

Outdated weather warning systems aren't reaching enough people, ASU professor says

Scott Robinson is researching 21st-century ways to better alert people of potential disasters

By Mark J. Scarp, ASU News
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Weather in the 21st century can be unpredictable, and in recent years our planet has experienced more extreme temperatures, tornadoes, hurricanes and flooding than in decades past.

The July 2025 issue of Harper's magazine quoted statistics that said the chances were 1 in 6 that the Federal Emergency Management Agency would declare a major disaster on any given day in 2024. The source of the figures, the London-based International Institute for Environment and Development, also said 34% of Americans were likely to have experienced at least one such disaster last year.

Public awareness of these major weather events is as important as ever, but according to an Arizona State University professor who researches extreme weather early warning systems, we need to rethink how we inform the public about these disasters.

Spreading the word about looming big weather changes is often based on older communications models that heavily rely on broadcast media, said [Scott Robinson](#), associate director of the [School of Public Affairs](#) who began work as an ASU professor this fall¹.

"In the 1980s and '90s, people got information from evening news and over-the-air signals. People had a routine for watching local (broadcast) news, whether to learn about school closings for their kids or approaching storms," Robinson said.

"Fast forward to today. We don't have that central location where people can turn for severe weather warnings. With the decline of centralized media messaging through television and radio, many have turned to SMS/cell phone systems and peer sharing of information," he said.

But according to Robinson, these 21st-century successors also have drawbacks, and can, ironically, hinder vital information from reaching the public fast enough to prevent injuries and loss of life.

Automatic messaging has difficulty with reaching people in the right places for timely warnings, and social media is often dispersed among several platforms that lack the audiences broadcast media once did, he said.

"The difference with weather warning is the stakes," he said. "The consequence of someone missing a timely weather warning is much different than someone missing the latest political or community news."

Better to employ multiple information sources

A research-based solution, Robinson said, is for local emergency managers to invest time customizing their communication strategies to most effectively meet their constituents where they are, with news they need to know in a hurry.

"Instead of looking for a single source to distribute information, emergency managers need to distribute information through many different sources," he said. "I recommend selecting those diverse sources in a way that matches the media consumption of their community."

For example, a younger population may be best reached via Instagram or TikTok, while those tools would be of little use for an older population.

"The collection of diverse outlets to disseminate for a particular community is what I call their 'portfolio' of communication outlets. Emergency managers need to understand their communities and think carefully about getting messages to the actual people they are serving, not who they think they should serve," he said.

No single solution likely

Robinson admits there is likely not a single solution.

"The temptation is to say, we need a killer app that will solve all our problems for us. No. We need to focus on some kind of community engagement," Robinson said. "Find out what mixture of apps and traditional media sources is best. Develop relationships in community organizations. In a rural community that might be a different mixture than in downtown Phoenix."

For example, rural populations might rely on weather warnings issued through trusted organizations such as FFA or local religious institutions, he said.

Plenty of hard work lies ahead for emergency managers, who need to deeply know their communities.

“There isn’t an off-the-shelf solution that people really want,” Robinson said.

The School of Public Affairs is part of the [Watts College of Public Service and Community Solutions](#).

This story originally appeared on [ASU News](#).

¹ Most of Robinson's research was done at the Institute for Public Policy Research and Analysis at his former institution, the University of Oklahoma.

Main image



Lightning strikes over Camelback Mountain, as seen from Mesa on Aug. 21. Photo by Samantha Chow/Arizona State University