



Is America #TornadoStrong?

2021 Topline Survey Findings Report

#TornadoStrong



Background

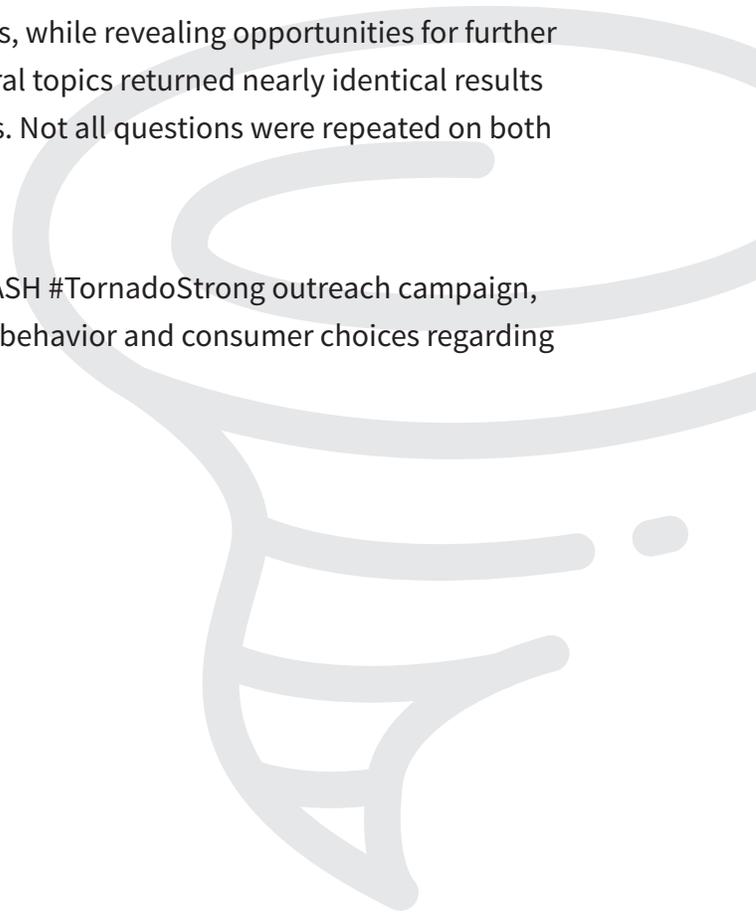
The Federal Alliance for Safe Homes (FLASH®) surveyed consumers during January 2021 to measure consumer awareness and understanding of tornado weather, safety, and protection. The survey identified significant opportunities to increase consumer safety through improved knowledge of meteorological terms, safe and unsafe behaviors during tornadoes, and information about safe rooms, and storm shelters.

Methodology

Each survey sampled 500 respondents in Alabama, Georgia, Kansas, Louisiana, Missouri, Mississippi, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, and Texas.

Survey One provided clear findings on several topics, while revealing opportunities for further investigation for several others in **Survey Two**. Several topics returned nearly identical results for identical questions, further validating the findings. Not all questions were repeated on both surveys.

The overall findings provide the basis for the new FLASH #TornadoStrong outreach campaign, emphasizing key messages that drive tornado safety behavior and consumer choices regarding awareness, preparation, and sheltering.

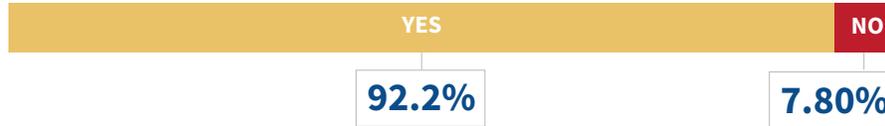


Understanding the Difference Between Tornado Watch and Tornado Warning

Survey One

Q1

Do you know the difference between a tornado warning and a tornado watch?



This question was asked more precisely in Survey Two to verify the high level of confidence reported.

Survey Two

Q1

The National Weather Service weather alert “tornadoes are possible in and near your area” indicates which of the following?



Q2

The National Weather Service weather alert “a tornado has been sighted or indicated by weather radar” indicates which of the following?



