

Protecting New Mexico's Economy, Communities and Environment from Global Warming

Global warming is already affecting New Mexico and will continue to do so for decades to come. A successful comprehensive climate and energy bill will invest significant new revenue in protecting communities and local economies across America by creating jobs that protect wildlife and landscapes from the effects of global warming. The American Clean Energy and Security Act passed by the House of Representatives in June takes a critical first step; however, given the scale and duration of the threat, more funding will be needed.

Critical Issues for New Mexico:

- Decreasing water availability
- Damage to the local economy
- Increasing temperatures
- Risks to public health

Is Global Warming Affecting Natural Resources in New Mexico?

Yes. New Mexico is both warming and getting drier. Since mid-century, temperatures across the state have **risen approximately 1.5°F**,¹ and are **expected to rise an additional 6.5°F by 2050**.² Precipitation, on the other hand, has steadily decreased since 1950, and is expected to decrease by an additional 20% by 2060.³ These changes are significant, and the impacts are already being felt.

Across the U.S., more than 80% of plant and animal species studied are shifting their ranges in reaction to less than 1°F of average nationwide warming in the last century.⁴ The Intergovernmental Panel on Climate Change predicts additional warming could result in **up to 30% of known species becoming extinct**, and the disappearance of more than one-fifth of the world's ecosystems.⁵

With temperatures rising, the entire southwest United States' snowpack has been decreasing, and streamflows have already **decreased by 20% since 1900**.⁶ The Upper Rio Grande, the principal source of fresh water for cities and farms throughout the state, is already experiencing declining water levels.⁷ In addition, higher temperatures have led to more frequent and intense wildfires; if droughts become more common or precipitation becomes less frequent, future fire risks in New Mexico are likely to increase.⁸

Natural Resources Adaptation Funding Will:

- Create and protect jobs
- Preserve treasured landscapes
- Revive the rural economy
- Provide clean air and water for future generations



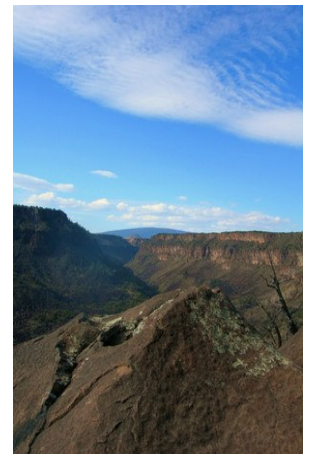
Natural resource adaptation funding will create jobs to help protect wildlands like Gila National Forest from the effects of global warming.

What is at Stake?

Changes brought on by global warming are disrupting the balance of natural resources and having significant impacts on communities and businesses across the state.

- **Water Availability and Agriculture:** New Mexico's agricultural economy will be placed at risk due to decreasing snow melt and water levels. Dwindling water supplies in New Mexico are projected to lead to statewide economic losses of about \$300 million cumulatively by 2080.⁹ Changes in water availability could also complicate the already complex tribal water rights and allocation issues in the state. New Mexico's \$1.7 billion agriculture industry is also likely to be affected significantly, as temperature increases are likely to exacerbate these water problems, causing major crops like wheat, onions, and pecans to decline by nearly 40%.¹⁰
- **Local Businesses:** New Mexico's outdoor recreation industry, which generates \$3.8 billion a year and provides 47,000 jobs statewide,¹¹ is dependent on healthy wildlife habitats and ecosystems, both of which are at great risk due to decreasing water availability. Businesses that support hiking, wildlife viewing, hunting, fishing, and camping are being threatened by the effects of global warming such as droughts, floods, and forest fires. Decline in trips to public lands due to changes in climate is not unprecedented: visits to New Mexico's Bandelier National Monument declined by 7 percent during a year of extreme drought and by 21 percent due to the Cerro Grande fire in 2000.¹²
- **Human Health:** Temperature increases and large accumulations of air pollutants in metropolitan areas such as Albuquerque are likely to result in more heat-related deaths, asthma attacks, and other respiratory disorders.¹³ Temperature changes may also create a greater risk for malaria transmission, due to the high likelihood of New Mexico's mosquitoes to carry the infectious disease.¹⁴
- **Quality of Life:** Aside from compelling economic incentives, arguments for preserving New Mexico's natural resources and public lands are innumerable. American landscapes, such as Otero Mesa and Valle Vidal, provide priceless and iconic connections to the natural world. These and other wild areas in New Mexico are threatened by global warming and may be lost if steps are not taken to protect them for future generations.

Economy at Risk:
\$3.8 Billion
47,000 jobs
*Annual contribution of
outdoor recreation to New
Mexico's economy*



Comprehensive climate and energy legislation will help safeguard landscapes, like the proposed El Rio Grade Del Norte National Conservation Area, from the effects of climate change.

