



NATURAL DISASTER AND SEVERE WEATHER PREPAREDNESS

2023 SURVEY REPORT



MOTOROLA SOLUTIONS

EXECUTIVE SUMMARY

[The United Nations](#) reports that extreme weather and climate events have killed more than two million people globally and caused roughly \$4.3 trillion in damages in the last half-century alone.

In 2022, the United States experienced 18 weather events and climate disasters, each of which cost over [\\$1 billion](#) in damages and repairs. These events, including nine hailstorms, three tropical cyclones, two tornado outbreaks and wildfires across the western U.S., resulted in 474 fatalities and cost the country \$175.2 billion in damages according to [the National Centers for Environmental Information](#).

Five months into 2023, the beat goes on with seven \$1 billion climate disaster events. They include unprecedented rain, flooding, landslides and snow in California; ice storms across Texas and the Midwest; a severe cold snap in the Northeast and tornadoes wreaking havoc throughout the South and Midwest. By any measure – loss of lives, damage to property, impact on infrastructure, business continuity issues, regionally, globally, recently or for decades – severe weather has the potential to devastate communities. Severe weather events and natural disasters are no longer restricted to a particular season; they are occurring year round and with [greater frequency](#).

Motorola Solutions commissioned its Natural Disaster & Severe Weather Preparedness Survey to gauge the public's feelings regarding natural disasters, learn about the steps people are taking to help ensure personal preparedness and to uncover opportunities for greater collaboration between emergency managers and community members when it comes to proactive planning and critical communications. The report sheds light on the public's growing concerns and shifting preferences as weather disasters become more severe. These insights can help shape safety steps, considerations and protocols for all stakeholders involved.

The survey found that even though 86% of the respondents are at least somewhat concerned that the intensity and frequency of natural disasters will increase in coming years, more than half (64%) are not at all, hardly or only somewhat prepared to face these unsettling events.

18
U.S. weather
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\$1B+
in damages &
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474
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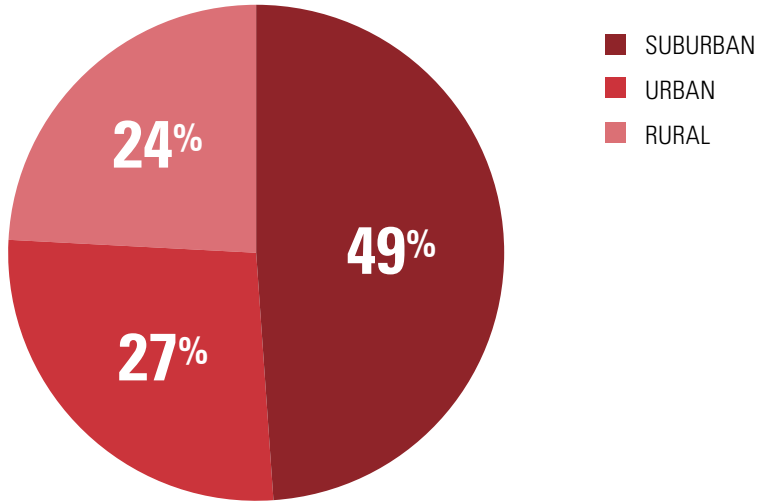
\$175.2B
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64%
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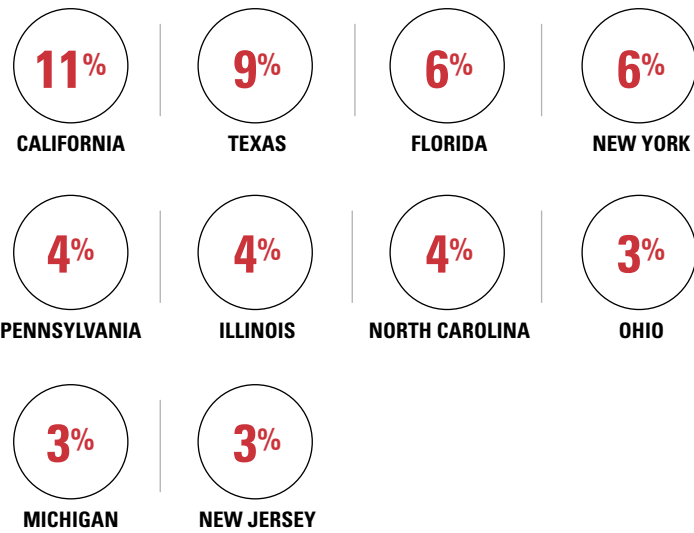
SURVEY RESPONDENTS

How would you describe the area you live in?