While respondents in Survey One were confident that they knew the difference between a tornado watch and a tornado warning, when provided specific definitions in Survey Two, half incorrectly identified a watch, and one-third incorrectly identified a warning.

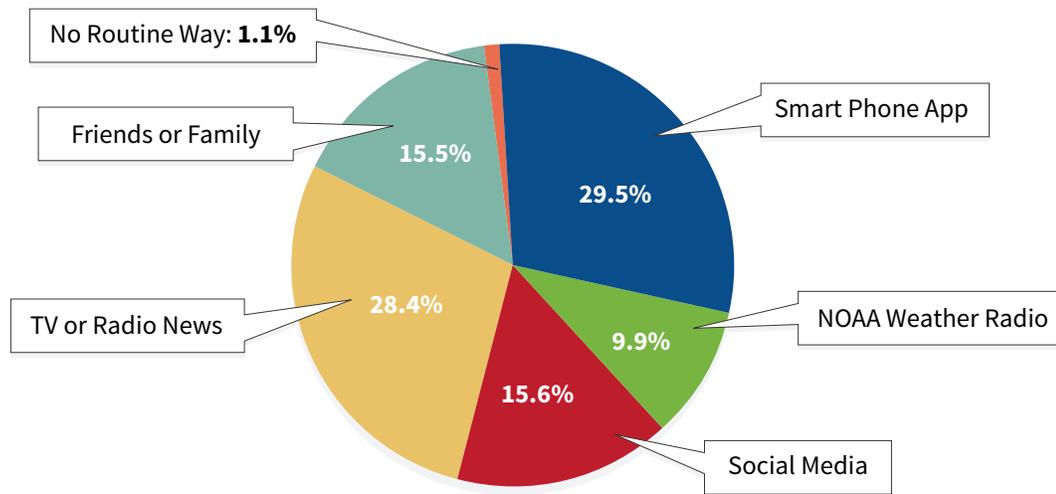
The definition of “tornado watch” appears to be the most confusing at 50% accuracy, and “tornado warning” was better understood at 65.8% accuracy. Neither of the answers on Survey Two validate the original 92.2% confidence level found in Survey One.

Receiving Tornado Alerts, Watches, and Warnings

Survey One

Q3

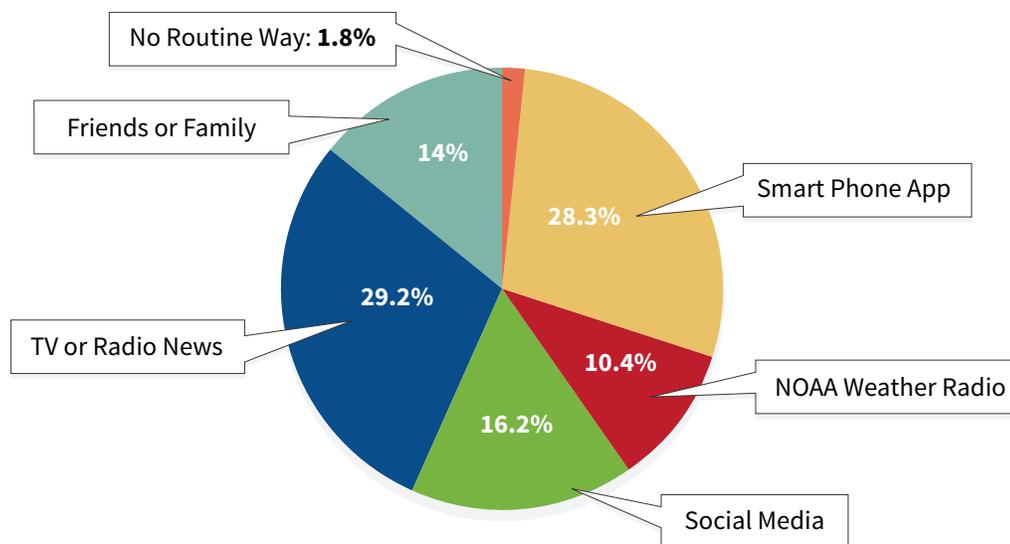
How do you receive tornado alerts, watches, or warnings?



