## THE STATE OF CLIMATE ACTION IN NEW MEXICO: A Call to Action



September 2024



Co-authors: Michael Jensen, CVNM Communications Specialist Molly Taylor, CVNM Chief Operating Officer

## The Toll of Climate Change on Educators and Students

New Mexico's warming climate has led to hotter classrooms, with summer and early fall temperatures hovering in unsafe ranges. In 2023, Albuquerque schools reported classroom temperatures over 80°F, well above the state code (Green, 2023). Parents in Las Cruces also expressed serious concerns when students were routinely exposed to 100+ degree heat while traveling on school buses with inadequate ventilation or no air conditioning (Dunlap, 2023). High temperatures also overstress already aging school HVAC systems that struggle to keep temperatures in the comfort zone. Schools without air conditioning, which includes 70% of Albuquerque public schools, rely on evaporative coolers, which are less effective at higher temperatures (Dunlap, 2023).



As temperatures increase, schools will struggle to obtain funding to replace aging or inadequate systems and will be forced to shift limited funds away from instruction and into energy efficiency and new equipment. Until that time, students and teachers will struggle to maintain attention levels. **Research has found that increased temperatures negatively impact student performance on tests and disproportionately impact students of color and low-income families (Goodman et al., 2018). Additionally, repeated exposure to heat increases stress levels, which can exacerbate mental health conditions, lower student attention spans and shorten tempers (Khan Rony & Alamgir, 2023).** Exposure to wildfire particulate pollution may also increase children's risk for autism and ADHD and result in poorer school performance (Shiv, 2023). All of these factors will also lead to an increase in student and classroom disruptions, which ultimately lower students' academic performance.



Researchers learned from the COVID-19 pandemic that inadequate ventilation spreads respiratory illness (Haddrell et al., 2024). This was found to be the result of carbon dioxide assisting in viral spread. In a warming climate with increased carbon dioxide levels, researchers also predict that respiratory illnesses will remain active for longer periods (Haddrell et al., 2024). Additionally, research predicts that diseases are more likely to spread due to climate change. A paper published in Nature found that 218 of 375 known diseases may be aggravated by global warming because climate change may impact the environment for bacteria/viruses and the ways they spread (Mora et al., 2022). This means that for illnesses that spread quickly in a classroom environment, such as the cold, flu and chickenpox, students and faculty may remain contagious for longer periods of time. This, in turn, will increase the number of school days missed due to illness and impact students' academic performance.

Time spent outdoors is also critical for child development. However, outdoor activities will likely be limited due to heat, air guality advisories due to dust and pollution, and an increased threat from more disease-bearing insects. For example, the mosquito responsible for the spread of vellow fever, Zika, dengue and chikungunya, Aedes aegypti, has been observed in Albuquerque and southern New Mexico since 2018 (New Mexico Department of Health, 2018; Van Note, 2022), although no cases have been reported. School nursing staff are likely to be inundated, and more students will be sent to emergency rooms and hospitals for heat-related incidents (such as heat stroke) and sickness. These impacts are more likely to afflict schools in communities that are rural or low income and in which the majority are Indigenous and other people of color because these communities are commonly under-resourced.



The longer these conditions persist, the more teacher and staff retention is likely to decrease, further harming student learning. As a result, students will suffer poorer educational outcomes, leading to lower graduation rates and college enrollment plans. School districts are also likely to receive decreased funding due to shifts in teacher retention, student performance and other factors. Therefore, the gap between high- and low-income schools will increase, leaving more students behind in New Mexico's educational system. This will also ultimately impact community poverty levels and economic opportunities.

## References

Dunlap, S. (2023, August 17). With increasing heat waves and school days, what are public schools in New Mexico to do? https://nmpoliticalreport.com/news/with-increasing-heat-waves-and-school-days-what-are-public-schools-in-new-mexico-to-do/

Goodman, J. et al. (2018, May). Heat and Learning (Working Paper No. RWP18-014). Harvard Kennedy School. https://www.hks.harvard.edu/publications/heat-and-learning

Green, L. (2023, August 4). Are hot classrooms in New Mexico violating state code? https://www.kob.com/new-mexico/are-hot-classrooms-in-new-mexico-violating-state-code/

Haddrell, A. et al. (2024, April 25). Ambient carbon dioxide concentration correlates with SARS-CoV-2 aerostability and infection risk. Nature Communications, 15. https://doi.org/10.1038/s41467-024-47777-5

Khan Rony, M. & Alamgir, H. (2023, December 4). High temperatures on mental health: recognizing the association and the need for proactive strategies - a perspective. Health Science Reports 6(12) Article e1729. https://doi.org/10.1002/hsr2.1729

Mora, C. et al. (2022, August 8). Over half of known human pathogenic diseases can be aggravated by climate change. Nature Climate Change, 12: 869-875. https://www.nature.com/articles/s41558-022-01426-1

New Mexico Department of Health. (2018, October 16). Important mosquito species found in Albuquerque. <u>https://www.nmhealth.org/news/awareness/2018/10/?view=717</u>

Shiv, Divya. (2023, July). Addressing Climate Change to Improve Children's Health in New Mexico. https://www.nmvoices.org/wp-content/uploads/2023/07/Climate-Change-and-Childrens-Health-Report\_web.pdf

Van Note, Sara. (2022, September 12). A new mosquito is stalking New Mexico. Is the state ready? Source NM. https://sourcenm.com/2022/09/12/a-new-mosquito-is-stalking-new-mexico-is-the-state-ready/