Which state, district or territory do you live in?

TOP 10



What is your age range?

32%	17%	18%	17%	16%
18-34	35-44	45-54	55-64	65+



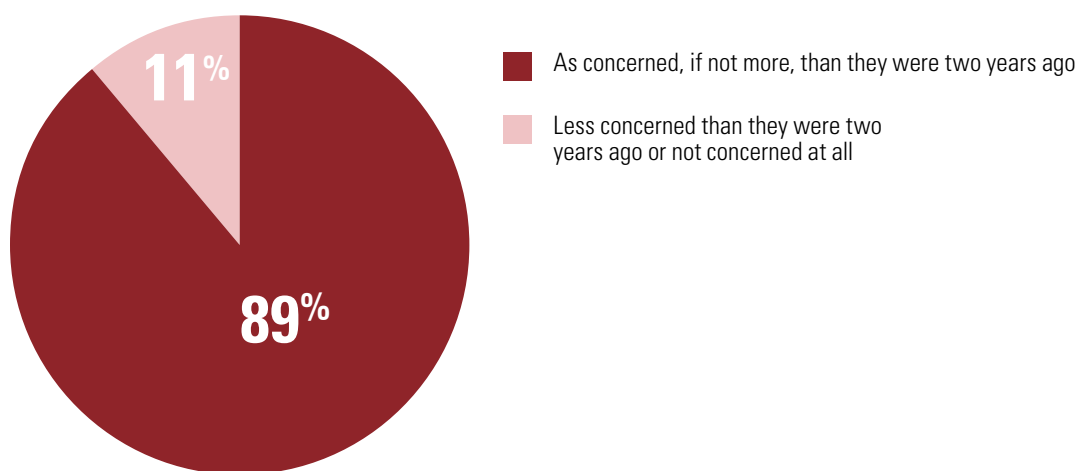


PUBLIC CONCERNS AND PREPAREDNESS LEVELS

Concern about the frequency and severity of natural disasters in recent years is on the rise. Most (89%) respondents have either the same level of concern or are even more concerned about natural disasters, including severe weather events and wildfires, compared to two years ago. Most respondents (86%) are also concerned that the intensity and frequency of natural disasters will continue to increase.

Despite these concerns, only 36% of respondents feel very or extremely prepared. Emergency managers in both the public and private sectors have an opportunity to bolster community preparedness by educating the public about emergency preparedness best practices and the ways that emergency management officials are addressing severe weather preparation, communication and response.

How would you describe your current level of concern regarding natural disasters, including severe weather events and wildfires, compared to two years ago?



In recent years, some regions have experienced severe weather events that were not typical for their locations, such as heavy rains and flooding in California or ice storms in Texas. Nearly one-third (31%) of respondents reported experiencing a new-to-them natural disaster in the past two years. In particular, 35% of respondents feel hardly or not at all prepared to face earthquakes, while conversely 40% feel very or extremely prepared to take on more common weather events such as snow and ice storms.

These natural disaster anomalies not only present new preparedness considerations for the public, they also present new opportunities for those in emergency management roles to revisit community education and engagement strategies.

