and transportation infrastructure takes. Land development policies that encourage development in areas that are the least vulnerable to climate impacts can minimize the impacts of extreme flooding, wildfires, and other natural disasters. Transportation infrastructure should feature a range of travel options to both support State objectives related to the reduction of greenhouse gas emissions and to ensure daily travel needs can be met if a particular roadway or mode of travel is affected by an extreme weather event. Mixed use development and multimodal transportation corridors can also have multiple social, health, and economic benefits which contribute to overall community wellbeing.

IBE_1: Initial Priority Actions

1. Develop state-level land use policies that incentivize growth in locations that are least vulnerable to climate impacts, such as above or out of floodplains.
2. Prioritize multi-modal transportation investments that increase resilience and support a greater range of transportation options.

State Agency Leads

NMDOT, NMSLO, OSE/ISC

Implementation Timeline

1. <2 years
2. 2-5 years

IBE_2. Invest in transportation infrastructure that is more resilient to impacts of flooding, dust storms and other extreme events

Transportation infrastructure connects communities and enables the delivery of crucial goods and services. Disruptions to those services creates isolation, disrupts local economies, and adversely affects quality of life. Infrastructure can be designed to handle higher temperatures and withstand more extreme rainfall events by considering larger design storms, expanding the use of green infrastructure, increasing the size of flood control features, preparing for higher temperature thresholds, and expanding coordination and alert systems for high wind and dust events. Creating redundant systems ensures that extreme events do not disrupt the flow of people, goods, and services.

IBE_3. Develop infrastructure that enables redundant access to services such as food, healthcare, education, and jobs before, during, and after extreme weather events.

Distributed resources and services, with multiple ways to access those services, can enhance resilience. Extreme weather events can be particularly devastating to communities that have limited services or single access points for food, health care, education, and certain jobs. Redundant services and alternative access points (both physical infrastructure such as roads and bridges and virtual infrastructure such as broadband internet access) can help communities prepare for and recover from extreme events.

IBE_4. Improve or enhance the permitting of infrastructure projects with established resilience and greenhouse gas emissions reduction benefits.

Expanding the renewable energy sector is critical for decarbonizing the economy and creating more resilient energy and transportation systems that are better able to withstand both current and future shocks and stressors. Streamlining the environmental review and permitting processes for projects to reduce the time it takes to implement development projects that enhance community resilience, reduce dependence on oil and gas, increase renewable energy generation and electrical transmission, or support the use of alternative forms of transportation, can make these projects more attractive and likely to be completed.

IBE_5. Review, revise, and enhance building design standards in wildfire hazard zones to improve resilience.

Enhancing design standards, hardening homes and buildings, and creating defensible space can help local communities reduce the wildfire risks to the built environment. Land use planning efforts and development decisions should consider wildfire risks and ensure new buildings are sited in locations that are less vulnerable to wildfires.

IBE_6. Support community-level energy efficiency projects, electrical generation, and storage capacity.

Reducing energy use in individual homes and buildings will help conserve and make the best use of the energy that is already available. Decentralized energy generation and storage - including at the individual build, development, or neighborhood level - can ensure that critical services are not disrupted during extreme weather events. These independent and self-reliant sections of

the grid can support critical infrastructure and services such as hospitals, fire stations, resilience hubs, and long-term care facilities and ensure that they are able to continue to operate during and after extreme weather events.

IBE_7. Invest in broadband infrastructure to bolster E-Governance and access to economic, educational, telehealth, and other resources.

New Mexico is a large state and residents from many rural communities must travel long distances to access basic services and healthcare. Improved broadband infrastructure supports local economies, increases opportunities for teleworking and education, reduces dependence on long-distance travel, and ensures that local populations can stay connected if transportation networks are disrupted by extreme events.

IBE_7: Initial Priority Actions

1. Understand broadband coverage levels and gaps across the state.
2. Define broadband in state statute as an essential service and public utility.
3. Create a well connected, statewide broadband network that utilizes public rights-of-way, including NMDOT facilities, to install fiber optic cables as part of roadway and other infrastructure

State Agency Leads

OBAE , DoIT, EMNRD, ECMD

Implementation Timeline

1. <2 years
2. <2 years
3. 5-10 years

IBE_8. Create waste management systems that support a circular lifecycle approach to addressing waste.

Holistic waste management practices can help minimize waste generation while providing a variety of co-benefits. Industrial scale composting at waste processing facilities can be evaluated and used to produce high quality soil amendments that reduces greenhouse gas emissions and increases the productivity and water retention capacity of working lands. Repurposing construction materials from demolition sites can decrease waste, offset the demand of new raw materials, and provide end users with materials at a lower cost.



Bike Route: Mnalls, CC

LOCAL ECONOMIES

Strategies in this resilience theme strengthen local economies by promoting economic diversification and industry mixes that reduce greenhouse gas emissions, support small businesses, foster job creation and workforce development opportunities, and encourage sustainable industry practices.

WENS OPERA HOUSE



The ability of businesses and industries to adapt to change is critical to a resilient economy. Also central to a resilient economy is a thriving workforce. Ensuring a community's workforce has access to affordable housing, mental and behavioral healthcare, quality education, professional development opportunities, transportation, and various factors supporting quality of life is critical. It is important to acknowledge the interplay between climate change and economic vitality and seek to foster resilient and sustainable local economies.

Strategies in this resilience theme underscore the State's commitment to supporting businesses, empowering local communities, and creating an inclusive and sustainable economic landscape that thrives in the face of change. Proposed initiatives aim to enhance economic diversification, promote green job creation, expand the workforce, create new living wage jobs, and support the growth of resilient industries. Investment in renewable energy infrastructure, sustainable agriculture, and fostering innovation and entrepreneurship around climate-resilient products and services aim to build resilience and harness new opportunities for growth and prosperity.

LE_1. Build local capacity to access funding and implement economic development projects that support adaptation and emissions reductions through asset-based community development tailored to specific regional needs.

Local capacity is critical to accessing funding and implementing projects. Building from community assets, such as historic and cultural resources, existing community organizations, and ongoing partnerships can ground the implementation of projects to address community needs and regional concerns. Collaborations between state agencies and local jurisdictions can improve access to funding, support project implementation as well as improve connection to place and resilience.

LE_2. Support and encourage workforce attraction and retention by training business on effective hiring & retention strategies, workforce training, incentivizing high wage jobs, and supporting affordable housing initiatives.

Communities of all sizes in the state are experiencing a crisis in workforce availability and retention. Creating good living-wage jobs with attractive benefits in places with affordable housing will help attract and retain a diverse and vibrant workforce, particularly in essential services fields such as healthcare, emergency response, and education. Workforce education includes K-12 institutes, local colleges, training programs, and informal educational settings that enhance the knowledge and the skills of the workforce.

LE_3. Support New Mexican industries as they adapt and prepare for changing climate conditions.

Key industries in New Mexico's economy such as agriculture, tourism, and energy, face unique threats from climate change and other trends. Supporting adaptive practices in these sectors can help businesses in these industries anticipate the impacts of climate changes and the other trends, reduce greenhouse gas emissions and other environmental impacts, and enhance the sustainability of industry practices.

LE_4. Support transition to the clean energy economy in local communities through workforce development.

Economic transitions to clean energy and sustainable jobs, especially in communities where extractive industries are the primary economic drivers supporting the tax base and funding public education can be challenges. Workforce development provides additional economic opportunity by cross training employees with new skills needed to participate in emerging industries or new opportunities.

LE_5. Support local economic diversification.

Economic diversification will allow local communities to continue to thrive in the event that a single sector or industry is affected by environmental or man-made shocks or stressors. Rural communities that rely heavily on agriculture, tourism, or the energy sector face unique threats from climate change and other trends and economic diversification can limit the impacts of these changing conditions.

LE_6. Create and integrate resilience criteria into state enabled economic development mechanisms to incentivize and prioritize green development.

Incentivizing green development and prioritizing projects that conserve resources can increase the sustainable development statewide. New metrics need to be developed for project evaluation and to better understand the impacts of development on resilience. Economic development mechanisms, such as the Local Economic Development Act, include but are not limited to funding programs, district designations, tax incentives, and municipal ordinances.

LE_6: Initial Priority Actions

1. Create a rubric for resilience criteria that can be applied to proposed economic development projects.
2. Define green development and resilience goals for the state.
3. Identify where resilience criteria can be integrated into development agreements and incentive programs.
4. Expand the types of industries and incentives used to promote economic development.

