Climate Change in Roswell

SCAN ME

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

Temperature

Current Conditions (1990-2019)

It's already getting hotter...

+ 1.8 °F
Increase in Annual Average Temperature
since 1950-1979 period

12 more days per year above 90°F
since 1950-1979 period

11.1 fewer cold days per year
With low temperatures below freezing (32°F)

Future Projections (2050-2079)

Temperatures will be even higher...

Winter:	2.4°F to 4.4°F Warmer
Spring:	3.1°F to 5.5°F Warmer
Summer:	3.0°F to 5.3°F Warmer
Fall:	2.7°F to 5.1°F Warmer

+ 58 More Hot Days
days per year with highs above 90°F

Rain and Snow

Current Conditions (1991-2020)

Extremely variable...

2.9 inches of rainfall 2003
24.8 inches of rainfall 1986

With changes in seasonal patterns...

+ 2% Winter Precipitation
- 6% Spring Precipitation
since 1950-1979 period

Future Projections (2050-2079)

Future is uncertain but may be slightly wetter...

+ 9% to + 10%
average annual precipitation by midcentury

More Rain and Less Snow
Higher Rates of Evaporation and Drought

Seasonal Changes

Spring
Earlier Frost-Free (by 2-4 weeks)
More Growing Degree Days
Earlier and Faster Runoff
Drier Overall

Summer
Higher Temperatures
More Extreme Monsoon
More Intense Rainstorms
More Extreme Heat Days

Fall
Warmer and Drier
Later Start of Winter
Extended Fire Season
Extended Growing Season

Winter
Fewer Freezing Degree Days
More Rain vs. Snow
More Extreme Storms
Extended Fire Season

What seasonal changes have you noticed?

Post your experiences below

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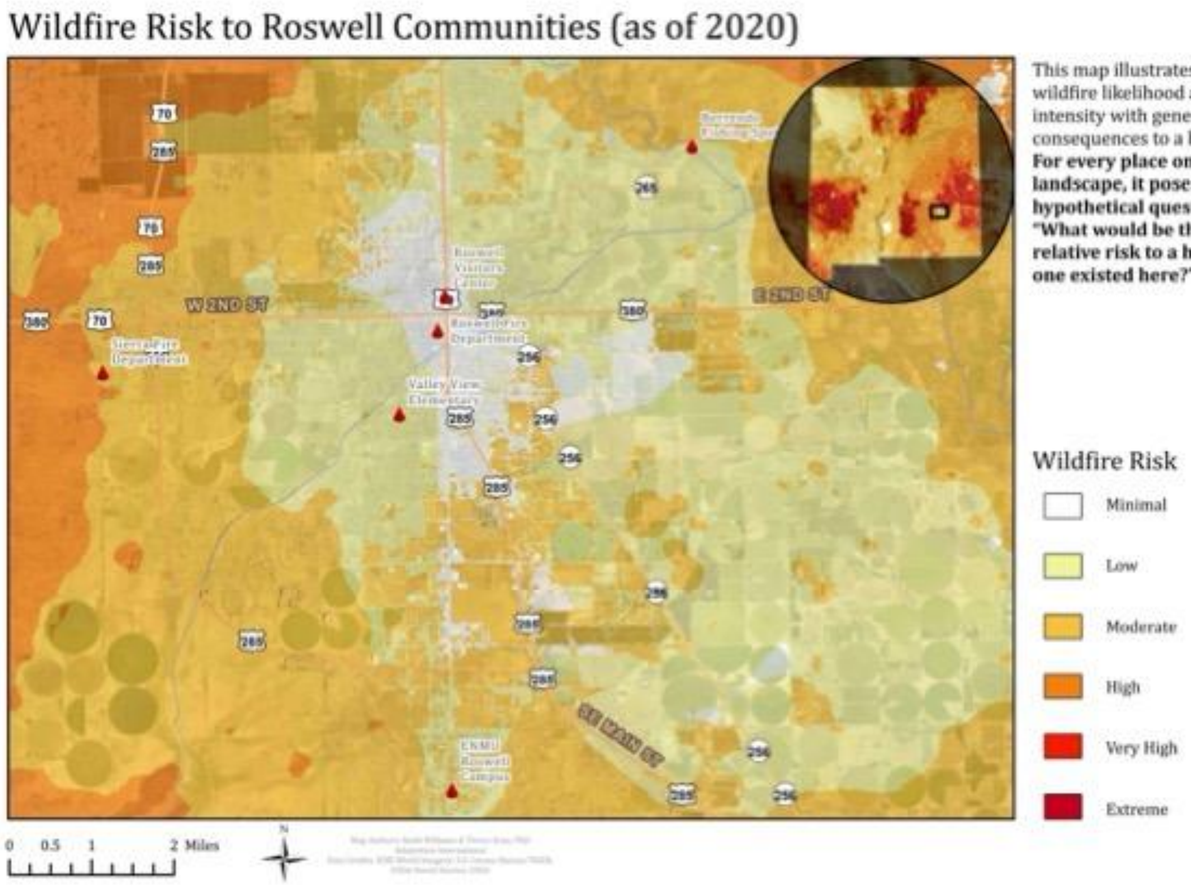
Common Climate Risks