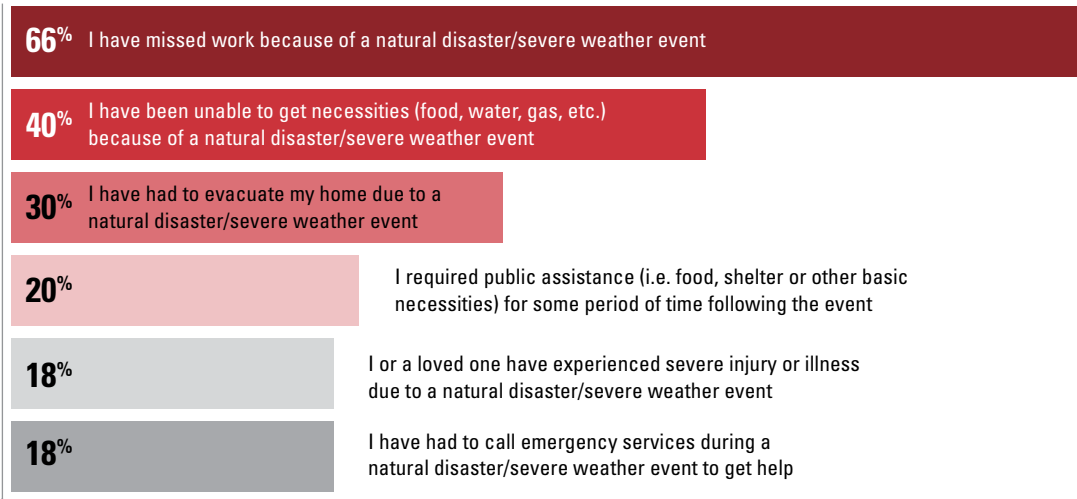


Whether facing a severe weather event that is routine to a region or one that community members haven't experienced before, more survey respondents indicated that they have taken steps to prepare for natural disasters this year than they did last year, including:

- 67%** Assembled a safety kit with items such as flashlights, clean water, non-perishable food, a battery-powered radio, etc.
[Up from 54% in 2022]
- 57%** Signed up for emergency notifications from their local government and/or public safety department
[Up from 48% in 2022]
- 47%** Created an evacuation or family plan
[Up from 36% in 2022]
- 35%** Shared information about themselves or their loved ones with public safety and/or 9-1-1 via an online safety profile or access/functional needs registry
[Up from 18% in 2022]
- 33%** Installed a generator
[Up from 22% in 2022]

Severe weather and natural disasters create significant, negative impacts on members of a community with 66% of respondents saying that they have missed work and 40% saying that they have been unable to get necessities (food, water, gas, etc.).

Please select all of the following that you have experienced due to a natural disaster/severe weather event.



As concerns about severe weather and natural disasters grow, the public is taking more strides to prepare for such events. Proactive steps to build on this momentum and provide more public education will allow residents to feel even more confident in their own personal level of preparedness.

Emergency managers, government agencies, school leaders and private businesses can also change safety outcomes by optimizing preferred communication channels when severe weather is approaching or impacts a community.