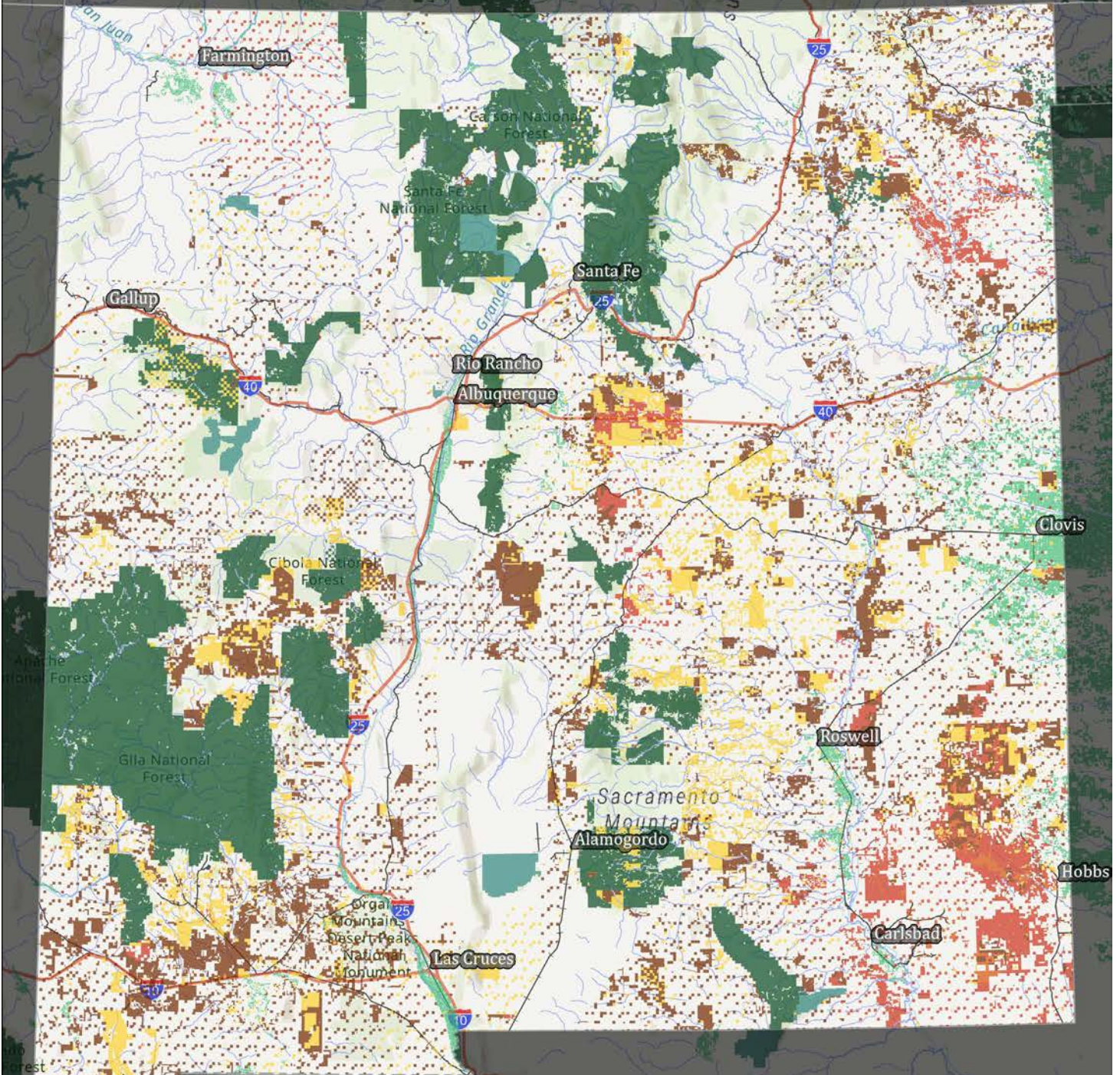
State Agency Leads

EDD, NMED

Implementation Timeline

1-4 years

Working Lands of New Mexico



Map Authors: Keith Williams & Trevor Egan, PhD
Adaptation International LLC
Data Credits: ESRI Topographic Imagery and Hillshade;
U.S. Census Bureau TIGER; USDA 2023 Crop Data Layer;
BLM Surface Management Agency; New Mexico State Lands Office

0 15 30 60 Miles

	Forest Service Lands		Oil, Gas, & Energy
	Parks Service Lands		Mineral Extraction
	State Lands		Cropland & Pasture
			State Leased Agriculture









Resilience in Action:

New Mexico Water Data Initiative

In 2019, New Mexico enacted the Water Data Act (NMSA 1978, §72-4B), a new statute directing state agencies and others to share, integrate, and improve the management of water data. Facing extended drought and climate change, New Mexicans are feeling the effects of reduced water supply and occasional water outages. Having ready access to data helps us more quickly address these challenges and evaluate resilient options for managing water. This includes data on water quality, quantity, and uses.

This future-looking, collaborative project, known as the New Mexico Water Data Initiative (WDI), is a multi-year endeavor and is critical to facilitate responsive and responsible water management and water planning by and for the people of New Mexico. WDI has established a water data catalog ([catalog.newmexicowaterdata.org](https://newmexicowaterdata.org)) where the public and state agencies can access and share data.

This is only the beginning of making water data more accessible to the people of New Mexico. WDI is also actively developing maps, applications, and other tools to increase the accessibility of water data for New Mexicans in the future. To Learn more at: <https://newmexicowaterdata.org/>



Participants brainstorming at a 2023 Water Data Initiative Workshop, EMNRD

FROM PLANNING TO ACTION

New Mexico has a long and strong history of resilience. While we have weathered the COVID-19 pandemic and catastrophic wildfires, we face additional changes related to climate change, extreme weather events, and a shifting social, economic, political, and technological landscape. To successfully meet current and future challenges and take advantage of the new opportunities that will present themselves, it is important to anticipate and proactively prepare for changing conditions. Our preparation must address vulnerabilities and reduce risk, especially for overly burdened communities, and take advantage of new opportunities to help create a future that New Mexicans hope to see for their communities.

Implementing this plan will require an all-of-state-government approach, partnerships with diverse sectors and communities across New Mexico, sustained action, adequate resources, and leadership support. It will also require a focused commitment to Equity and effort to ensure that overly burdened communities are not only considered, but involved in the process to build resilience. Over the next year, the State will commit to supporting this process in the following ways:

Form an Interagency Climate Adaptation and Resilience Planning Team - This group consists of state agencies who have participated in the Climate Adaptation and Resilience Planning process. The Interagency Climate Resilience and Adaptation Planning Team will play a central role in resilience planning.

- Help identify next steps in New Mexico's resilience journey.
- Steward the implementation of resilience actions beginning with the initial actions identified in this plan.
- Collaborate and share progress on implementation and updates on resilience efforts in their respective agencies to support group learning as well as interagency connections and collaboration.
- Streamline and coordinate communication with communities.

Building a Culture of Action - Initially, creating the fabric of collaboration and information sharing to enhance resilience will require a core level of support at the state. EMNRD is home to the State's Resilience coordinator and the Climate Policy Bureau and will serve this role. The department will also lead the outreach and engagement process with communities across the state. Initial efforts will include the following.

- Convene state agencies, departments, and working groups to implement the plan.
- Support efforts to operationalize resilience into agency programs.
- Coordination with other state task forces, working groups, and positions.
- Host an annual summit to share plan updates, lessons learned, and brainstorm next steps in New Mexico's resilience journey.
- Share inspiring news and useful information that supports resilience.

In addition to this planning process and the work that we will do together over the next few years, we will need to draw from diverse sources of available information, apply lessons from previous experience, and work together in new ways to develop creative solutions. As we work to create a more resilient New Mexico for all, it is imperative that we address the disproportionate impacts of changing conditions, and create solutions that support equitable outcomes. We will need to braid together investments that reduce the emissions of heat trapping gasses and enhance the resilience of our systems, resources, and communities. We will also need to work together with local governments, Tribes, and across state agencies to realize our potential to effectively support resilience initiatives statewide.

This draft plan is a living document and represents a next step in an all-of-state-government approach to strengthening resilience across New Mexico. In the coming years, we will be working with Tribes, local governments, diverse sectors, and the public to build connections and make informed choices about how to improve and strengthen this plan. We will be collaborating to implement the initial actions identified here and develop new initiatives. None of us can do it alone, but we can do it together.

The impact of climate change on our state will be determined by how we as New Mexicans, local communities, and state agencies decide to invest in reducing risk, prepare for impacts, and build resilience. Where and how we choose to build, what investments we make in our social systems, how we diversify or protect our physical and cultural infrastructure, and how we enhance our capacity to respond to these ever changing conditions will be critical in determining not only what happens during these extreme events, but also how quickly we can recover, bounce forward, and continue to thrive.



Workshop 1. Groundwork Studio

APPENDICES AND REFERENCES

State Agency Acronyms

ALTSD - Aging and Long-Term Services Department
CYFD - Children, Youth, and Families Department
DCA - Department of Cultural Affairs
DDPC - Developmental Disabilities Planning Council
DFA - Department of Finance and Administration
DHSEM - Department of Homeland Security and Emergency Management
DMA - Department of Military Affairs
DOH - Department of Health
DoIT - Department of Information Technology
DOT - Department of Transportation
DPS - Department of Public Safety
DVS - Department of Veterans Services
ECECD - Early Childhood Education and Care Department
EDD - Economic Development Department
EMNRD - Energy, Minerals, and Natural Resources Department
GSD - General Services Department
HED - Higher Education Department
HSD - Human Services Department
IAD - Indian Affairs Department
ISC - Interstate Stream Commission
NMCD - New Mexico Corrections Department
NMDA - New Mexico Department of Agriculture
NMDWS - New Mexico Department of Workforce Solutions
NMED - New Mexico Environment Department
NMGFD - New Mexico Game and Fish Department
NMTD - New Mexico Tourism Department
OAAA - Office of African American Affairs
OBAE - Office of Broadband Access and Expansion
OSE - Office of the State Engineer
OG - Office of the Governor
PED - Public Education Department
RETA - Renewable Energy Transmission Authority
SLO - State Land Office
SPO - State Personnel Office
WCA - Workers Compensation Administration

Glossary of Terms

Adaptation - refers to adjustments to human and natural systems that leverage opportunities and moderate adverse impacts of actual or expected climate (or other) changes.

Adaptive Capacity - the ability of people, institutions, systems, and communities to adjust and respond to impacts and take advantage of opportunities.

Assets - characteristics or resources that make it easier to perform core functions, manage affairs, and improve over time. Assets can be tangible (e.g., physical infrastructure or emergency vehicles) or intangible (e.g., social networks or neighborhood cohesion).

Built environment - man-made structures, features, and facilities viewed collectively as an environment in which people live and work.

Cascading impact - the direct impact of hazard events and/or crises generates a sequence of events resulting in physical, social, or economic disruption in other systems.

Climate adaptation - taking action to prepare for and adjust to both the current and projected impacts of climate change (like extreme heat, wildfire, or flooding) and making the most of any potentially beneficial opportunities associated with climate change.

Climate change - changes in global or regional climate patterns largely attributed to human-caused increased levels of atmospheric greenhouse gasses.

Climate resilience - the capacity of a system to maintain function in the face of stresses imposed by climate change and to adapt the system to be better prepared for future climate impacts.

Community resilience - the ability of communities to function so that the people living and working in them survive and thrive no matter what stresses or shocks they encounter.

Constraints - stressors, limitations, or deficits that make it difficult to perform core functions, manage affairs, and improve over time (e.g., aging infrastructure or outdated design, limited access to data and modeling, few internal opportunities, understaffing, limited administrative support).

Diversity - the range of human differences that shape identity, perspective, and experience such as age, physical ability, gender, beliefs, sexual orientation, and race/ethnicity.

Ecosystem Services - Ecosystem services produce the many life-sustaining benefits humans receive from nature that are important for human health and well-being. These services include, but are not limited to clean air and water, fertile soil, pollination, and flood control.

Emergency preparedness - the steps you take to make sure you are safe before, during, and after an emergency or natural disaster.

Environmental health - the relationships between people and their environment.

Equity - when everyone has meaningful and fair access to opportunities and resources that enable people to thrive, regardless of who they are or where they come from. This requires that factors preventing access to resources and opportunities are acknowledged and addressed,

including implicit biases and systemic barriers that different groups of people face, whether that is in association with social, economic, demographic, or geographic characteristics. Climate equity affirms the fundamental right to political, economic, and cultural self-determination of all people.

Exposure - impact on an individual, institution, system, or community due to stressors such as storms, floods, and other extreme weather and climate events. Exposure can be direct or indirect. Impacts can be negative, or in some cases, positive.

Hazard Mitigation - any sustainable action that reduces or eliminates long-term risk to people and property from future disasters.

Inclusion - the intentional practice of recognizing, appreciating, and incorporating the talents and skills of people from all backgrounds such that processes and environments are designed in a way that maximizes the meaningful participation and contributions of all participants.

Local Capacity - the ability of an actor, organization, or system to perform core functions, manage affairs, and improve itself over time.

Mitigation - actions to reduce the emissions or heat trapping gasses (greenhouse gasses) or enhance absorption of these gasses to avoid the long term and most severe impacts of climate change.

Needs - resources that could make it easier to perform core functions, manage affairs, and improve over time (e.g., material, monetary, administrative, political, or social).

