

# Is America #TornadoStrong?

## 2024 Consumer Survey Topline Report

### Background

The Federal Alliance for Safe Homes (FLASH)® surveyed consumers in February 2024 to measure awareness and understanding of tornado weather, safety, and protection. The survey identified opportunities to increase consumer safety through improved knowledge of meteorological terms, safe and unsafe behaviors during tornadoes, and information about tornado safe rooms and storm shelters.

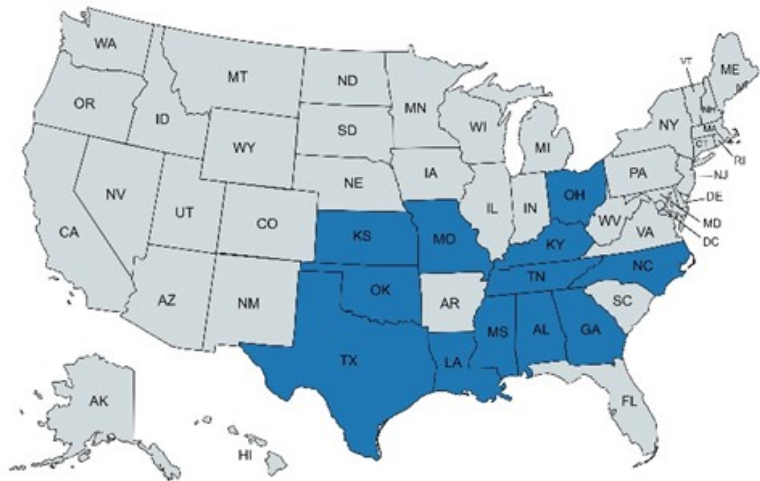
### Summary

This year's survey indicates steady improvement in many aspects of public awareness, safety, and home protection, such as an improved understanding of the difference between a tornado watch and a warning. However, the survey identifies a significant gap in awareness regarding the life-saving potential of safe rooms and affordability, as well as the pivotal role a garage door can play in maintaining the structural integrity of a home during extreme winds.

### Methodology

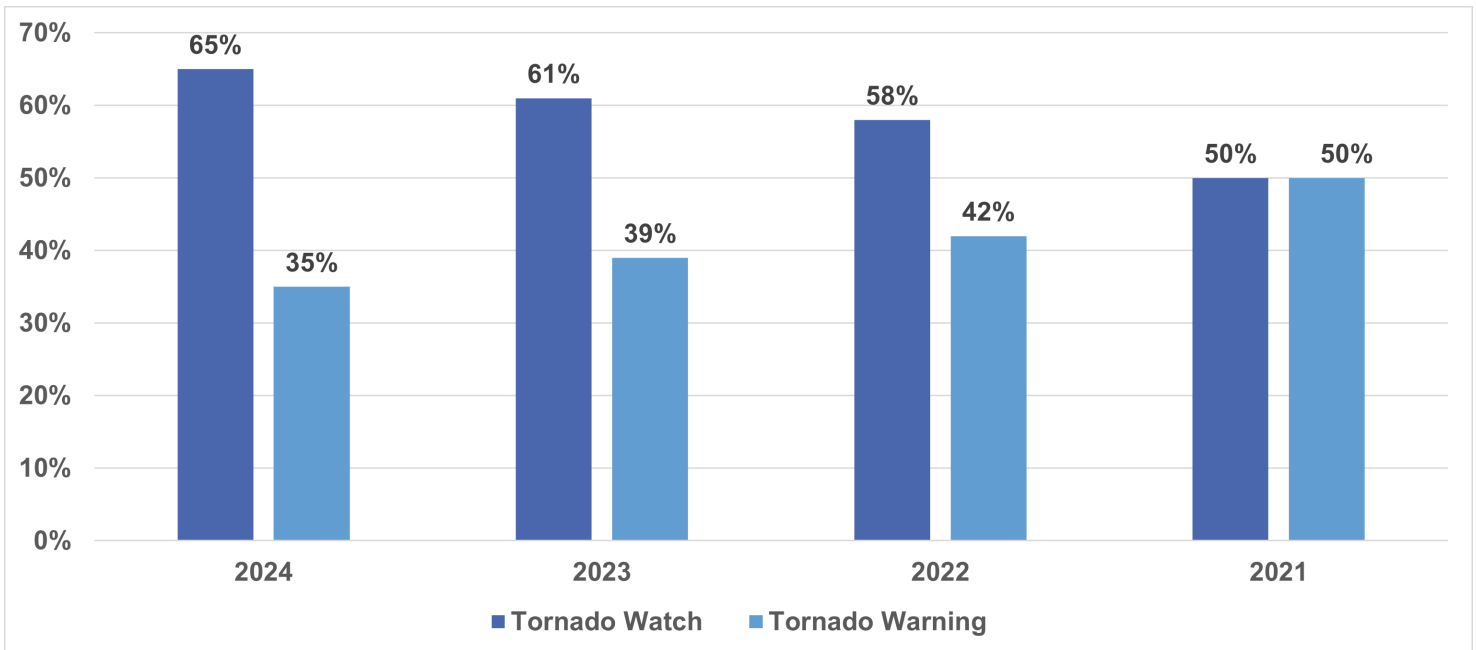
The survey sampled 500 respondents ranging in age from 18-24 (11%), 25-34 (15%), 35-44 (18.6%), 45-54 (20.4%), and >54 (35%). The respondents were 57% female and 43% male and resided in one of 12 tornado-prone states.