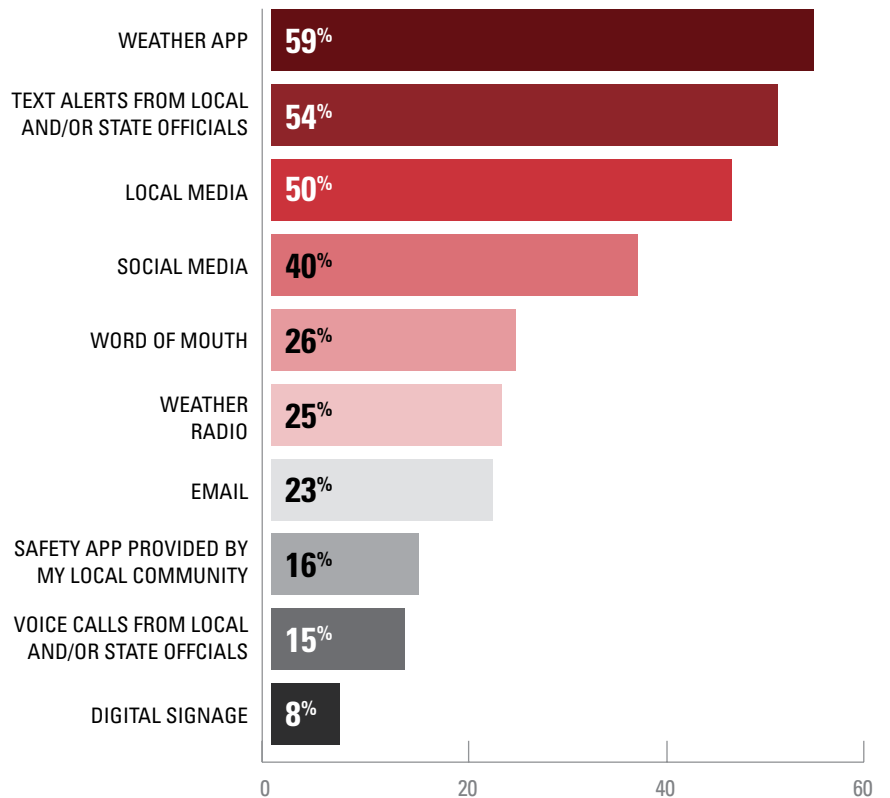




EFFECTIVELY REACHING COMMUNITIES—AND HOW RESIDENTS WANT TO BE REACHED

Nearly nine in 10 respondents indicated they are as willing (40%) or more willing (47%) to sign up for public safety alerts than they were two years ago. When asked about their **personal communication preferences** in the event of severe weather or a natural disaster, respondents ranked text/SMS notifications (35%), sirens/other public broadcast alerts (15%) or a weather app (11%) as their top three preferred communication methods. Their personal preferences, however, are not in line with the ways that they currently receive updates.

How do you currently receive updates about natural disasters, including severe weather events, impacting your local area?



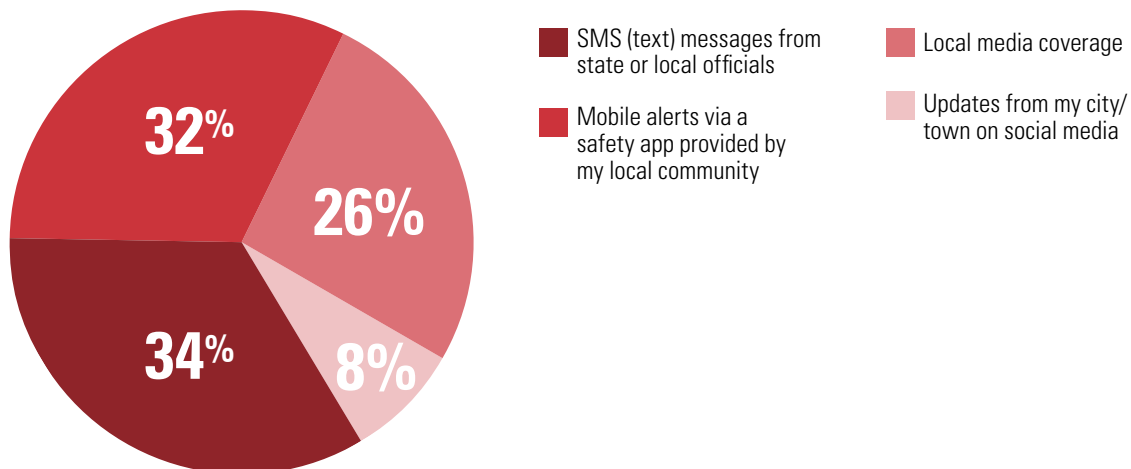


Given that members of the public are accustomed to doing almost everything—working, shopping, reading and communicating—on their cell phones, it makes sense that they would prefer to receive emergency notifications via text/SMS messages.

When asked which communication method they would choose to be their **source of truth** during natural disasters today, respondents ranked SMS/text messages from state or local officials as their first pick (34%), followed by mobile alerts via a safety app provided by their local community (32%) and local media coverage (26%). Given SMS/text messages are the top pick for both preferred communication method and single source of truth, text messaging ranks as a key component of severe weather communications.

In recent years, many members of the public have received updates about natural disasters via social media. But as the social media landscape continues to change (i.e., [Twitter limiting Weather Service automated tweets](#) that communities often use to share severe weather watches, warnings and advisories), those charged with emergency management cannot rely solely on these channels to engage and inform audiences in a quick and reliable manner. It is also interesting to note that while 40% of respondents said they currently receive updates about severe weather via social media, only 8% would choose social media as their source of truth during weather events.