Wildfire and Flood Risk in Roswell

Wildfires

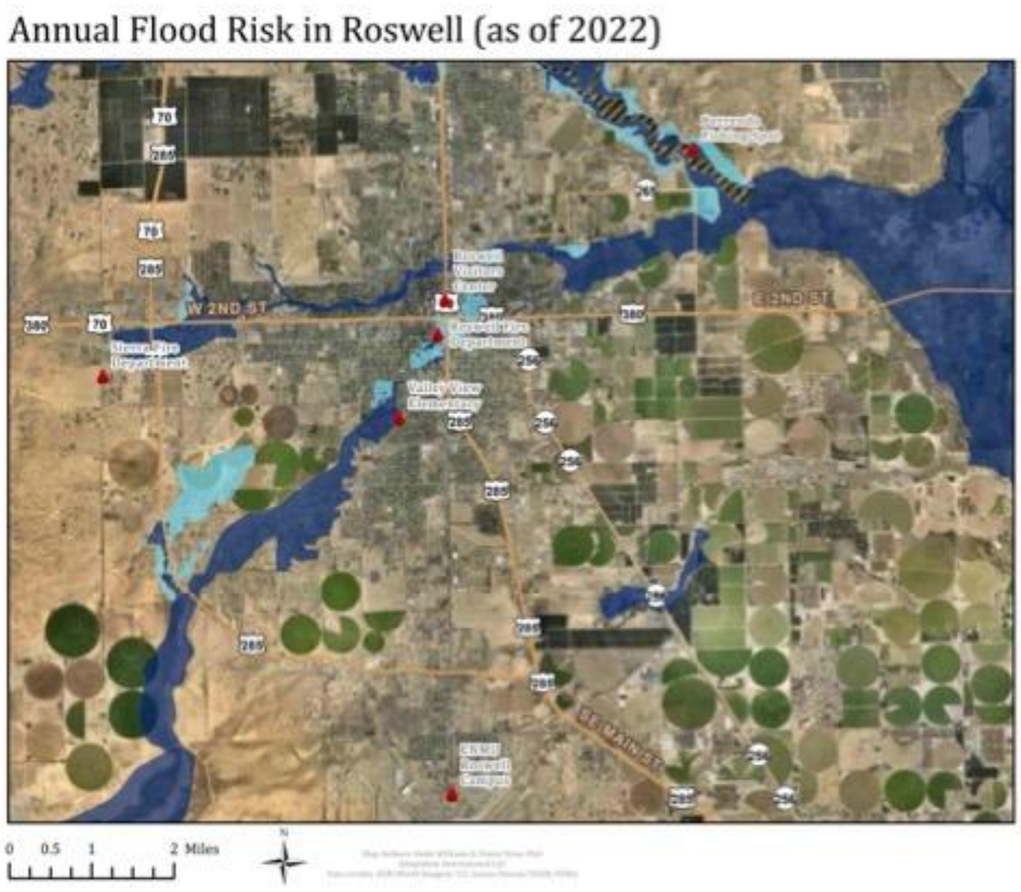


This map illustrates wildfire likelihood and intensity with generalized consequences to a home. **For every place on the landscape, it poses the hypothetical question, "What would be the relative risk to a house if one existed here?"**

Statewide, the risks associated with wildfires, are likely to increase.

