



National Weather Center  
University of Oklahoma

# BEHAVIOR

SOCIAL SCIENCE RESEARCH



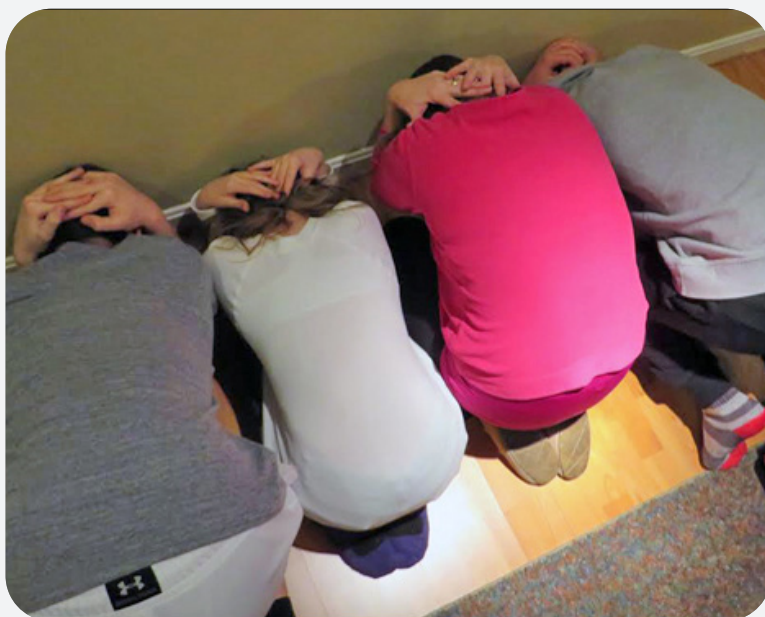
Tornadoes, flash floods and wildfires happen every year - and the greatest impact is to people. Understanding how people receive warnings and respond to these weather dangers helps ensure the success of new meteorological tools, technologies and communication strategies developed at CIWRO. The Social Science Research Team conducts research that helps to reduce the impact of dangerous weather on society.

After a deadly EF4 tornado hit Rolling Fork, Mississippi, in 2023, CIWRO researchers conducted in-depth interviews with those

directly impacted, including the public, emergency managers, broadcast meteorologists and National Weather Service forecasters. Researchers came to better understand how people learned the tornado was approaching and the actions they took. They also learned how emergency managers allocated resources, how broadcast meteorologists communicated to their viewers, and how National Weather Service forecasters approached dangerous days prior to the tornado. This work has yielded critical recommendations to improve outcomes for future severe weather events.

# SURVEY AIMS TO SAVE LIVES

CIWRO empowers anyone impacted by a tornado to submit a personal story through the online Tornado Tales survey. Developed with NSSL, the survey allows people to enter information about how they knew a tornado was coming, what protective actions they took and what happened during their experience. The National Weather Service and private broadcast sector help distribute the survey to people after a tornado has struck their area. CIWRO researchers are tracking behavioral patterns such as what devices people use most to receive warnings.



177

interviews conducted  
after high-impact  
weather events

25

hours of interviews  
from Rolling Fork

5

hours of wildfire  
interviews from Texas

45

collaborations  
within weather  
community

4

completed or  
ongoing surveys

## PREPARING COMMUNITIES

CIWRO gathers feedback from the emergency management and private broadcast sectors about National Weather Service forecast and warning products. For instance, researchers designed and distributed an Oklahoma-wide survey with the Norman NWS office and Oklahoma Forestry Service to learn how emergency managers use weather information to prepare for dangerous wildfires. CIWRO scientists also asked questions about what weather information they need and if current products are meeting their needs. CIWRO researchers are embedded in development of the Warn on Forecast guidance system, and work in the Hazardous Weather Testbed to learn from emergency managers what weather information they need from it to prepare resources for severe weather hours ahead.



The UNIVERSITY of OKLAHOMA