Survey Two

Q3

How do you receive tornado alerts, watches, or warnings?



Both surveys conveyed nearly identical findings that the majority of respondents received severe weather alerts from smartphone apps or TV/radio news channels. The increase in smartphone app use reflects a consistent upward trend.

Knowing What to Do Under Tornado Threat

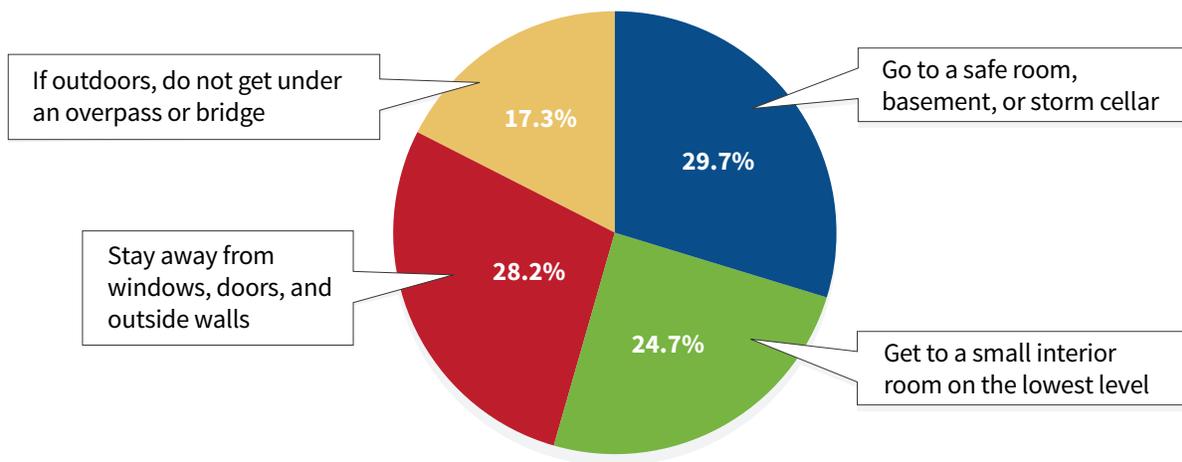
The surveys paired two sets of slightly different questions and provided for open-ended responses.

Survey One

Q4 Do you know what to do if a tornado threatens?

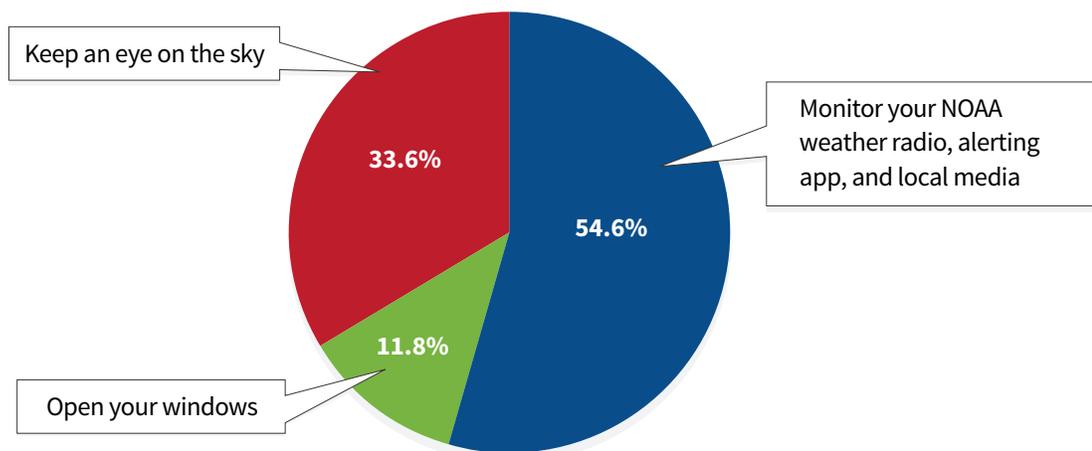


Q5 Please select the steps that you would take if a tornado threatened.