- New Mexico already experiences 50 more days a year of extreme wildfire risk than it did in the 1970s.
- Wildfires can directly impact people and property.
- Smoke inhalation, poor air quality, disruptions to critical infrastructure impact the lives, economy, and health and well-being of New Mexicans.
- Wildland fires are no longer constrained to mountainous areas.
- The 2022 Hermit's Peak/Calf Canyon Fire, the largest and most destructive in the state's recorded history, burned 534 square miles and was exacerbated by unseasonably hot and dry conditions and high winds.

Floods



This map displays flood hazard areas from the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program's floodplain management. These flood hazard areas have regulations that include the mandatory purchase of flood insurance.
Disclaimer: Floods can still occur outside of the shaded areas

In the next 30 years, 17% of properties in New Mexico have more than a 1 in 4 chance of flooding.

- Flooding, landslides, and debris flows can impact infrastructure, buildings, and people.
- Flash floods, particularly from summer thunderstorms and monsoon rains, pose real risks to people and property.
- Those individuals or families with limited mobility, transportation challenges, can't or don't receive timely notifications or living in substandard housing are likely to experience the worst impacts.

How have flooding or wildfires affected you?

Post your experiences below

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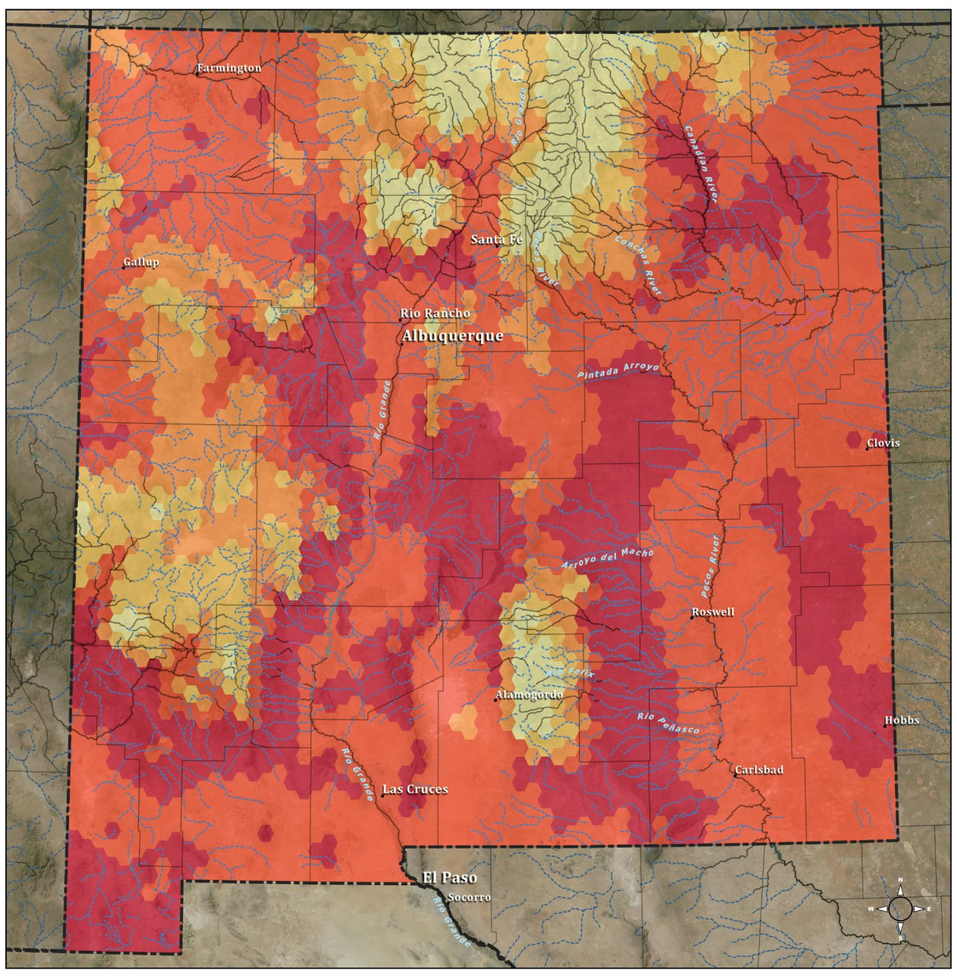
Common Climate Risks

It is getting hotter and drier

Extreme Heat



Projected Additional Days Per Year with High Temperatures above 90 °F by the 2050's