Overly Burdened Communities - a community or population—especially people of color, women, tribal communities, immigrants, youth, low or no-income earners, rural communities, and communities dependent on extractive industries—for which multiple systemic burdens, including environmental and socioeconomic inequities, negatively affect their health, economic prosperity, and environment.

Resilience - the ability to anticipate, prepare for, respond to, and recover from disruptions with minimum damage to social well-being, the economy, and the environment.

Sensitivity - the degree to which people, institutions, systems, and communities can be affected directly or indirectly by extreme weather, climate, and natural hazards.

Shock - acute environmental, social, or economic events that challenge human and environmental systems that communities rely on. Shocks might include things like natural disasters, pandemics, abrupt economic transitions, and cybersecurity attacks.

Social vulnerability - the ways in which people and communities are vulnerable to the effects of hazards and disasters that go beyond physical exposure, including social, economic, health, cultural, and historical factors.

Stressor - chronic conditions that undermine resilience and increase vulnerability such as ongoing food insecurity, high unemployment, eroding infrastructure, limited institutional capacity, and racial discrimination.

Sustainability - managing resources to achieve environmental, social, and economic goals in ways that can be sustained long term.

Traditional Knowledges - the multiple ways of knowing that are prevalent in Tribal and Indigenous communities which encompass the lifeways, beliefs, traditions, practices and how those knowledges are transmitted and shared.

Vulnerability - the relative potential impacts to systems, institutions, communities, or individuals posed by climate change and related hazards. Vulnerability is determined by climate related exposures, sensitivity, and adaptive capacity.

Vulnerability Assessments - assessments that identify potential climate and weather-related vulnerabilities of key components of a system or community, including physical infrastructure, residents, land areas, essential services, transportation, financial capacity, etc.



Workshop 3, Groundwork Studio

Recommendations for Further Development of the New Mexico Climate Adaptation & Resilience Plan (CARP)

The following recommendations are based on the input received during the outreach workshops in the early summer of 2024. They are provided for consideration by the Climate Policy Bureau for inclusion in future iterations/drafts of the State Climate Adaptation & Resilience Plan. These recommendations are tailored to help the Plan demonstrate the State's commitment to resilience, better reflect community priorities, enhance transparency and clarity, tailor resilience strategies and actions to New Mexico's diverse localities and population, and foster increased engagement and collaboration on resilience efforts across the State.

1. Demonstrate an Ongoing Commitment to Resilience

- This could take many forms but could include (formally or informally) establishing the Interagency Resilience Working Group and holding quarterly meetings to share information, build interagency connections and collaborations, and support the further development of the plan.
- Explore avenues and formats for annual reporting of progress on resilience. This could include a briefing to the Climate Change Taskforce (when re-established) or the Governor's Office, or a public-facing report of key progress on each resilience theme.

2. Enhance Transparency and Provide Clarity on Plan Development and Use

- Provide a short- to mid-term timeline (e.g. 3-5 years) for CARP's development & implementation with known (and, within reason, aspirational) milestones and deadlines. Ideally, this timeline would be co-developed with the Interagency Resilience Working Group and take into consideration existing already funded projects and programs. To the extent possible, specify the plans and objectives for the next five years related to improving & implementing the CARP.
 - Clarify the leadership and jurisdictional responsibilities for strategy and plan implementation.
 - Be explicit about EMNRD's authority and role in directing agency actions or the limitations of that authority.
 - Where appropriate, acknowledge other agency mandates or directives related to

- Add a section to the report to acknowledge resource and capacity limitations and available funding.
 - Explain the current funding situation for CARP and list any potential federal, state, or private funding opportunities (or anticipated roadblocks) for further development.

3. Reflect Community Priorities

- Explain commonly discussed topics from the regional climate workshops within the theme descriptions and strategies. Consider adding “assets” lists drawn from the community posters and frequently mentioned topics to clarify what is included in each theme.

4. Refine Strategies and Develop Actions

- Enhance the clarity and specificity of strategy wording where possible.
 - Consider adding additional sample actions for some strategies to provide concrete examples of implementation.
 - Consider how to make the Plan as useful as possible for both an internal audience (State Agencies) and external audiences (communities, stakeholders) and what format or materials will be useful for these audiences as a single .pdf report is unlikely to serve the needs of all users. These materials could include fact sheets, spreadsheets of strategies and actions, websites, and more.
- Reiterate the importance of adopting different approaches tailored to the specific needs of various communities when building resilience.
- Where appropriate, amend strategies to highlight how they can be tailored to support local communities in multiple ways. and demonstrate CARP’s flexibility and relevance across New Mexico’s diverse localities.
 - Consider providing real or hypothetical examples of what a resilience strategy or action might look like in practice in two different communities, or if led by two different actors (e.g. state department vs. grassroots organization).
 - Consider incorporating a table, diagram, or series of case studies that outline how different actors can engage in building resilience within a theme (or a specific strategy), highlighting the types of partnerships, resources, and actions specific to

5. Continue to Support Engagement with Tribes, Pueblo, and Community

- Provide an overview of outreach and engagement efforts for the first round of community conversations (regional, Tribal, and Virtual) and the outcomes) of these efforts. This could preface the workshop summaries.
 - Highlight the community groups and representatives that attended the first round of community conversations.
 - Address limitations in reaching certain groups and state intentions for future engagement.

- Consider outlining the plan for sustained and meaningful Tribal engagement going forward, ensuring continuous collaboration and opportunities for input from Tribes and Pueblos communities.
 - This could include the creation of a Tribal Resilience Working Group
 - Include information on how to set up 1:1 meetings, the time window these will be available, and what Tribes can expect from these discussions.
- Consider outlining your plan for increased general education and outreach
 - This could include creating a dedicated section in the plan with specific strategies for ongoing or sustained community engagement.
 - Alternatively, for each theme, proposed specific actions EMNRD (and/or other

6. *Maintain Regular Communication*

- Commit to a consistent schedule for informing stakeholders of relevant CARP-related updates through various channels such as newsletters, open meetings, or “office hours”, maintaining a calendar of events, social media, etc.
- Ensure ongoing direct communication (e.g. phone, email, and virtual or in-person meetings) with Tribes & Pueblos, State Agencies, Local Governments, and Community partners to keep them informed and engaged.

COMMUNITY CONVERSATIONS

In the spring of 2024, the New Mexico Energy, Minerals and Natural Resources Department's Climate Policy Bureau hosted a series of eight community conversations across the state to debut and collect feedback on the initial draft Climate Resilience and Adaptation Plan. These conversations also helped identify additional opportunities to incorporate resilience into the work of state and local government.

There were six (6) regionally-focused in-person workshops in Truth or Consequences, Roswell, Albuquerque, Farmington, Taos and Las Vegas. Additionally, there was one in-person workshop in Santa Fe for staff members from Tribes and Pueblos, and one virtual workshop open to anyone state-wide. Each in-person event was hosted at a local organization or business and lasted about two hours. Spotlight crucial efforts to enhance climate adaptation and resilience in communities.



The goals of the workshops were to:

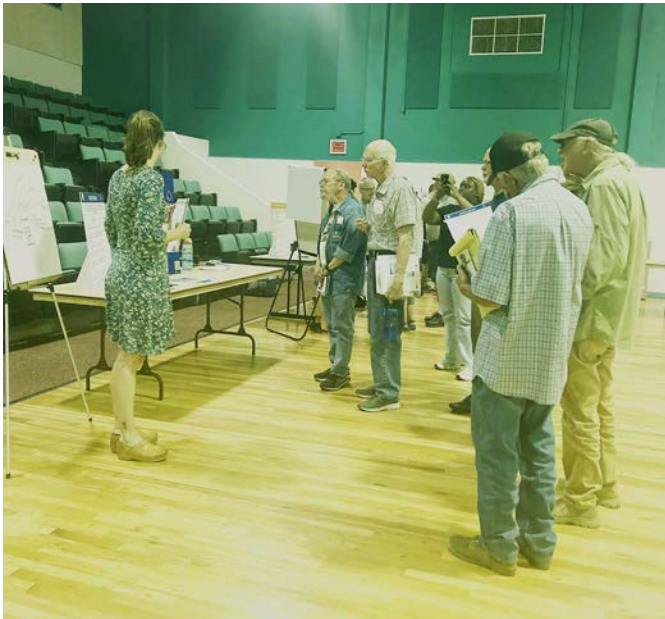
- Hear directly from residents about how to improve resilience in their communities.
- Connect participants to relevant programs and resources.
- Improve the State’s Climate Adaptation and Resilience Plan based on community perspectives.
- Identify recommendations of how to incorporate resilience into the work of state and local government.

Each workshop followed a similar format where CPB gave a short presentation about the State’s resilience planning efforts; a guest speaker gave a presentation on their efforts to build resilience in their community; and participants were given time to visit various breakout stations to discuss climate hazards in their community and CARP’s six resilience themes and associated strategies.

As part of the resilience theme breakout stations, participants were asked to vote for what they saw as the highest priority strategies for implementation in each theme using dot stickers and leave comments on the strategies using post-it notes. Facilitators also took notes of group discussions. A summary of these “dot voting” activities is provided at the end of the appendix. Additionally, the appendix includes a table of the most commonly mentioned topics for each of the resilience themes.

Climate data for regional workshops were provided by Trevor Lee Even, Ph.D., utilizing historical observations from the NOAA NCEI GHCNd version 3 dataset, accessed at: <https://www.ncei.noaa.gov/maps/daily/> and climate change projections were provided by the MACAv2-METDATA CMIP5 downscaled climate projection project for coordinates centered on each regional community, accessed at https://climate.northwestknowledge.net/MACA/data_csv.php.

Truth or Consequences



Community members and staff discussing climate impacts and resilience strategies in Truth or Consequences.

Conversation Workshop Summary

Thirteen community members from Truth or Consequences, Las Cruces, and surrounding communities gathered on May 20, 2024, at Truth or Consequences Civic Center to discuss climate change impacts and resilience in the region. During the evening workshop, participants signed in and perused a series of regionally specific climate posters. There was a formal welcome and introduction, a summary of the State’s Climate Adaptation and Resilience Plan, and a guest speaker highlighting resilience in action for the region. The bulk of the workshop time was structured around breakout sessions where participants could choose their own adventure and spend time providing input on two of the six resilience themes.



Climate Change in Truth or Consequences



Our communities are already seeing rising temperatures and changing rain and snow patterns.