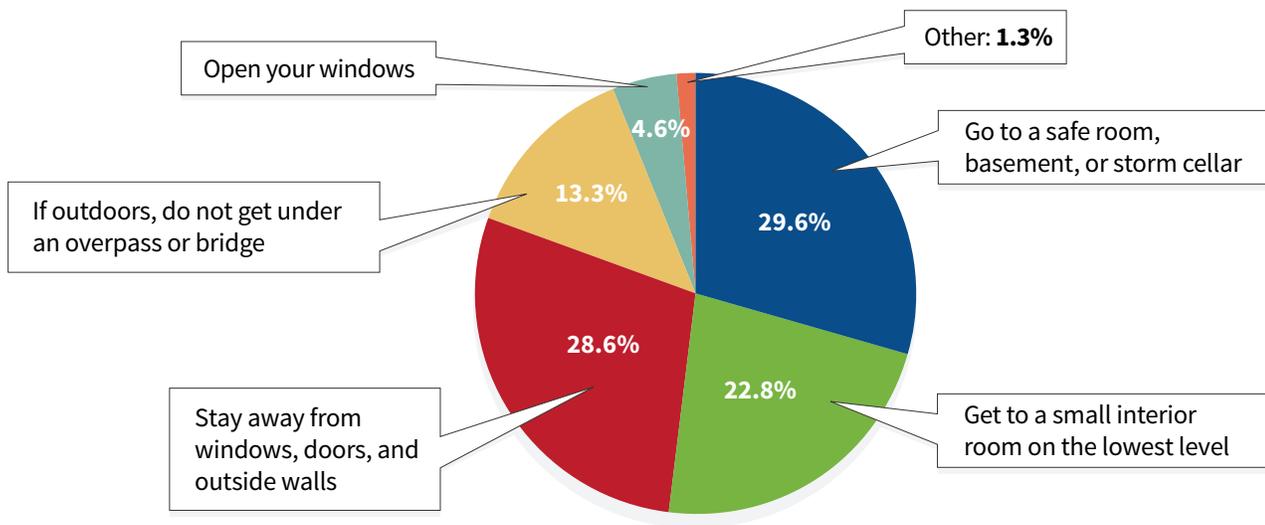
Survey Two

Q4 Please select the precautions you would take if you came under a tornado watch.



Q5

Please select the steps you would take if you came under a tornado warning.



Respondents reported high levels of confidence in their understanding of protective actions to take during a tornado watch or warning. More detailed questions supported those higher levels of understanding, although a small percentage reported interest in opening or cracking windows when under “watch” conditions.

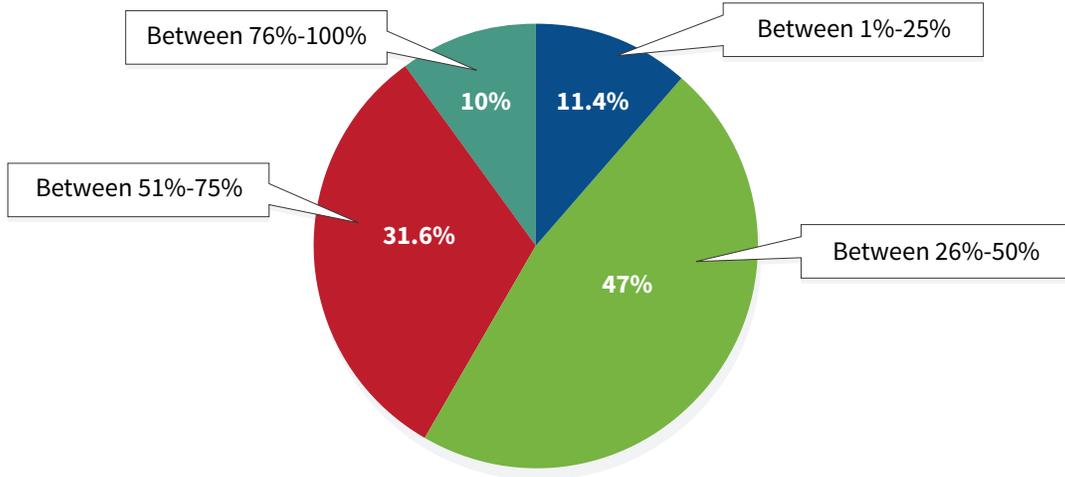
While minimal (11.8% and 4.6%), the support for opening windows indicates a need for continued education. Cracking or opening windows allows wind pressurization inside a home that leads to building damage and often complete destruction.