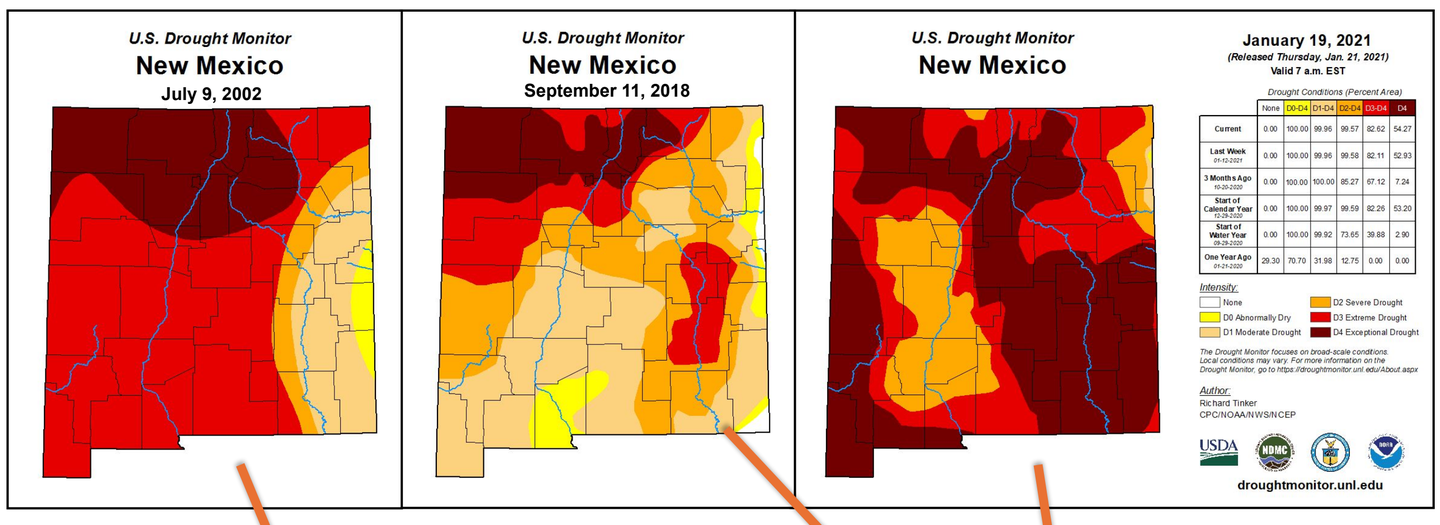
RCP 8.5 Ensemble Mean Projections

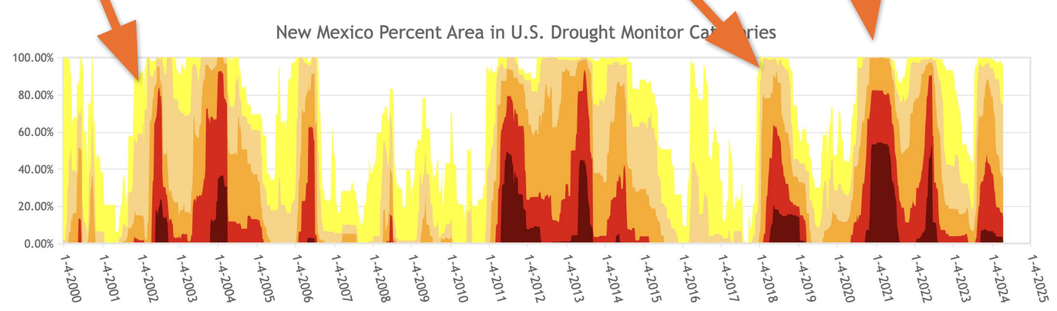
Data derived from LOCA Downscaled CMIP5 Projections.

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.

- 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
- Older adults, children, low-income residents, and individuals with pre-existing health conditions are more likely to experience adverse health effects from heat.
- People with certain health conditions, such as cardiovascular diseases, respiratory diseases, and diabetes, are more susceptible to the effects of extreme heat.

Drought





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.

- Climate-driven hydrological modeling indicates a 25% decrease in runoff and recharge in the next 50 years.
- Less water will be available for agriculture, working lands, and our communities.
- Increasing aridity (severe lack of water availability) will affect the health and vitality of ecosystems.
- Decreases in vegetative cover can accelerate erosion.

How have these extreme heat or recent droughts affected you?

Post your experiences below