Alabama	7%
Georgia	13%
Kansas	2%
Kentucky	6%
Louisiana	4%
Mississippi	3%
Missouri	6%
North Carolina	12%
Ohio	15%
Oklahoma	4%
Tennessee	8%
Texas	20%

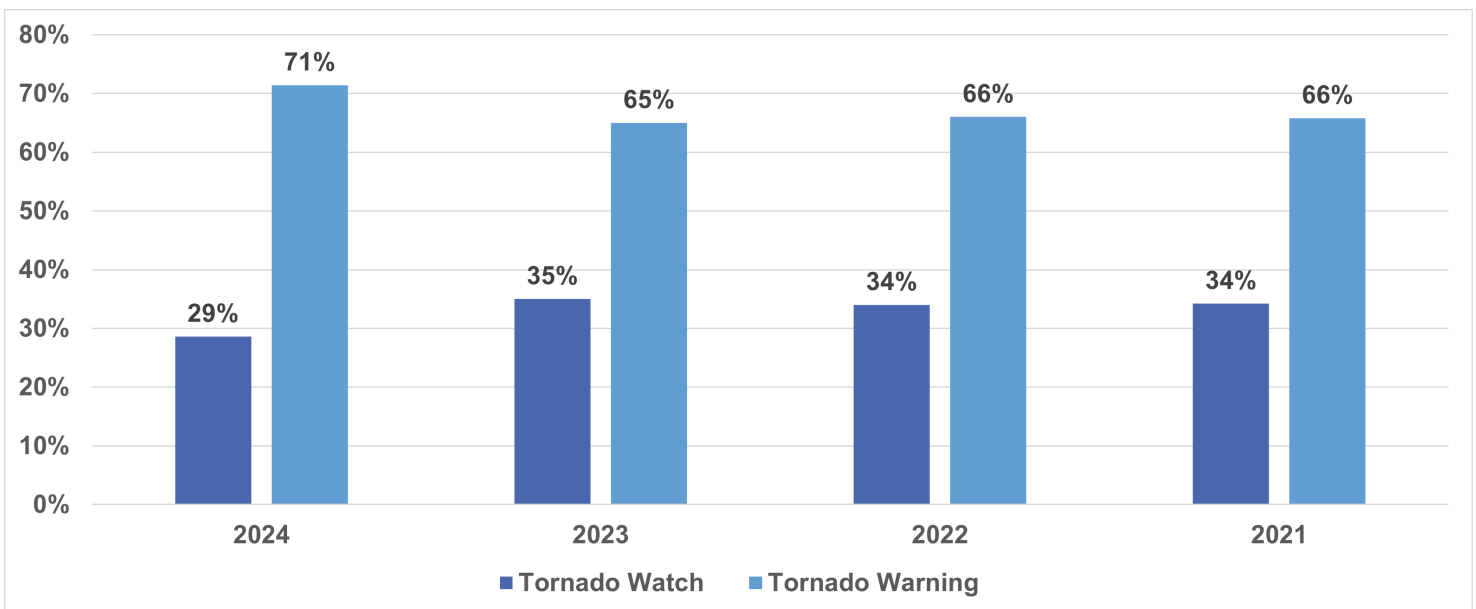


## Understanding the Difference Between Tornado Watch and Tornado Warning

1) The National Weather Service weather alert “tornadoes are possible in and near the watch area” indicates which of the following:



