

New Report Outlines How Climate Change Impacts Health in Montana

By MSU News Service

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BOZEMAN — Climate change is already affecting the health of Montanans, a situation that will likely worsen in the coming years, according to a new report published by a group of Montana University System scientists and Montana physicians.

“Climate Change and Human Health in Montana: A Special Report of the Montana Climate Assessment,” or C2H2, to be released on December 8, 2020, is a special report of the 2017 Montana Climate Assessment. C2H2 was produced by the Montana University System’s Institute on Ecosystems, Montana State University’s Center for American Indian and Rural Health Equity (CAIRHE) and Montana Health Professionals for a Healthy Environment, with support from the Montana Healthcare Foundation.

The report brought together researchers, clinicians, public health experts, climate scientists, tribal experts, and community leaders from throughout Montana to focus on ways climate change impacts the health of Montanans, both now and in the future, said physician Alexandra Adams, director of CAIRHE and lead author of the report.

“In contrast to the Montana Climate Assessment, which focused on agriculture, forests, and water, this report is about people and their health,” Adams said. “It builds on the Montana Climate Assessment by adding what has been learned from numerous health-related studies, to analyze health impacts of climate change to the people of Montana.”

Co-author Robert Byron, an internist with the nonprofit Montana Health Professionals for a Healthy Climate, said it’s easy for the public to think mistakenly that climate change is something occurring to other people somewhere else in the world, or sometime in the future. “C2H2 presents evidence for ways that climate change is already impacting the health of Montanans, and will increasingly do so in the future,” he said.

Byron said the assessment highlights the most likely climate impacts — heat, wildfires, drought and flood — on physical and mental health, and recommends important steps that communities, health professionals and individuals can take to lessen those impacts.

Another co-author, Mari Eggers, a Research Assistant Professor at MSU and member of the Gallatin City-County Board of Health, added that the C2H2 assessment presents evidence for a number of health impacts from climate change, and lays out actions that help prepare for and minimize those impacts, with an emphasis on sharing of information and working collaboratively.

Because more than 60% of Montanans live in rural areas, the assessment looks at ways that climate change will affect people living in both urban and rural settings. “The key messages and

recommendations of the report were developed to be useful to people wherever they live in Montana,” according to MSU professor Bruce Maxwell, director of the Montana Institute on Ecosystems, and co-author of the 2017 Montana Climate Assessment, as well as the Climate Change and Human Health report. “Everyone has a role to play.”

“We’ve learned from the current pandemic that advance planning for health emergencies is essential to reduce the economic impacts of unexpected events,” says Professor Cathy Whitlock, lead author of the 2017 Montana Climate Assessment and one of the co-authors of this special report. “C2H2 fills an important gap by providing critical information that can help Montanans prepare for climate surprises ahead.”

Mike Durglo, representing the Confederated Salish and Kootenai Tribes of the Flathead Indian Reservation, and contributor to the C2H2 report, said “Climate change is already impacting the health and well-being of our people. Wildfires have caused hazardous air quality conditions, and extreme weather events create dangerous conditions and limit access to healthcare and other critical services. The climate crisis and the ecological changes that it brings threaten traditional customs, including our access to first foods through hunting, fishing and gathering, and our ability to conduct ceremonies and spiritual practices.”

The full C2H2 report is available at: montanaclimate.org.

The full press conference can be viewed here: <https://www.montana.edu/cairhe/news-events/video.html>

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Key Messages

- o Three aspects of projected climate change are of greatest concern for human health in Montana: 1) increased summer temperatures and periods of extreme heat, with many days over 90°F (32°C); 2) reduced air quality from smoke, as wildfires will increase in size and frequency in the coming decades; and 3) more unexpected climate-related weather events (i.e., *climate surprises*), including rapid spring snowmelt and flooding, severe summer drought, and more extreme storms. [*high agreement, robust evidence*]
- o The most vulnerable individuals to the combined effects of heat, smoke, and climate surprises will be those with existing chronic physical and mental health conditions, as well as individuals who are very young, very old, or pregnant. Montana's at-risk populations include those exposed to prolonged heat and smoke, living in poverty, having limited access to health services, and/or lacking adequate health insurance. [*high agreement, robust evidence*]
- o Projected increased summer temperatures and wildfire occurrence will worsen heat- and smoke-related health problems such as respiratory and cardiopulmonary illness, and these potential problems are of most immediate concern. [*high agreement, robust evidence*]
- o Earlier snowmelt, more intense precipitation events, and projected increases in floods will endanger lives and lead to more gastrointestinal disease due to contaminated water supplies, as well as increased opportunities for other water-borne, food-borne, and mold-related diseases. [*high agreement, moderate evidence*]
- o Increased summer drought will likely increase cases of West Nile virus in Montana, but the impact of climate change on other vector-borne diseases is less clear. [*high agreement, moderate evidence*]
- o Longer growing seasons, warmer temperatures and elevated carbon dioxide (CO₂) levels are leading to increased pollen levels, worsening allergies and asthma. [*high agreement, moderate evidence*]
- o Summer drought poses challenges to local agriculture, resulting in decreased food availability and nutritional quality, and to the safety and availability of public and private water supplies, especially for individuals and communities relying on surface water and shallow groundwater. [*high agreement, robust evidence*]
- o Climate changes, acting alone or in combination, are reducing the availability of wild game, fish, and many subsistence, ceremonial, and medicinal plants, which threatens food security, community health, and cultural well-being, particularly for tribal communities. [*high agreement, moderate evidence*]
- o Increased stress and increased mental illness are under recognized but serious health consequences of climate change. [*high agreement, robust evidence*]

Recommendations

- o Address the health and economic impacts of climate change by creating an adequately funded and coordinated statewide public health network that engages public health and emergency and environmental management professionals, clinicians, climate scientists, elected leaders, and stakeholders in planning and implementing climate mitigation and adaptation strategies.
- o Improve information collected and shared at the state and local levels on climate and health to facilitate this public health network and medical decision-making by:
 - working with government agencies to expand heat, smoke, air-quality, and water-quality monitoring, and improve data accessibility, especially for underreported and underserved areas; and
 - supporting efforts in the healthcare community to establish mechanisms for capturing and analyzing physical and mental health impacts related to heat, smoke and air quality, and water quality in Montana.
- o Boost statewide technical expertise in implementing climate change adaptation by funding trainings for diverse stakeholders, landowners, professionals, and leadership.
- o Continue the work of the MCA to update the information in this report and expand the understanding of climate change impacts on other sectors of importance in Montana.
- o Get involved and be part of the solution! Use the information in this report to help yourself, your community, and Montana address climate change. Everyone has a role to play!