Temperature

Current Conditions (1990-2019)	
<i>It's already getting hotter...</i>	
+ 1.2 °F Increase in Annual Average Temperature since 1950 - 1979 period	
13 more days per year above 90°F since 1950 - 1979 period	
8.6 fewer cold days per year With low temperatures below freezing (32°F)	
Future Projections (2050-2079)	
<i>Temperatures will be even higher...</i>	
Winter:	3.6°F to 5.5°F Warmer
Spring:	4.9°F to 6.9°F Warmer
Summer:	5.2°F to 7.0°F Warmer
Fall:	4.2°F to 6.4°F Warmer
+ 59 More Hot Days days per year with highs above 90°F	

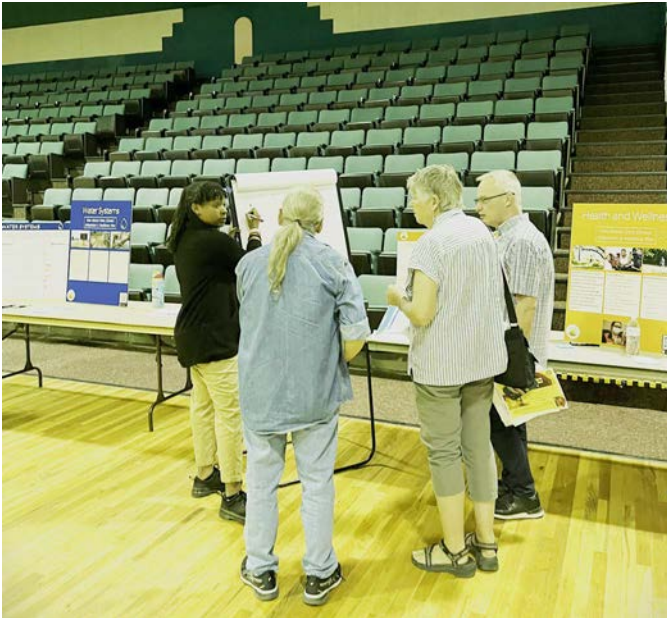
Rain and Snow

Current Conditions (1990-2019)	
<i>Extremely variable...</i>	
4.6 inches of rainfall 1980 19.2 inches of rainfall 1990	
<i>With changes in seasonal patterns...</i>	
+ 9% Fall Precipitation - 4% Summer Precipitation since 1950 - 1979 period	
Future Projections (2050-2079)	
<i>Future is uncertain but may be slightly drier...</i>	
- 2% to - 6% average annual precipitation by midcentury	
<i>More Rain and Less Snow Higher Rates of Evaporation and Drought</i>	

Climate change projections for temperature and precipitation (rain and snow) for the Truth or Consequences region using an ensemble of climate models. Figure show current conditions between 1990-2019, observed changes (top rows), and projected changes for mid-century between 2050-2079 averages (bottom rows).

Climate Concerns

The figure highlights the climate projections for Truth or Consequences. Temperatures are projected to increase in all scenarios across all time periods with an average of 59 more days a year above 90°F by mid century compared to current conditions. The future is uncertain with highly variable precipitation. Projections show a slight decrease in annual rainfall (-2% to -6%) by the middle of the century. However, with higher temperatures, there will be more evaporation and drought.



Community members and workshop facilitators discussing the Health and Wellness resilience theme and strategies in Truth or Consequences.



Guest Speaker Dan Lorimer gives a presentation on local and regional resilience initiatives and opportunities in Truth or Consequences.

Resilience in Action - Dan Lorimer

Dan Lorimer is a small business owner, advocate, and resident of Sierra County, New Mexico who specializes in irrigation and water conservation, and consistently demonstrates a commitment to environmental stewardship. In his presentation, he discussed the SunZia Renewable Wind Energy Project, highlighting its potential benefits and impacts to the region. He also explored the geothermal energy potential of the area, emphasizing its clean energy and role in enhancing local resilience. Additionally, Dan underscored the unique geology and cultural value of Sierra County.

Input on Resilience Themes

During the breakout session time, participants had the opportunity to discuss resilience themes of interest and provide comments and input on those themes and the associated strategies. Some of that key input is highlighted below.

COMMUNITY AND CULTURE

- Indigenous culture, heritage, and traditions should be celebrated.
- Consider animals and animal welfare in planning for resilience.
- Communities can be leaders but it is difficult to get people to gather post COVID.

HUMAN HEALTH AND WELLNESS

- Situation is dire for low income and rural community members with lack of employment, limited communication, and compounding challenges.
- Need to expand and strengthen education and hire more health professionals.
- Livestock and wild animals contribute to health and wellbeing and need to be explicitly considered in resilience planning efforts.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

- Small scale nature based solutions should be considered for both habitat and water management.
- Explore district heating systems connected to wastewater.
- Consider removing road access to public lands.

ECOSYSTEMS & NATURAL RESOURCES

- Grazing can impact ecosystems and cause a loss of carbon and there aren't enough programs focused on animal welfare.
- Need education on soil loss, water loss, and keeping water on the land by using bioswales and other methods.
- Need to safeguard natural environment from oil and gas development.

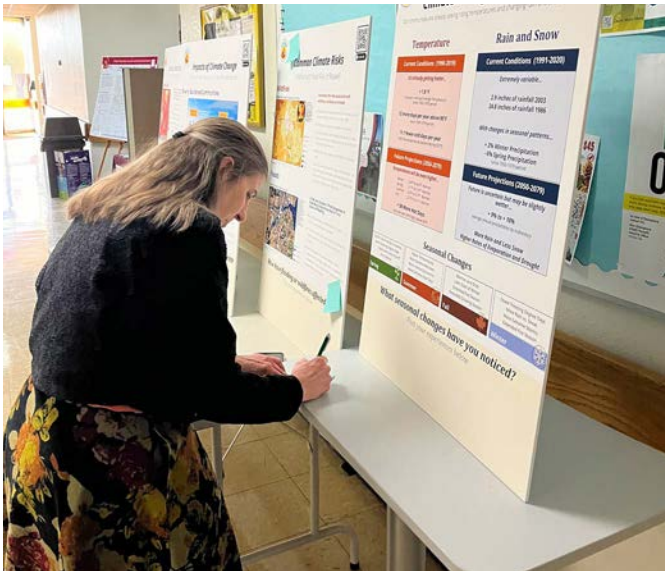
WATER SYSTEMS

- Aging infrastructure requires costly repairs and undue burden on small communities.
- Major forest fires affect both the forest and the water systems through runoff and sedimentation.
- Promote local plants for landscaping as they require less water, compared to non-native plants.

LOCAL ECONOMIES

- Promote "green jobs", broadly including clean energy, gardening, composting, and gray water management.
- Focus on bringing long-lasting jobs to the region.
- Find ways to bring tourism to the region using wildlife.

Roswell



A community member writes down their experience with local climate change impacts at the Climate Hazards breakout station in Roswell.

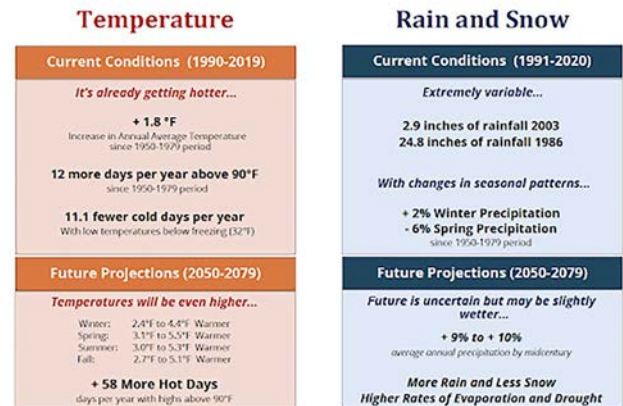
Conversation Workshop Summary

Six community members from Roswell, Ruidoso, Hondo and Lincoln County gathered on May 21, 2024, At ENMU-Roswell Occupational Technology Center to discuss climate change impacts and resilience in the region. During the evening workshop participants signed in and perused a series of regionally specific climate posters. There was a formal welcome and introduction, a summary of the State’s Climate Adaptation and Resilience Plan, and a guest speaker highlighting resilience in action for the region. The bulk of the workshop time was structured around breakout sessions where participants could choose their own adventure and spend time providing input on two of the six resilience themes.



Climate Change in Roswell

Our communities are already seeing rising temperatures and changing rain and snow patterns.



Climate change projections for temperature and precipitation (rain and snow) for the Roswell region using an ensemble of climate models. Figure show current conditions between 1990-2019, observed changes (top rows), and projected changes for mid-century between 2050-2079 averages (bottom rows).

Climate Concerns

The figure highlights the climate projections for Roswell. Temperatures are projected to increase in all scenarios across all time periods with an average of 58 more days a year above 90°F by mid century compared to current conditions. The future is uncertain with highly variable precipitation. Projections show a slight increase in annual rainfall (+9 to +10%) by the middle of the century. However, with higher temperatures, there will be more evaporation and drought.



Ruidoso community member and workshop facilitator discussing the Ecosystems and Natural Resources resilience theme and strategies in Roswell.



Guest Speaker Jackie Powell giving a presentation on the wildfire and flood cycles in Rio Ruidoso/Hondo Valley and how to build resilience in the region.

Resilience in Action - Jackie Powell

Jackie Powell, a 5th generation small farmer and water advocate from the Rio Ruidoso/Hondo Valley, talked about the history of environmental disasters in the region. She highlighted the impacts of recent wildfires and the floods that followed them. She discussed the importance of community awareness and collaboration to prepare and respond to wildfire-flood cycles. She shared examples of recovery work taking place in Rio Ruidoso/Hondo Valley, including cleaning up waterways, reservoirs, and acequias impacted by ash and other pollutants.

Input on Resilience Themes

During the breakout session time, participants had the opportunity to discuss resilience themes of interest and provide comments and input on those themes and the associated strategies. Some of that key input is highlighted below.

COMMUNITY AND CULTURE

- Grassroots organizations play a vital role in engaging community members in state efforts.
- It is important to incorporate indigenous knowledge into resilience initiatives.
- “Farmers and Ranchers are the original conservationists, and we can learn a lot from them.”

ECOSYSTEMS AND NATURAL RESOURCES

- The community believes the government values nature over human life.
- Many believe forest thinning is a useful technique Roswell could implement to combat wildfires.
- Animals should also be considered when developing cooling centers to address extreme heat.

HUMAN HEALTH AND WELLNESS

- Existing concerns about water quality and the drinking water of the Roswell community.
- Bridges have collapsed during extreme weather which have killed several people in Roswell.
- Dust storms have also killed people in the region.

WATER SYSTEMS

- Working with communities is important when managing water resources for domestic, food production, and industrial usage.
- Preparing for floods after wildfires is essential, as they are prone to occur.
- The plan talks about agriculture as water users; however, acknowledge that agriculture benefits local economies.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

- Buildings in Wildland-Urban Interface (WUI) areas need better protection from wildfire.
- Cooling pavement techniques can affect urban heat islands.
- Greater guidance in the planning and approval of battery and EV charging stations is needed.

LOCAL ECONOMIES

- A diversified economy can minimize risks caused by extreme weather events.
- Local businesses and citizens are unprepared for severe storms and lack shelter resources.
- There can be great potential in community-based green projects (implementing LEED designs, e.g. school solar panels), renewable energy (wind farms), and rainwater harvesting.

Albuquerque



Community members participating in the regional resilience workshop in Albuquerque.