Aligning Perceived Level of Tornado Risk with Actual Tornado Frequency

Survey One

Q6

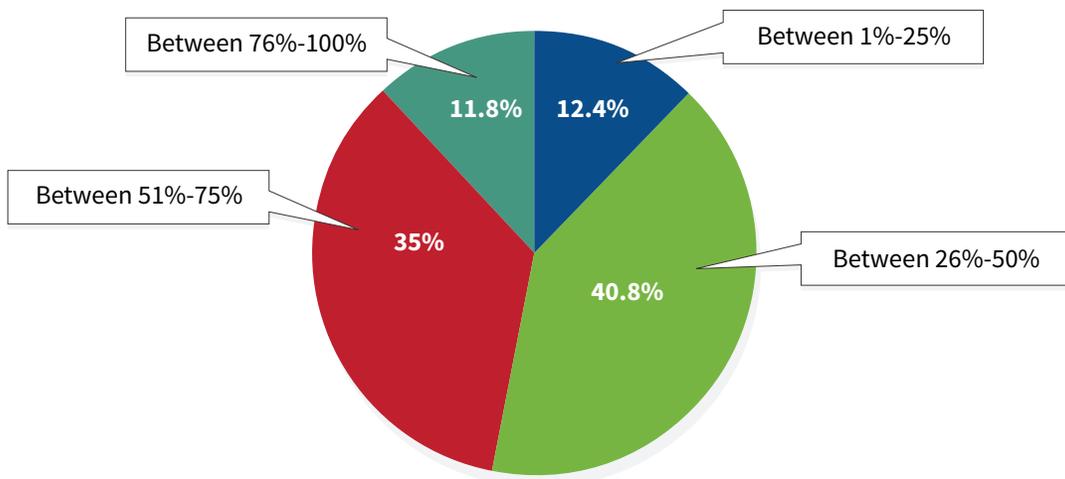
How many U.S. counties do you believe have been under a tornado watch during the past five years?



Survey Two

Q6

How many U.S. counties do you believe have been under a tornado watch during the past five years?



Most respondents underestimated the frequency of tornadoes nationwide and likelihood that they could threaten an area. According to the NOAA Storm Prediction Center, 88% of the counties in the lower U.S. were under a tornado watch at some point between 2015 and 2020.

Understanding the Difference Between Safe Spaces and Safe Rooms

Survey One

Q7

Do you have a tornado safe room or shelter either in your home, garage, or yard?



Survey Two

Q7

Do you have a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council 500 standard?



Respondents were confused by the difference between generic “safe rooms, spaces, or shelters” and FEMA safe rooms and shelters that meet the national technical criteria and standards. When asked if they had a safe room or shelter, 57.2% responded positively on Survey One. That same response dropped to 35.4% on Survey Two, which included the specific technical criteria language. While it’s unclear why respondents answered differently, the finding suggests the need for more promotion of FEMA criteria when building a safe room or purchasing a tested and approved shelter that meets ICC 500.

Survey Two

Q8

Are you aware that a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council 500 standard can provide near-absolute protection in tornadoes up to 250 miles-per-hour?



