



Executive Summary

2022 Joint Stockmen's Convention

Cattlemen's College

A Regional Forecast of Future Weather Patterns in New Mexico,
Dr. Fred Phillips

Albuquerque, NM—2022 Joint Stockmen's Convention:
Transforming Challenges into Opportunities

Summary:

Starting in 1975, greenhouse gases in the atmosphere became larger than natural variability, and there has been a steady downward trend in precipitation. New Mexico's climate is warming, there is a need for a 50-year water plan that accounts for future climate changes and the reliability of water resources. Scientific research showcases an increase in temperature associated as a cause to long-term droughts. The rate of increase is highest at the four corners area and lowest at the state's southeast corner. The southern part of NM is statistically warming slower.

New Mexico will be among the states in the country worst hit by the changing climate. The change in precipitation is uncertain, but a temperature increase will result in aridity. Higher mountain areas will have the most substantial impact, resulting in forest conversion. The northwest highlands and eastern plains will see continuing/increasing drought. Southern deserts should have the least number of effects shown. Overall, temperatures are expected to grow in the next 50 years.

Key Points:

1. The impact of climate on New Mexico's resources is overwhelmingly negative. The temperature will rise between 5–7°F, and precipitation is likely to remain constant or decrease, with possible higher incidences of extreme precipitation.
2. Aridity will increase due to higher air temperatures, leading to lower runoff and recharge.
3. Snowmelt will be earlier and less.
4. Decreased surface water = greater use of groundwater.
5. Reduce emissions—with reduced emissions, the state will increase to 4-6°F warmer rather than 10°F warmer.

Contact Information: Dr. Fred Phillips - fred.phillips@nmt.edu

For more information, visit: [Forewarned is Forearmed](#)

P.O. Box 850 • Moriarty, NM 87035 • Telephone: (505) 247-0584 • Fax: (505) 842-1766
email: nmcga20@gmail.com • website: www.nmagriculture.org