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

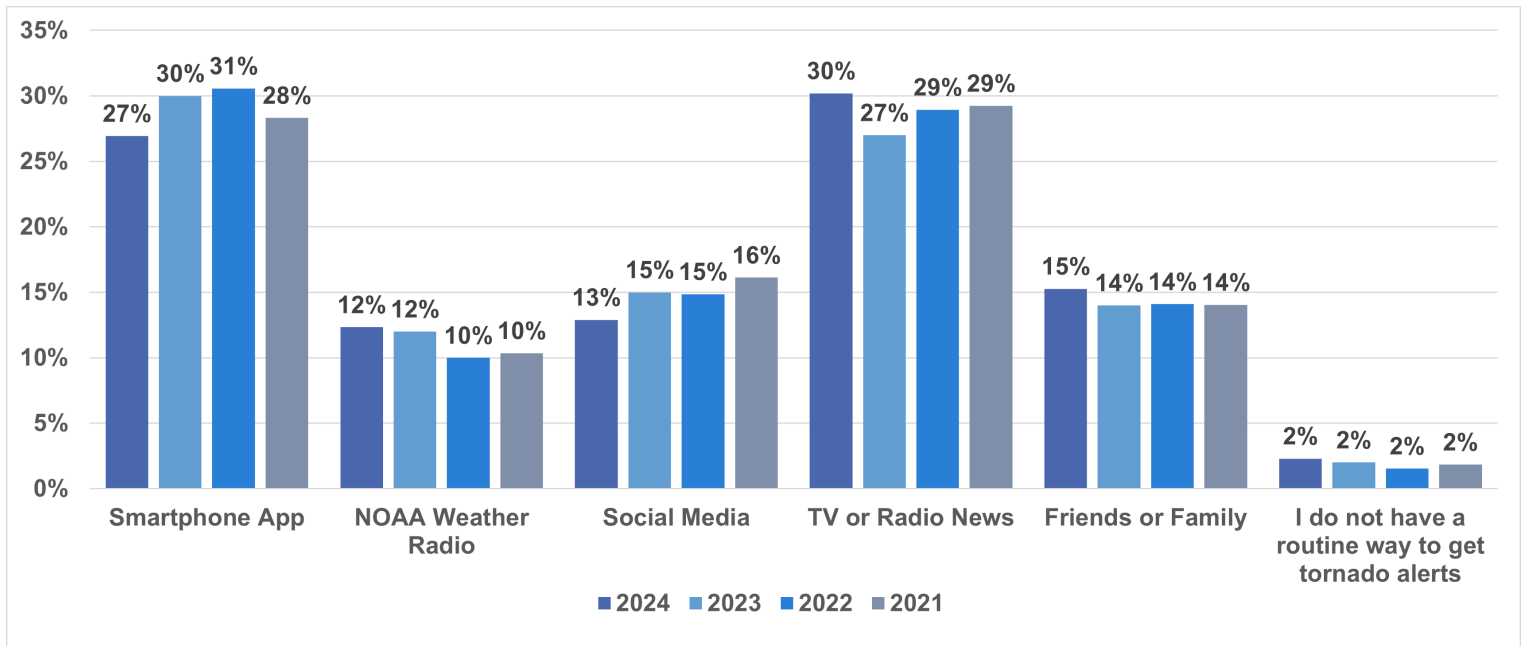


*Survey respondents were confident that they knew the difference between a tornado watch and a tornado warning; when provided specific definitions, 65% correctly identified a tornado watch, and 