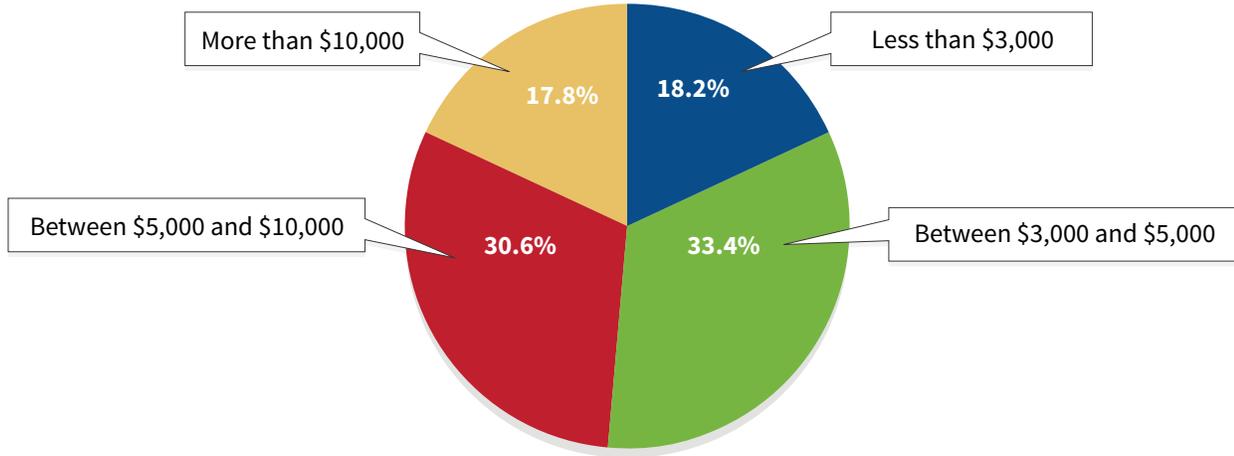
Only half of respondents reported awareness of the most effective life safety protection options. This question appeared on Survey Two only.

Understanding the Cost of Safe Rooms and Shelters

Survey One

Q9

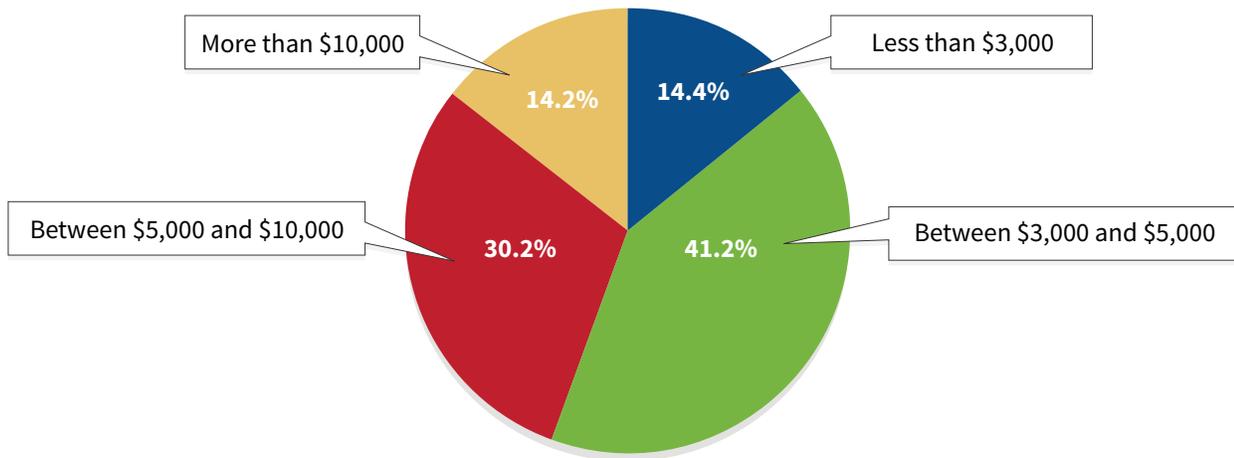
How much do you believe a certified/tested and approved tornado safe room costs?



Survey Two

Q9

How much does a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council 500 standard typically cost?



More than 44% of respondents overestimated the actual cost of safe rooms during new construction when they are most affordable. Many affordable shelter options are available for purchase and installation at and below \$3,000.

Survey One

Q10

Did you know that single-family homes can be affordably built to withstand most tornadoes?



Survey Two

Q10

Are you aware that single-family homes can be affordably built to withstand most tornadoes?



Nearly half (45.6% and 44.2%) of respondents thought that tornado-resistant homes were unaffordable. In fact, \$1,000 in additional metal connectors installed from a home's roof to its foundation could upgrade a house to withstand wind uplift pressure from an EF-0 to an EF-2 tornado.