Conversation Workshop Summary

Forty-two community members from Albuquerque and surrounding communities gathered on May 22, 2024, at the UNM Jackson Student Center to discuss climate change impacts and resilience in the region. During the evening workshop participants signed in and perused a series of regionally specific climate posters. There was a formal welcome and introduction, a summary of the State's Climate Adaptation and Resilience Plan, and a guest speaker highlighting resilience in action for the region. The bulk of the workshop time was structured around breakout sessions where participants could choose their own adventure and spend time providing input on two of the six resilience themes.



Climate Change in Albuquerque

Our communities are already seeing rising temperatures and changing rain and snow patterns.



Temperature

Current Conditions (1990-2019)	
<i>It's already getting hotter...</i>	
+ 1.5 °F Increase in Annual Average Temperature since 1950-1979 period	
3 less days per year above 90°F since 1950-1979 period	
17.8 fewer cold days per year With low temperatures below freezing (32°F)	
Future Projections (2050-2079)	
<i>Temperatures will be even higher...</i>	
Winter:	3.2°F to 5.3°F Warmer
Spring:	3.7°F to 6.0°F Warmer
Summer:	3.7°F to 6.2°F Warmer
Fall:	3.0°F to 5.4°F Warmer
+ 68 More Hot Days days per year with highs above 90°F	

Rain and Snow

Current Conditions (1990-2019)	
<i>Extremely variable...</i>	
4.1 inches of rainfall 1956 13.1 inches of rainfall 1988	
<i>With changes in seasonal patterns...</i>	
+ 6% Fall Precipitation - 1 % Spring Precipitation since 1950-1979 period	
Future Projections (2050-2079)	
<i>Future is uncertain but may be slightly wetter...</i>	
+ 2% to + 7% average annual precipitation by midcentury	
<i>More Rain and Less Snow Higher Rates of Evaporation and Drought</i>	

Climate change projections for temperature and precipitation (rain and snow) for the Albuquerque region using an ensemble of climate models. Figure show current conditions between 1990-2019, observed changes (top rows), and projected changes for mid-century between 2050-2079 averages (bottom rows).

Climate Concerns

The figure highlights the climate projections for Albuquerque. Temperatures are projected to increase in all scenarios across all time periods with an average of 68 more days a year above 90°F by mid century compared to current conditions. The future is uncertain with highly variable precipitation. Projections show a slight increase in annual rainfall (+2 to +7%) by the middle of the century. However, with higher temperatures, there will be more evaporation and drought.



Community members visit the climate hazard station and refreshment tables before the community conversation in Albuquerque.



Guest Speaker Marcy Litvak gives a presentation on UNM's ARID Institute.

Resilience in Action - Marcy Litvak

Marcy Litvak, Co-Director of The ARID Institute at the University of New Mexico, discussed the institute's focus on enhancing resilience in semi-arid ecosystems through actionable science. She emphasized the importance of drylands, which are critical biodiversity and climate change hotspots, and highlighted ARID's role in fostering innovations that sustain clean water, energy, ecosystems, and community health. The institute builds capacity for transdisciplinary research across four key themes: adaptive infrastructures, sustainable water, community health and vitality, and healthy ecosystems. Litvak highlighted ARID's role as a hub for facilitating connections and partnerships to improve resilience in New Mexico.

Input on Resilience Themes

During the breakout session time, participants had the opportunity to discuss resilience themes of interest and provide comments and input on those themes and the associated strategies. Some of that key input is highlighted below.

COMMUNITY AND CULTURE

- There should be more focus on youth, educational opportunities, and training in the Plan.
- Need resilience centers to address inequities and the health impacts on disadvantaged communities.
- Horses are an important part of New Mexican culture and solutions need to consider both animal welfare and human community needs.

HUMAN HEALTH AND WELLNESS

- Expand and train local health councils by providing funding and technical assistance.
- Expand access to nature, especially shady green spaces for cooling and mental health.
- Children and infants have disproportionate exposure to climate change, engage and educate mom or parent networks to share information and reduce risk.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

- Need a massive investment in electric vehicle charging stations, bus stops, and bicycle storage.
- Look for dual purpose investments such as installing solar panels above parking lots in schools to generate energy and provide shade.
- Consider a significant investment in residential weatherization for low income residents and renters including insulation, doors, and windows.

ECOSYSTEMS & NATURAL RESOURCES

- Wildlife should be explicitly mentioned in the plan.
- Consideration of free roaming horses, their effects on ecosystems, and how they can be humanely managed.
- The discussion of local community involvement can be more specific.

WATER SYSTEMS

- More attention needs to be paid to stormwater and flooding considering both human and natural solutions (such as beaver dams).
- Adaptive management will lead to more effective water management.
- All state agencies need to be included in the plan development.

LOCAL ECONOMIES

- Investment in community transitions away from fossil fuel industry jobs by focusing on job training and guidance.
- Build a multifaceted and diverse economy around renewable energy, regenerative agriculture, health care, and the university.
- Equip local organizations to apply and use grants.

Farmington



Robert Gomez, EMNRD's Sustainability and Resilience Officer, gives a presentation about the State's resilience planning efforts to community members in Farmington.

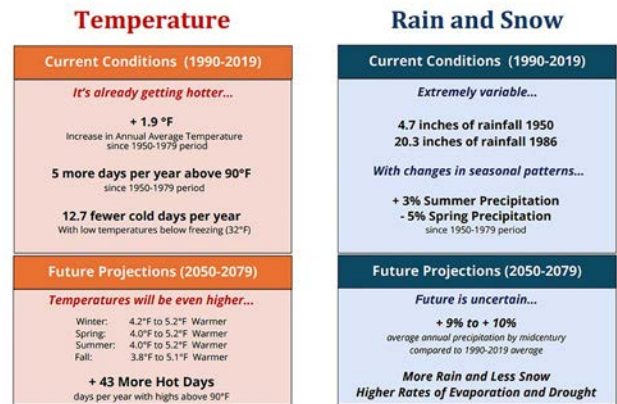
Conversation Workshop Summary

Eight community members from Farmington and surrounding communities gathered on June 3, 2024, at the Riverside Nature Center to discuss climate change impacts and resilience in the region. During the evening workshop participants signed in and perused a series of regionally specific climate posters. There was a formal welcome and introduction, and a summary of the State's Climate Adaptation and Resilience Plan. The bulk of the workshop time was structured around breakout sessions where participants could choose their own adventure and spend time providing input on two of the six resilience themes.



Climate Change in Farmington

Our communities are already seeing rising temperatures and changing rain and snow patterns.



Climate change projections for temperature and precipitation (rain and snow) for the Farmington region using an ensemble of climate models. Figure show current conditions between 1990-2019, observed changes (top rows), and projected changes for mid-century between 2050-2079 averages (bottom rows).

Climate Concerns

The figure highlights the climate projections for Farmington. Temperatures are projected to increase in all scenarios across all time periods with an average of 43 more days a year above 90°F by mid century compared to current conditions. The future is uncertain with highly variable precipitation. Projections show a slight increase in annual rainfall (+9 to +10%) by the middle of the century. However, with higher temperatures, there will be more evaporation and drought.



Workshop facilitator writing down community member's feedback on the Water Systems resilience theme and strategies in Farmington.



Community members and State staff discussing climate impacts, resilience themes, and relevant regional strategies during the open house portion of the workshop.

Input on Resilience Themes

During the breakout session time, participants had the opportunity to discuss resilience themes of interest and provide comments and input on those themes and the associated strategies. Some of that key input is highlighted below.

COMMUNITY AND CULTURE

- Participants highlighted the importance of building state capacity and working closely with local communities to build community resilience.

HUMAN HEALTH AND WELLNESS

- Support and build on existing local efforts for capacity building, community development, and environmental/economic justice.
- Hire more staff. Focus more on doing as opposed to planning.
- Develop a clear understanding of the disproportionate impacts of climate change.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

- Installing more trees along roads and paths can encourage walking and biking.
- Focus on multimodal transportation investments, not just roads.

ECOSYSTEMS & NATURAL RESOURCES

- Water resources should be used to support agriculture and economic development, not the fossil fuel industry.
- Provide clarity on how the Plan will be used or support local decision making.

WATER SYSTEMS

- Emphasize green stormwater infrastructure such as bioswales and trees.
- Consider installing solar on top of irrigation canals to reduce evaporation and provide power to pumps and monitoring stations.
- Encouraging regional approaches to water management is important.

LOCAL ECONOMIES

- Look for ways to expand workforce development specifically to replace high paying fossil fuel jobs.
- There is a lack of educational opportunities and affordable housing especially for native people.
- Increase the amount of State funding for clean and green businesses.

Taos



Community members and state staff discussing climate change impacts, resilience themes, and strategies during the workshop.

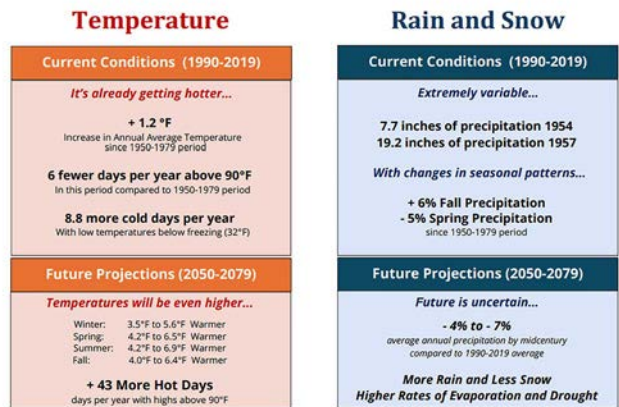
Conversation Workshop Summary

Thirty-two community members from Taos and surrounding communities gathered on June 4th, 2024, at UNM Taos Baatan Hall to discuss climate change impacts and resilience in the region. During the evening workshop, participants signed in and perused a series of regionally specific climate posters. There was a formal welcome and introduction, a summary of the State's Climate Adaptation and Resilience Plan, and a guest speaker highlighting resilience in action for the region. The bulk of the workshop time was structured around breakout sessions where participants could choose their own adventure and spend time providing input on two of the six resilience themes.



Climate Change in Taos

Our communities are already seeing rising temperatures and changing rain and snow patterns.



Climate change projections for temperature and precipitation (rain and snow) for the Taos region using an ensemble of climate models. Figure show current conditions between 1990-2019, observed changes (top rows), and projected changes for mid-century between 2050-2079 averages (bottom rows).

Climate Concerns

The figure highlights the climate projections for Taos. Temperatures are projected to increase in all scenarios across all time periods with an average of 43 more days a year above 90°F by mid century compared to current conditions. The future is uncertain with highly variable precipitation. Projections show a slight decrease in annual rainfall (-4% to -7%) by the middle of the century. With higher temperatures, there will be more evaporation and drought.



A community member at the Ecosystems and Natural Resources breakout station votes for resilience strategies they would like the State to prioritize in Taos.



Community members discussing climate impacts and resilience options during the open house portion of the workshop.