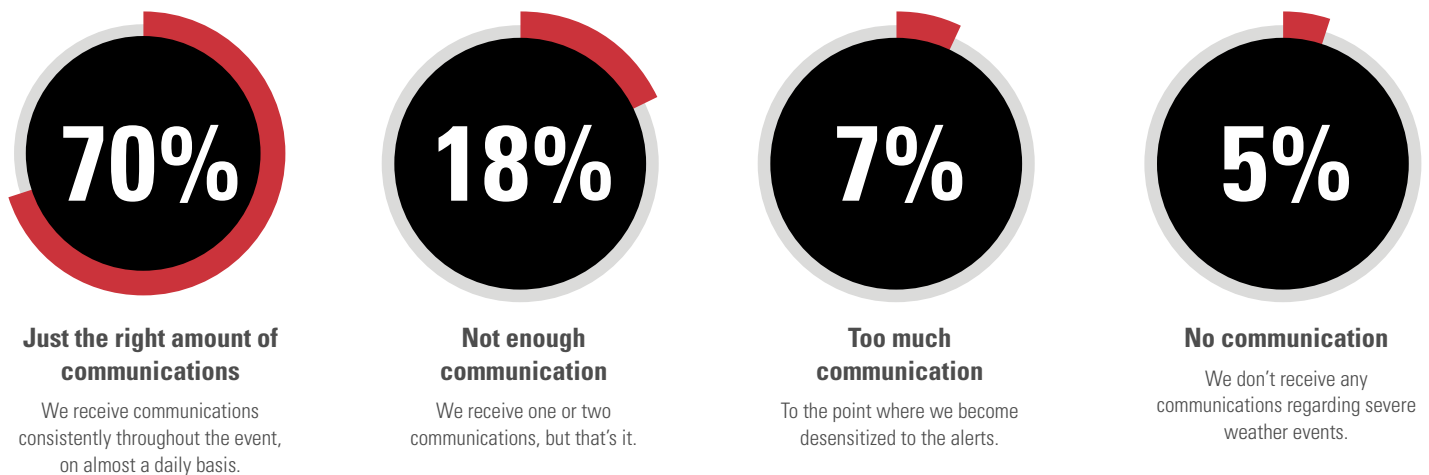
If you had to pick one, which of the following communication methods would be your source of truth during natural disasters/severe weather events?



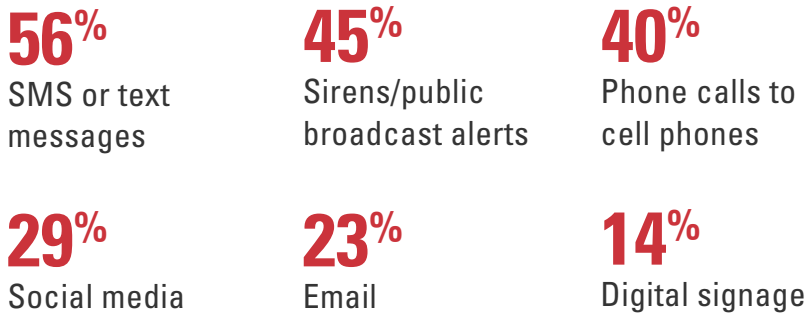


No matter the notification style, it is crucial for emergency managers, government agencies and other safety practitioners to communicate proactively and in a timely manner. In terms of the volume of emergency notifications, 70% of respondents said that they receive just the right amount of communication consistently throughout a severe weather event, while 23% of respondents indicated they do not receive enough notifications or none at all.

When a natural disaster or severe weather event occurs in your area, how much communication do you receive about the event from local public safety and/or emergency management officials?



Specifically, if a community **loses power during a natural disaster**, respondents said that they would prefer emergency communications via the following channels:



When asked how emergency services would communicate with community members in the instance of lost power, 16% of respondents responded that they don't know.