Protecting Natural Resources, Creating Jobs

Restoring ecosystem health helps ensure species have the best possible chance to adapt to the effects of global warming. Human communities rely on maintaining the viability of these natural systems of water and air filtration. Ecosystem adaptation projects, such as establishing wildlife corridors for animals migrating in search of needed habitat, are critical to the survival of many species and will create long-term American jobs. **Investing now in natural resources is the most cost-effective way to protect our treasured landscapes and the clean water, clean air and jobs they provide.**

Of the total allowance value generated from an energy and climate bill, at least 5% should be invested in protecting communities and local economies across America by safeguarding natural resources from the effects

of global warming. This funding will allow New Mexico's wildlife and land management agencies, as well as the Land and Water Conservation Fund and the Forest Legacy Program, to ramp up important conservation projects.

This dedicated funding will allow scientists, engineers, construction crews, and others to be employed across New Mexico:

- Repairing damaged watersheds to ensure clean water for communities by removing impediments and deteriorating structures, restoring eroding river banks, and repairing in-stream habitat.
- Acquiring land and establishing migration corridors to increase species' survival as climates change.
- Monitoring wildlife, habitat and local climate and developing appropriate adaptation responses.
- Restoring native landscapes to increase resiliency in a warming world by removing unnecessary roads and barriers, constructing buffer strips along river corridors, and removing invasive species.

This work will protect and create American jobs—providing new skills and income to workers and their families across the state and revitalizing rural economies.



Restoring river habitats protects ecosystems, jobs, and drinking water

Investing in Solutions for Families, Businesses and the Planet

The risks to New Mexico and the nation from global warming are significant—and require an extensive and sustained commitment to reducing heat-trapping pollution, and to protecting our natural resources and the communities that rely on them. A cap-and-invest system that reduces pollution and auctions emission allowances will provide billions of dollars for combating the climate crisis.

Revenues from a cap-and-invest system must be directed to three primary solutions:

- **Invest at least 5% of the total allowance value generated in annual dedicated funding for natural resource protection** in order to create jobs while increasing resiliency across landscapes, protecting important natural services and safeguarding communities.
- **Offset increased energy costs for at-risk consumers** by allocating a percentage of allowance auction revenues to consumers through existing mechanisms.¹⁵
- **Invest in areas such as clean energy choices, job training, and business assistance**, which will aid businesses and communities in transitioning to a clean energy economy, while creating jobs and reducing heat-trapping pollution.

New Mexico and the nation need your support for reducing carbon pollution and protecting communities by safeguarding our natural resources.

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Photo Credits: Thanks to the City of Santa Fe for the picture of the restoration project, to the State of New Mexico for providing the picture of the Rio Grande del Norte Conservation Area, and to the State of Massachusetts for the picture of river restoration.

¹ NOAA National Climatic Data Center. 2009. "U.S. Climate at a Glance – Statewide." Available from: <http://www.ncdc.noaa.gov/oa/climate/research/cag3/state.html>

² The University of Washington and The Nature Conservancy. 2009. Climate Wizard. Available from: <http://www.climatewizard.org/index.html>

³ The University of Washington and The Nature Conservancy. 2009. Climate Wizard. Available from: <http://www.climatewizard.org/index.html>

⁴ Sagarin, Raphael. 2002. "Historical Studies of Species' Responses to Climate Change." In: *Wildlife Responses to Climate Change: North American Case Studies*. Ed: Terry L. Root and Stephen H. Schneider. Island Press. New Mexico, DC.

⁵ Intergovernmental Panel on Climate Change. 2007. "Summary for Policy Makers." In: *Climate Change 2007: Impacts, Adaptation and Vulnerability: Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Pg 792.

⁶ Field, C.B., et al. 2007. In: North America. In *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Parry, M.L., O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson (eds). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

⁷ Hurd, Brian H. and Julie Coonrod. 2008. "Climate Change and Its Implications for New Mexico's Water Resources and Economic Opportunities." New Mexico State University. Technical Report 45 (1-28).

⁸ Grissino-Mayer, H.D. and T.W. Swetnam. 2000. "Century-scale climate forcing of fire regimes in the American Southwest." *The Holocene*, 10(2):213-220

⁹ Hurd, Brian H. and Julie Coonrod. 2008.

¹⁰ Intergovernmental Panel on Climate Change. 2007. "Summary for Policy Makers." In: *Climate Change 2007: Impacts, Adaptation and Vulnerability: Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

¹¹ Outdoor Industry Association. 2007.

¹² Morehouse B., G. Frisvold, R. Bark-Hodgins. 2007. "How can tourism research benefit from multi-disciplinary assessments of climate change? Lessons from the U.S. Southwest." In Matzarakis, A., C.R. de Freitas, and D. Scott. (eds.) *Developments in Tourism Climatology*. pp.274-281

¹³ Patz JA, McGeehin MA, Bernard SM, et al. 2000. "The Potential Health Impacts of Climate Variability and change for the United States: Executive Summary of the Report of the Health Sector of the U.S. National Assessment." *Environ Health Perspect*. 108(4): 367-376.

¹⁴ U.S. Environmental Protection Agency (U.S. EPA). 1997. "Climate Change and New Mexico." Available from: www.epa.gov/globalwarmingimpacts

¹⁵ Stone, Chad and Hannah Shaw. 2009. "Extending "Climate Rebates" to Include Middle-Income Consumers." *Center on Budget and Policy Priorities*.