Resilience in Action - Luis Reyes

Luis Reyes, Chief Executive Officer, Kit Carson Electric Cooperative, Inc. (KCEC) and Chairman and Director of the National Rural Telecommunications Cooperative, spoke to workshop attendees about resource diversification, increasing battery storage for solar energy, exploring long-term energy solutions, and maintaining corporate accountability. Luis expounded on Kit Carson Cooperative’s efforts to integrate smart-grid technology, “fiber-to-home” internet, and disaster-resilient electricity into the services they proudly provide Northern New Mexico communities.

Input on Resilience Themes

During the breakout session time, participants had the opportunity to discuss resilience themes of interest and provide comments and input on those themes and the associated strategies. Some of that key input is highlighted below.

COMMUNITY AND CULTURE

- Traditional knowledge, cultural preservation amidst climate migration (in & out), and cultural consideration for changing practices for sustainability should all be considered.
- Engagement with Tribes should be first on the list not last.
- Allow communities to tailor solutions and determine how best to integrate youth, schools, and traditional knowledge.

HUMAN HEALTH AND WELLNESS

- Heat and chronic climate stress have serious impacts on mental health. Medications and medical devices are also affected by extreme heat and climate related events like power outages.
- More acknowledgement and state-level support for the unhoused, elderly, and those addicted to drugs is needed.
- The drug epidemic and housing crisis are coinciding with the climate crisis. More funding, staff capacity, and data is needed at the health department.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

- Waste management (septic, sewer infrastructure, diversion, compost, waste reduction) should receive more attention.
- Multimodal pathways, complete streets, and trails could be highlighted more in the Plan.
- Building and planning codes and standards could be strengthened to be more like “LEED”.

ECOSYSTEMS & NATURAL RESOURCES

- Build wetland and watershed restoration and protection into the strategies.
- For grant funding and implementation it is important to understand the unique nature of each locality and provide flexibility.
- The importance of trees should be highlighted and there should be more intentional planting.

WATER SYSTEMS

- Identify and address concerns about “strategic water” (produced water) including the science, the cost, safety, and clean-up.
- Regional water and wastewater utility and management is important for keeping water in Taos.
- Enhance watershed protection through wetland restoration which can also reduce flood risk.

LOCAL ECONOMIES

- Modernize and diversify local business and their buildings, to increase tourist appeal include longer hours and walkable/bikeable business access.
- Retrain workforce to provide access to better paying local jobs in renewable energy.
- Create cultural centers where more locals are involved in showcasing local arts, food, and culture.

Las Vegas



Community members and staff discussing climate impacts and resilience options in Las Vegas.

Conversation Workshop Summary

Seventeen community members from Las Vegas and surrounding areas gathered on June 5th, 2024, at Stella's Cafe to discuss climate change impacts and resilience in the region. During the evening workshop, participants signed in and perused a series of regionally specific climate posters. There was a formal welcome and introduction, a summary of the State's Climate Adaptation and Resilience Plan, and a guest speaker highlighting resilience in action for the region. The bulk of the workshop time was structured around breakout sessions where participants could choose their own adventure and spend time providing input on two of the six resilience themes.



Climate Change in Las Vegas



Our communities are already seeing rising temperatures and changing rain and snow patterns.

Temperature

Current Conditions (1990-2019)	
<i>It's already getting hotter...</i>	
+ 1.5 °F Increase in Annual Average Temperature since 1950-1979 period	
7 more days per year above 90°F since 1950-1979 period	
6.7 fewer cold days per year With low temperatures below freezing (32°F)	
Future Projections (2050-2079)	
<i>Temperatures will be even higher...</i>	
Winter:	3.2°F to 5.2°F Warmer
Spring:	4.2°F to 6.6°F Warmer
Summer:	4.1°F to 6.6°F Warmer
Fall:	3.7°F to 6.1°F Warmer
+ 57 More Hot Days days per year with highs above 90°F	

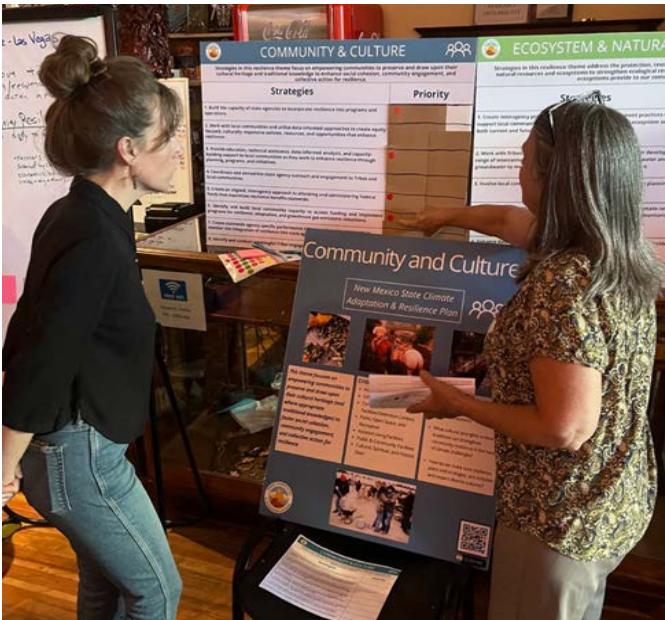
Rain and Snow

Current Conditions (1990-2019)	
<i>Extremely variable...</i>	
5.4 inches of rainfall 1956 27.8 inches of rainfall 1985	
<i>With changes in seasonal patterns...</i>	
+ 6% Fall Precipitation - 2% Spring Precipitation since 1950-1979 period	
Future Projections (2050-2079)	
<i>Future is uncertain...</i>	
+ 2.5% to + 8% average annual precipitation by midcentury compared to 1990-2019 average	
More Rain and Less Snow Higher Rates of Evaporation and Drought	

Climate change projections for temperature and precipitation (rain and snow) for the Las Vegas region using an ensemble of climate models. Figure show current conditions between 1990-2019, observed changes (top rows), and projected changes for mid-century between 2050-2079 averages (bottom rows).

Climate Concerns in Las Vegas

The figure highlights the climate projections for Las Vegas. Temperatures are projected to increase in all scenarios across all time periods with an average of 57 more days a year above 90°F by mid century compared to current conditions. The future is uncertain with highly variable precipitation. Projections show a slight increase in annual rainfall (+2.5% to +8%) by the middle of the century. However, with higher temperatures, there will be more evaporation and drought.



A workshop facilitator discusses a community member's feedback on the Community and Culture resilience theme and strategies in Las Vegas.



Paula Garcia discussing the history and importance of acequias in Northern New Mexico.

Resilience in Action - Paula Garcia

Paula Garcia, Executive Director of the New Mexico Acequia Association, provided an overview of the role of acequias in northern New Mexico and the agriculture of the region. She shared how extreme weather is affecting acequia operations from drought to extreme rainfall and debris. Relevant to resilience, she highlighted how acequias are both infrastructure and people, as it is a community working together to keep acequias operating.

Input on Resilience Themes

During the breakout session time, participants had the opportunity to discuss resilience themes of interest and provide comments and input on those themes and the associated strategies. Some of that key input is highlighted below.

COMMUNITY AND CULTURE

- Always reach out to communities and have them help lead actions in their region.
- Consider a “Community Resilience Fund” to allow for up-front funding of local resilience initiatives designed by and for the community.
- Look for ways to simplify funding so that it goes directly to communities and community members in need.

HUMAN HEALTH AND WELLNESS

- Health care access in northern New Mexico can be a challenge.
- Tight-knit, primarily Hispanic communities, can sometimes keep people out and require local health or climate ambassadors.
- Keeping water on the landscape and supporting trees and food forests can have health benefits.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

- Creating an integrated multi-modal transportation system with trails, electrical vehicle charging stations, and all electric buses would support the community.
- Workforce development is important in the region.
- Focus on education and making it easier for grant writers to identify and access funding.

ECOSYSTEMS & NATURAL RESOURCES

- “One size fits all” programs, plans or grants, will not be effective in meeting the needs of individual communities across the state.
- Consider how best to integrate programs to achieve co-benefits with education, youth involvement, pollinators, and workforce development.
- Provide clarity on how the State’s Climate Adaptation and Resilience Plan will be implemented.

WATER SYSTEMS

- Las Vegas needs better access to clean drinking water.
- Water conservation information should be provided at the local level.
- It is important to share water shortfalls equally and consider rebranding drought as aridification.

LOCAL ECONOMIES

- The region needs more job training and workforce development around clean energy and electrical vehicle jobs.
- Additional funding for local businesses would help them compete with national companies.
- Incentivize climate smart building codes and invest in energy efficient affordable housing.

Tribes & Pueblos



Invocation and welcome from Brophy Toledo (Pueblo of Jemez).



Guest Speaker Raymond Martinez gives a presentation about adaptation planning efforts at the San Ildefonso Pueblo.

Conversation Workshop Summary

On June 6, 2024, representatives from the State of New Mexico and New Mexico Tribes and Pueblos gathered at Mabry Hall in Santa Fe for a workshop on climate adaptation and resilience. The workshop opened with a welcome from Brophy Toledo (Pueblo of Jemez). EMNRD Cabinet Secretary Designate Melanie A. Kenderdine formally introduced the event, emphasizing the State's interest in sustained collaboration with Tribes and Pueblos in the ongoing development and deployment of the CARP. The agenda included participant introductions, an overview of the CARP by Tess Ngochi, the CBP's Resilience Coordinator, a series of small group discussions, and a presentation by 1st Lieutenant Governor of the Pueblo of San Ildefonso, Raymond Martinez.

Resilience in Action - Raymond Martinez

Raymond Martinez shared stories about the on-going adaptation planning work that is happening at the San Ildefonso Pueblo and what it took to create their first adaptation plan in 2020. The Pueblo made the effort to create space for all Tribal members to participate in the planning process including working with interpreters to have discussions with elders. They also separated elders from the youth discussions to encourage dialogue and allow them to speak more openly. The Pueblo's efforts are centered around their vision for their community.



Breakout session discussion focusing on climate challenges and opportunities in Tribes and Pueblos across the state.

Input on Resilience Themes

During the meeting's initial round of discussions, participants shared the work their communities were engaged in on climate-related issues, discussed obstacles involved in this work, and explored how the state and other tribes could collectively move these efforts forward.

State support for existing and emerging Tribal and Pueblo climate resilience efforts

New Mexico Tribes and Pueblos are already working on adaptation plans or vulnerability assessments, collaborations with federal agencies or others in climate-responsive land management projects, and climate-focused youth education and engagement. Participants discussed the means by which the state can support these existing efforts and facilitate the development or expansion of new efforts.