As authorities revisit their severe weather notification protocols, the following preferences from the public should be considered:

- 43%** Send notifications via customized texts and/or phone alerts
- 39%** Provide a safety app with alerts, emergency procedures and a library of safety resources
- 39%** Prioritize outreach from local officials leading up to severe weather events
- 29%** Introduce strategies whereby local public safety officials can gather information on community members via an access/functional needs registry or safety profile system
- 28%** Utilize more local messaging platforms (targeted mailings, flyers, public information sessions, etc.) detailing ways to prepare for severe weather events



Once a dominant channel through which citizens received updates or checked for information, social media's low ranking as a source of truth shows that consumers want information to come straight to them from authorities, rather than checking different social media platforms to get the latest updates.





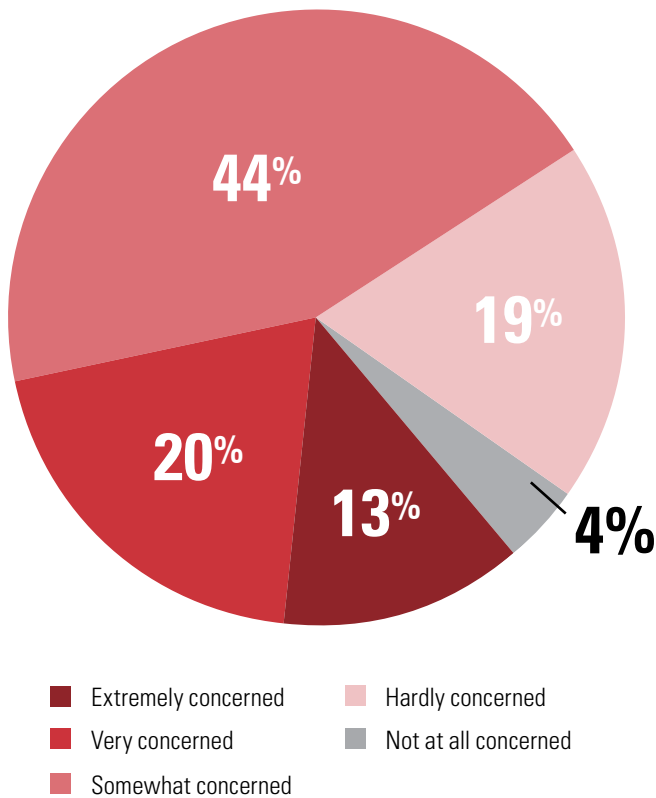
TRUST IN FIRST RESPONDERS, EMERGENCY MANAGERS AND GOVERNMENT AGENCIES

Cultivating trust between a community and first responders is crucial, especially during a natural disaster when resident safety is at an increased risk. Ninety-three percent of respondents indicate that they feel emergency responders in their community are somewhat prepared, prepared or extremely prepared to help them/their community members in the event of a natural disaster, and the same number of respondents also feel at least somewhat confident that their public safety and emergency management agencies are equipped to handle natural disasters. These sentiments show that members of the public have high confidence in local authorities. And when it comes to addressing the needs of the whole community, including those with access and functional needs, 89% of respondents said they are somewhat confident, confident or extremely confident that their local public safety and emergency management agencies are prepared.



When a severe weather event does warrant emergency response, every second counts. Nearly half (44%) of respondents indicated that they are somewhat concerned about help arriving to them in a timely manner following a call for emergency assistance. Community members can proactively create 9-1-1 profiles for themselves and their loved ones with addresses, vehicles, pets or service animals, medical or mental health conditions, photos and more. This critical caller information will help to expedite response and provide first responders with greater situational awareness during any kind of emergency.

In the event of a natural disaster, how concerned are you that first responders would not be able to respond in a timely manner?