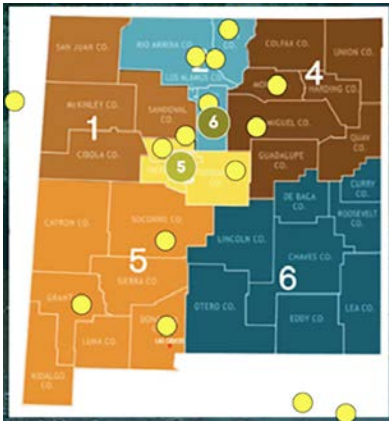
- Provide funding for Tribal and Pueblo adaptation efforts - Many existing funding sources are not responsive to Tribal needs or have onerous application requirements that prohibit access to funding.
- Help direct federal funding to New Mexico Tribes and Pueblos, leverage federal relationships to communicate Tribal needs and limitations - Participants identified that many federal funding sources are not responsive to the needs and limitations of Indigenous governments.
- Support the ability of Tribes and Pueblo communities to meet their own needs - Tribal representatives emphasized the importance of sharing adaptation resources created by the State for their own use and the importance of building resilience from the ground up.

Find opportunities to deepen collaborations, co-manage mutually important resources, and collectively transition from planning to action

To better support tribal-specific needs, participants emphasized the value of co-producing management planning resources and scientific research as a basis for future collaboration. They also highlighted the co-management of off-reservation resources important to Tribes and Pueblos is essential for effective and equitable climate adaptation.

- Utilize pilot projects and focus on scalability - Pilot projects as essential tools for furthering both state and tribally-led adaptation efforts in Tribal communities. The scalability of pilots should be considered, ensuring that they can be distributed and implemented by various communities with different capacities.
- Provide educational resources on adaptation topics - Provide resources Tribal staff can use in their educational initiatives. These resources might include information on climate impacts, community-based strategies, no and low-cost solutions, and other pertinent materials.
- Share success stories - Supporting ways for tribes to share these solutions and opportunities to test new ideas to develop more success stories will be key components to advancing overall adaptation efforts.
- No and low-cost solutions - A catalog of no-cost and low-cost adaptation actions which can be undertaken by Tribal community members (and others) could spur additional action.
- Create a state plan for long-term engagement and collaboration on adaptation planning - Ensure input and collaboration by creating opportunities for direct feedback on adaptation and planning initiatives. Elicit participation through individual contacts and participation in professional networks of tribal adaptation planners, such as the Intertribal Resource Advisory Council, NM Tribal Resilience Action Network, etc.

Virtual



Left Image: Example input received during the virtual community workshop including where people who attended the workshop live. Right Image: How each person viewed the importance of resilience investments in their region.

Conversation Workshop Summary

Forty-one community members from across the state gathered virtually on June 11, 2024, to discuss climate change impacts and resilience. During the evening workshop, participants were guided through a series of presentations and interactive exercises including a real time virtual survey, a presentation on the development of the Draft Climate Adaptation and Resilience Plan, and two breakout sessions that allowed for dialogue on individual resilience themes.

Climate Concerns

This workshop varied from the other regional workshop in that it did not include regionally specific climate projections. Instead, the participants used an open ended survey question to identify the most pressing challenges facing their communities or their regions. This included direct climate impacts such as extreme heat, drought, and wildfires, as well as social challenges and opportunities such as changing people’s minds, climate gentrification, and building on the ongoing work of local non-profit organizations.

What are the most pressing climate resilience issues facing your community?

Breakdown

26 of 30 responded • 40 responses

Water Wildfire Food	Water, heat, and soil	The increasing aridity
Extreme heat and air quality from forest fires	Heat, fire, lack of precipitation	Changing peoples mindset
Wildfire and water security	Air quality and cooling centers	Dwindling water and reliance on fossil fuels for funding education in our state
Wildfire and water security	Extreme heat	Water! Wildfire
Fire, water, excessive heat,	Housing, disasters, future	Water!!! Wiksfires
Smart use of renewable energy	Soil moisture loss	The electric grid
Water!!! Extreme heat, drought	Water security, agriculture's future direction	Flooding, insurance, substandard housing
Health, economy, animal welfare	Building on amazing efforts by NGOs	Safe battery storage
Extreme heat and drought	Energy	Climate gentrification and gentrification in general negatively impacts dwindling and fragile natural resources.
Pollution from outside sources	Water usage, shade	Heat stress for people, plants and creatures
Loss of resources.	Lack of / change of water availability	Adaptation to changes in water availability and balance
Water storage and collection	Challenges water	People being aware / willing to change
Threats and Impacts to Tribal and Pueblo culture	Heat wave and power failure. Inability to pay for utilities (40% of households in NM as per Census). Heat sink cities. Lack of trees. Etc.	What can I do to do my part to safe guard our future
Attitude.		

Summary of key climate related issues facing community members who participated in the virtual workshop.

Defining Resilience



Participants identified what the word “resilience” means for their communities. This included being adaptable, flexible, and creative when responding to changing conditions. They also identified the importance of being able to bounce back, maintain culture and heritage, and the importance of collaboration. All of these ideas align with how resilience is discussed in the Draft Plan.

Screen shot of resilience word cloud created by participants in the virtual workshops. Size of words or phrases reflect frequency of use in answers.

Input on Resilience Themes

During the breakout session time, participants had the opportunity to discuss resilience themes of interest and provide comments and input on those themes and the associated strategies. Some of that key input is highlighted below.

COMMUNITY AND CULTURE

- Provide more support for community leadership and community buy-in for projects and action.
- Effective action will require enhancing coordination, collaboration, and capacity at the state level.
- Expanding weatherization programs for low-income families, especially in mobile homes or substandard housing can be effective in reducing energy costs and decreasing emissions.

HUMAN HEALTH AND WELLNESS

- Low income, marginalized communities bear the brunt of climate change especially when it comes to health.
- Communication with clear messages to help make the connection between climate and health, consider the role of university extension and community climate/health ambassadors.
- More attention should be paid to Indigenous people and food systems.

INFRASTRUCTURE & THE BUILT ENVIRONMENT

- Invest in the resilience of the energy grid and consider both renewable and decentralized energy generation.
- Update building codes to enhance energy efficiency, passive design standards, and reduce wildfire risks.
- Enhance collaboration and communication between state agencies and with communities.

ECOSYSTEMS & NATURAL RESOURCES

- More attention should be paid to groundwater resources.
- Encourage and make it easier for state and federal agencies to work together on large scale resilience projects.
- Enhance education on how healthy ecosystems are connected to water resources, health and wellness, and preservation of culture and indigenous lifeways.

WATER SYSTEMS

- Consider the effects of pollution on water systems and water quality.
- Acknowledging and centering the wisdom of Indigenous communities for water management.
- Provide water focused education, training, and technical support to communities, particularly in small and rural communities.

LOCAL ECONOMIES

- Training young people for climate related careers or trades can support local workforce development.
- Energy auditor training should be expanded to build trained workforce and expand capacity.
- Use training and mentorship programs to encourage careers in agriculture and ranching.

Overview of Community Conversation Topics

Approximately 700 comments were collected from those who attended the eight community conversation workshops hosted in May & June 2024. Comments were related to climate change hazards and impacts, the six resilience themes, and the draft Plan's development and implementation generally. There were many shared priorities and concerns among workshop participants and regions. The following lists of topics directly reflect community input from the eight community conversations collectively. Topics are not listed in any specific order.

The EMNRD Climate Policy Bureau will consider and explore these topics as they work with State Agencies to review and update the draft Climate Adaptation and Resilience Plan. This attention will help ensure the future updated draft plan reflects the voices and needs of New Mexicans across different regions.

Community & Culture

- *Climate Change Awareness and Education*
- *Accessible Meeting Locations*
- *State Department Capacity Building*
- *Acequia Usage and Water Rights*
- *Wildlife and Companion Animals*
- *Metrics and Data Collection*
- *Green Spaces and Urbanization*
- *Intergenerational and Youth Education*
- *Regenerative Agriculture and Ranching*
- *Cultural Diversity and Inclusion*
- *Traditional Knowledge Integration*
- *Community Gathering Spaces*
- *Climate Migrants and Cultural Preservation*
- *Community-Driven Action and Support*
- *Resilience Funds and Local Empowerment*
- *Equitable Access to Programs*
- *Cultural Importance of Horses*
- *Community Tailoring of Programs*

Human Health & Wellness

- *Public Access to Nature*
- *Climate Impacts on Mental Health*
- *Food Security and Local Agriculture*
- *Elder Care*
- *Families with missing generations (Grandparents raising Grandchildren)*
- *Community Education and Capacity Building*
- *Data Collection, Access and Underrepresented Data*
- *Public Alerts & Communication*
- *Emergency Preparedness*
- *Integrating Cultural and Traditional Activities*
- *Children and Infant Exposure to Heat & Pollutants*
- *Worker Safety*
- *Water Quality and Waste Management*
- *Air Quality Monitoring Network*
- *Dust Storm Impacts on Health & Safety*
- *Homeless and Unhoused Populations*
- *Cooling Centers*
- *Heat Impacts on Medication*
- *Domestic Violence*
- *Substance Abuse & Drug Use Populations*
- *Gut Microbiome Health*
- *Home Dwellings Impacts on Health & Wellness*
- *Infrastructure and Built Environment Impacts on Health & Wellness*
- *Health Care Facility Emissions & Sustainability*
- *Access to Health Care Providers*
- *Department of Health Staff and Funding*
- *Climate Health Resilience Plan and Community Fund (HB104)*
- *Outdoor Worker Heat Safety Standards*

Infrastructure

- *Dual-Purpose Energy Infrastructure*
- *Residential Energy Efficiency*
- *Trees and Green Infrastructure*
- *Improvement of Public Spaces and Transportation (Walkability, Accessibility, Shade & Cooling)*
- *Water System Upgrades*
- *Geothermal Energy*
- *Smart City Infrastructure and Distributed Energy Generation*
- *Waste Management and Reduction*
- *Enhanced Building and Planning Codes*
- *Habitat Restoration and Environmental Protection*
- *Equity and Community Engagement*
- *Broadband and Economic Development*
- *Forest Management and Wildfire Resilience*
- *Water Reuse and Conservation*

Ecosystems & Natural Resources

- Wildlife Management
- Education
- Humane Management of Free-roaming Horses
- Trail Maintenance and Employment
- Forest Fire Management
- Incorporating Local Knowledge into Fire Management
- Nutrient Pollution
- Wetland Restoration
- Watershed Protection
- Enhancing Water Quality
- Conservation of Endangered Species
- Light Pollution Reduction
- Use of terms drought and increasing aridity.