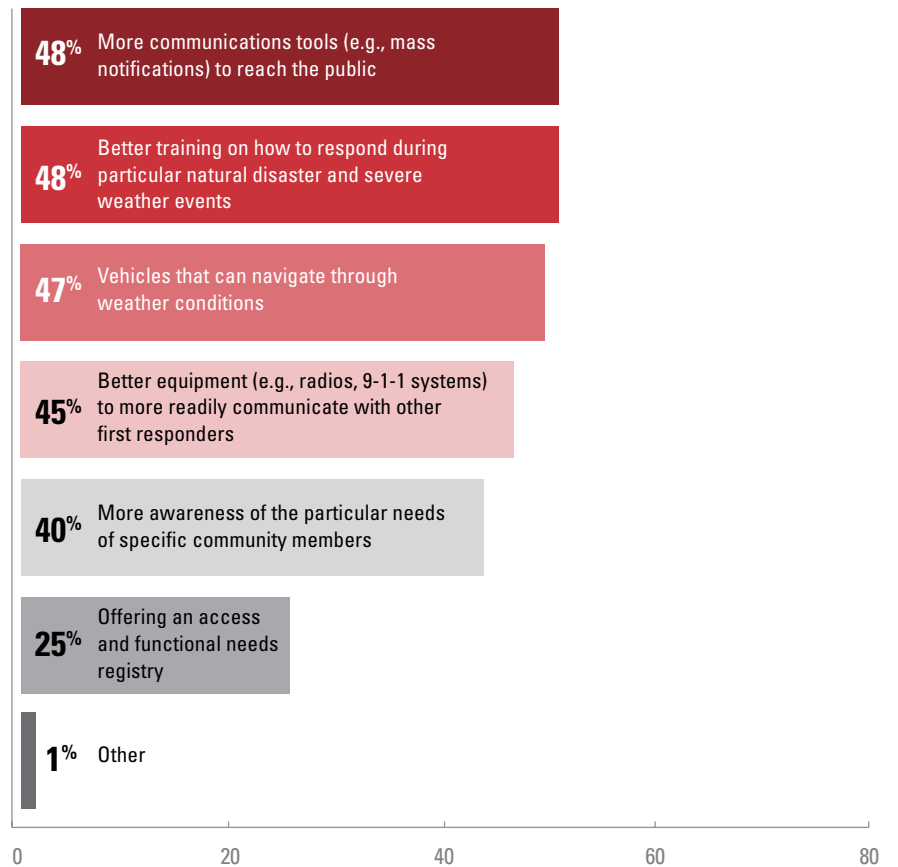
When it comes to trust between first responders and residents, respondents overwhelmingly agreed first responders in their communities are prepared: 93% said that emergency responders are somewhat prepared, prepared or extremely prepared to help them/their neighbors in the event of a natural disaster, and the same number of respondents indicated they feel somewhat confident, confident or extremely confident that their public safety and emergency management agencies can handle natural disasters.





The public believes that the availability of more communications tools and training on how to respond during particular natural disasters and severe weather events (48% each) as well as an investment in response vehicles that can navigate through inclement weather conditions (47%) would help to improve safety outcomes.

What do you believe would make your local public safety and emergency management agencies more prepared to serve the community during a natural disaster/severe weather event?





CONCLUSION

This survey identified public perceptions about severe weather preparedness - both on a community and personal level. The insights within this report can help inform natural disaster and severe weather planning, public education strategies and communication protocols.

While emergency management professionals and public safety agencies play a vital role in preparedness and response, community members play a role in safety, too, and can do their part to keep safe by creating severe weather emergency plans for themselves and their families. The public can ensure they are connected to the right notification methods from trusted sources. At the same time, emergency managers must also meet residents where they are to ensure timely, effective communication when it counts most.

It is also critical that first responders have the appropriate tools and resources to reach community members during natural disasters, including those with access and functional needs. Agency cross collaboration in advance and in the midst of severe weather events will ensure that police, fire and EMS professionals are able to respond swiftly and successfully when natural disasters strike.

Motorola Solutions offers communities a myriad of technologies to help during natural disasters including mission-critical radio infrastructure and devices and 9-1-1 command center software, video security and land mobile radios. Its Rave Mobile Safety platform also addresses challenges and opportunities outlined in this report including multimodal emergency communication capabilities (mass notification, email, phone, signage, texts), mobile safety apps and 9-1-1 safety profiles.

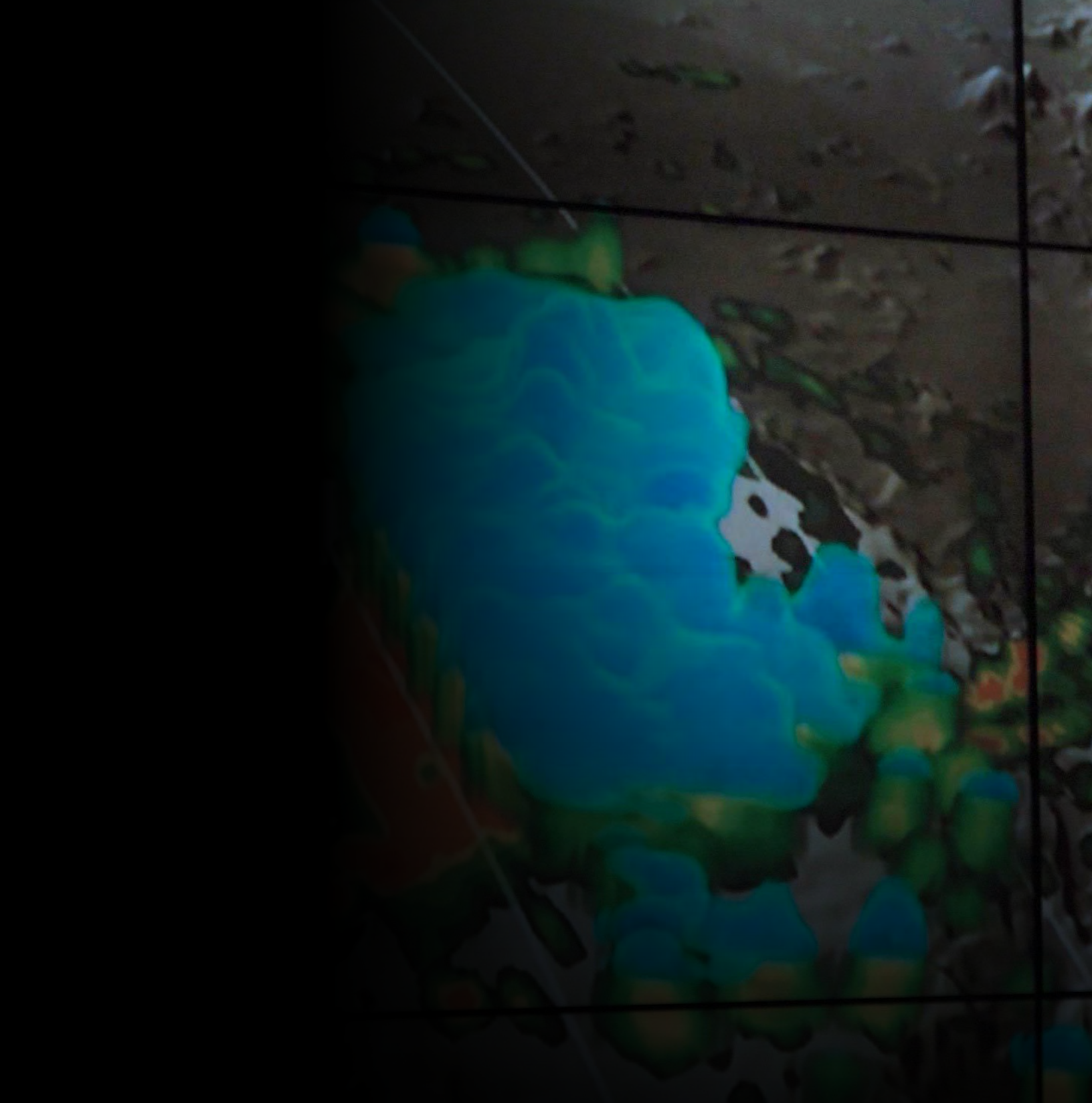
Methodology

The independent market research firm Researchscape conducted this survey. Respondents were 1,000 members of the public aged 18 and over in the United States. The survey was conducted in May 2023.

About Motorola Solutions

Motorola Solutions is a global leader in public safety and enterprise security. Our solutions in land mobile radio communications, video security & access control and the command center, bolstered by managed & support services, create an integrated technology ecosystem to help make communities safer and businesses stay productive and secure. At Motorola Solutions, we're ushering in a new era in public safety and security. Learn more at www.motorolasolutions.com.





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