Water Systems

- Stormwater Management Solutions
- Nature based Solutions - Integration of Beavers in Water Management
- Adaptive Management
- Interstate Collaboration
- Groundwater Management
- Ban on For-Profit Water Bottling
- Investment in Water-Conserving Appliances
- Regulation of Water Use for Outside Industries
- Home-Level Water Efficiency Measures
- Investment in Water Infrastructure
- Support for Rural Communities
- Protection Against Fracking-Related Risks
- Public Communication on Water Systems Supply and Management
- Wetland and Watershed Protection
- Equal sharing of Water Shortages
- Alternative Water Sources
- Swales and Green Stormwater Infrastructure
- Solar Panels on Irrigation Channels
- Inclusion of the Army Corps of Engineers
- Private Wells
- Public Access to Water

Local Economies

- High-Paying Job Replacement for Fossil Fuel Industry Jobs
- Workforce Development
- Investment in Clean/Green Businesses
- Support for Renewable Energy Infrastructure
- Affordable and Energy-Efficient Housing
- Support for Local Businesses
- Broadband and Connectivity
- Green Education and Training
- Community and Cultural Integration
- Sustainable Tourism and Quality of Life
- Local Economy and Workforce Sustainability

General

- **Funding** for proposed strategies & existing programs (Funding avenues/ opportunities are unclear)
- **Data Collection and Access** (more is needed to address data gaps in current focus areas. new programs are needed to collect data needs to be collected in new focus areas)
- **Timelines** for strategies and overall plan implementation are needed
- **Recognizing Variation** in needs and communities across the State
- **Allowing for Flexibility** (in implementing plan)
- **Building Capacity** (Concerns there isn't enough currently across the state)
 - State Agency Capacity (i.e. Hiring Dept. of Health or Climate Policy Bureau Staff)
 - Local Capacity (i.e. to apply for grants)
 - Community Capacity (i.e. Grassroots & NGO leaders)
- **Respecting Tribal Sovereignty**
- **Improved Tribal Engagement** (Continued engagement, better timing and reach)
- **Forming Partnerships & Leveraging Existing Programs** (State, NGO & Private Sector) for implementation
- **Strategies are too long / have too many parts / too broad**
- **Lack of Attention on Animals** throughout plan, especially in Health and Wellness, Ecosystems and Natural Resources, and Community and Culture.
- **Lack of Attention on Farmers, Ranchers, Agricultural Communities and Food Systems** throughout plan
- **Educating the General Public** about climate impacts & how to protect themselves



COMMUNITY & CULTURE

Strategies in this resilience theme focus on empowering communities to preserve and draw upon their cultural heritage and traditional knowledge to enhance social cohesion, community engagement, and collective action for resilience.



	Truth or Consequences	Roswell	Albuquerque	Farmington	Taos	Las Vegas	Virtual	Total
1. Build the capacity of state agencies to incorporate resilience into programs and operations.		●	●● ●	●● ●	●	●	●● ●	12
2. Work with local communities and utilize data-informed approaches to create equity focused, culturally responsive policies, resources, and opportunities which enhance resilience.	● ●	●	●●●●● ●●●●●	●● ●	●● ●●		●	20
3. Provide education, technical assistance, data-informed analysis, and capacity-building support to local communities as they work to enhance resilience through planning, programs, and initiatives.	●		●●● ●●●	● ●	●● ●●	●	● ●	18
4. Coordinate and streamline state agency outreach and engagement to Tribes and local communities.	● ●	●	● ●	●	●		●● ●	10
5. Create an aligned, interagency approach to allocating and administering Federal funds which maximize resilience benefits statewide.		●	●● ●●	●	●● ●●		●● ●●	14
6. Identify and build local community capacity to access funding and implement programs for resilience, adaptation, and greenhouse gas emissions reduction.	●	●	●●●●● ●●●●	●	●● ●● ●● ●	●	● ●	25
7. Create statewide agency specific performance criteria and review processes to monitor the integration of resilience into state agency programs and operations.	●	●	● ●	● ●		●		8
8. Identify and conduct meaningful Tribal engagement around resilience initiatives.		●	●●● ●●	●	●		● ●	10



ECOSYSTEM & NATURAL RESOURCES

Strategies in this resilience theme address the protection, restoration, and sustainable management of natural resources and ecosystems to strengthen ecological resilience and maintain the services these ecosystems provide to our communities.



	Truth or Consequences	Roswell	Albuquerque	Farmington	Taos	Las Vegas	Virtual	Total
1. Create interagency programs to encourage land management practices that support local communities, traditional uses, biodiversity, and ecosystem services for both current and future generations.	●● ●●	●	●●●●● ●●●●●	●● ●●	●● ●●	● ●	●● ●	27
2. Work with local communities and utilize data. Work with Tribes and local communities to build upon and further develop a broad range of interconnected policies and programs to conserve surface water and groundwater to meet the needs of New Mexicans and our ecosystems.		●	●●●● ●●●●	●● ●	●● ●● ●● ●●	●	●● ●	24
3. Involve local communities and Tribes in state-wide natural resources planning.		● ●	●● ●	●	●● ●●	● ●	●● ●	15
4. Identify ecosystems and regions that are the most threatened by climate-related and human disturbance and customize conservation, adaptation, and monitoring in response to both continued stability and anticipated instability.	●● ●●	●● ●	●●●●● ●●●●●	●●● ●●	●● ●● ●● ●	● ●	●● ●	36
5. Enhance data-driven monitoring, early warning, and dynamic multi-stakeholder management of ecosystems.	● ●	●	● ●	●	● ●	● ●	●● ●	13



HEALTH & WELLNESS

Strategies in this resilience theme prioritize public health and well-being to build resilience in the face of public health crisis and both chronic and acute environmental health risks, ensuring access to healthcare services, mental health support, and effective disaster



	Truth or Consequences	Roswell	Albuquerque	Farmington	Taos	Las Vegas	Virtual	Total
1. Support neighborhood organizations and community leaders through funding and training to build social connections, proactively prepare, and enhance self-reliance before, during, and after acute crisis events.	●● ●	● ●	●●●●●● ●●●●●● ●●●●●●	●●●●● ●●●●	●● ●● ●● ●● ●● ●	●● ●	●● ●	44
2. Enhance data driven monitoring and analysis of climate related physical illness, behavioral health, and mental health conditions and trends for overly burdened communities across New Mexico.	● ●	● ●	●●●●●● ●●●●●●	● ●	●● ●● ●●	●	● ●	19
3. Encourage collaboration across state agencies and with clinics, health centers, and community based organizations to limit the impacts of extreme heat and drought on overly burdened communities.	● ●	●● ●	●●●●●● ●●●●●●	●●● ●●	●● ●● ●●	●	● ●	30
4. Enhance communication with community based organizations across the state to build trust in State agencies.	●● ●	●	● ●		●● ●●	●● ●●	●●● ●●	19
5. Identify and support community ambassadors in every county to advocate for local health concerns.	● ●		●●● ●●●	●	● ●	●	●● ●●	16



INFRASTRUCTURE

Strategies in this resilience theme focus on enhancing the resilience of physical infrastructure, including critical facilities, transportation networks, and social/cultural assets, to withstand and recover from extreme weather events and other disruptions, while also supporting the daily activities of New Mexicans in a sustainable manner.



	Truth or Consequences	Roswell	Albuquerque	Farmington	Taos	Las Vegas	Virtual	Total
1. Support land use and transportation planned decisions that promote mixed-use developments in places with low vulnerability to natural hazards and connected by multimodal transportation corridors.	● ●		●●●●● ●●●●●	●● ●	●● ●● ●		● ●	21
2. Invest in transportation infrastructure that is more resilient to impacts of flooding, dust storms, and other extreme events. Transportation infrastructure connects communities and enables the delivery of crucial goods and services.	● ●	●	● ●			●		6
3. Develop infrastructure that enables redundant access to services such as food, healthcare, education, and jobs before, during, and after extreme weather events.	●● ●	●	●● ●●		● ●		●	11
4. Improve or enhance the permitting of infrastructure projects with established resilience and greenhouse gas emissions reduction benefits.		●	●●● ●●●	● ●	●● ●● ●●	●	●● ●●	20
5. Review, revise, and enhance building design standards in wildfire hazard zones to improve resilience.		●				●● ●	●● ●	7
6. Support community-level energy efficiency projects, electrical generation, and storage capacity.	●● ●	● ●	●●●● ●●●●	● ●	●● ●● ●● ●	● ●	●● ●●	28
7. Invest in broadband infrastructure to bolster E-Governance and access to economic, educational, telehealth, and other resources.			●	●	● ●	●	●	6
8. Create waste management systems which support a circular lifecycle approach to addressing waste.	●	● ●	●●●●● ●●●●●		●● ●●	●		17



LOCAL ECONOMIES

Strategies in this resilience theme address the protection, restoration, and sustainable management of natural resources and ecosystems to strengthen ecological resilience and maintain the services these ecosystems provide to our communities.



	Truth or Consequences	Roswell	Albuquerque	Farmington	Taos	Las Vegas	Virtual	Total
1. Build local capacity to access funding and implement economic development projects that support adaptation and emissions reductions through asset-based community development tailored to specific regional needs.		● ●	●●●●●●●● ●●●●●●●●	● ●		●	●	26
2. Support and encourage workforce attraction and retention by training businesses on effective hiring and retention strategies, workforce training, incentivizing high wage jobs, and supporting affordable housing initiatives.	●		●●●●●● ●●●●●●	●●● ●●	●● ●● ●	●● ●	● ●	26
3. Support New Mexican industries as they adapt and prepare for changing climate conditions.			● ●	●	●	●		5
4. Support transition to the clean energy economy in local communities through workforce development.	●	●● ●	●●●●● ●●●●	● ●	●● ●● ●● ●● ●	●● ●	●● ●●	27
5. Support local economic diversification.		●	●● ●●	●● ●●	●● ●●	●● ●●	●	18
6. Create and integrate resilience criteria into state enabled economic development mechanisms to incentivize and prioritize green development.	● ●	●● ●	●●●●●● ●●●●●●		●● ●●	●		20



WATER SYSTEMS

Strategies in this resilience theme are dedicated to strengthening the resilience of water-related infrastructure, encompassing water supply systems, wastewater treatment, and flood management. The primary goal is to enhance water quality and distribution while protecting or improving equitable access and water security for all.



	Truth or Consequences	Roswell	Albuquerque	Farmington	Taos	Las Vegas	Virtual	Total
1. Encourage regional approaches to water supply, management, and distribution.	●	● ●	●●● ●●●	●● ●●	●● ●	● ●	●●● ●●●	25
2. Support regional approaches to building the technical, managerial, and financial capacity of individual water system operators to maintain and upgrade systems across New Mexico.	●● ●	●	●● ●	●● ●	●●● ●●●	●	●● ●	20
3. Pursue strategies to limit evaporation in surface water storage facilities.	● ●	● ●	●●● ●●				●● ●	12
4. Develop a statewide policy on regional stormwater management to support collection, infiltration, and aquifer recharge.	●● ●	● ●	●●●● ●●●		●● ●● ●●		●● ●●	24
5. Identify and address water infrastructure vulnerabilities to natural hazards in ways that enhance structural integrity and protect water quality for municipal and agricultural uses.	●● ●	● ●	●●●● ●●●	●	● ●	● ●	● ●	19
6. Create resilient water utility systems through long-term resource planning, efficiency improvements, conservation efforts, water reuse, and flexible operations.	●● ●	●	●●● ●●●	● ●	●●● ●●●	●● ●	●●● ●●● ●●●	31
7. Collaborate with communities to enhance acequia functions during extreme weather events and projected changes in water supply.	●	●	●●● ●●		●●● ●●●	●	●● ●	17

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