71% correctly identified a warning. Respondents' ability to correctly identify a tornado watch has steadily increased over the last four years.*



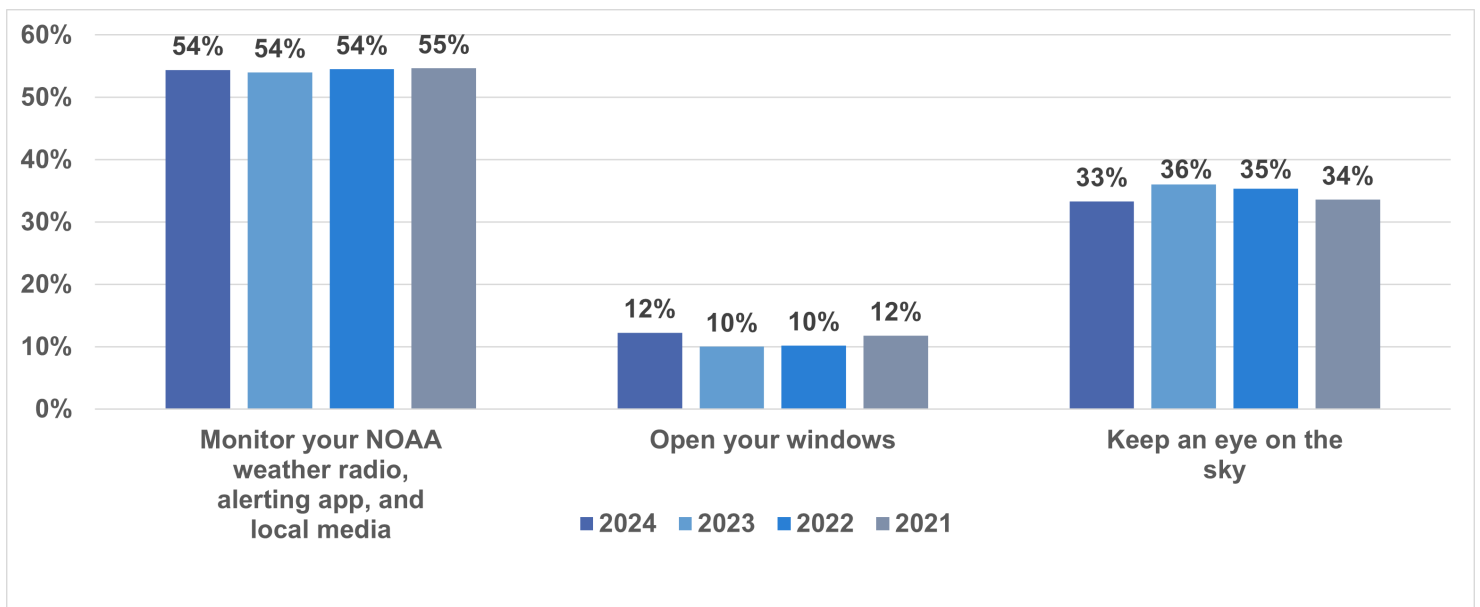
## Knowing What to do When Under a Tornado Threat

### 3) How do you receive tornado watches or warnings?



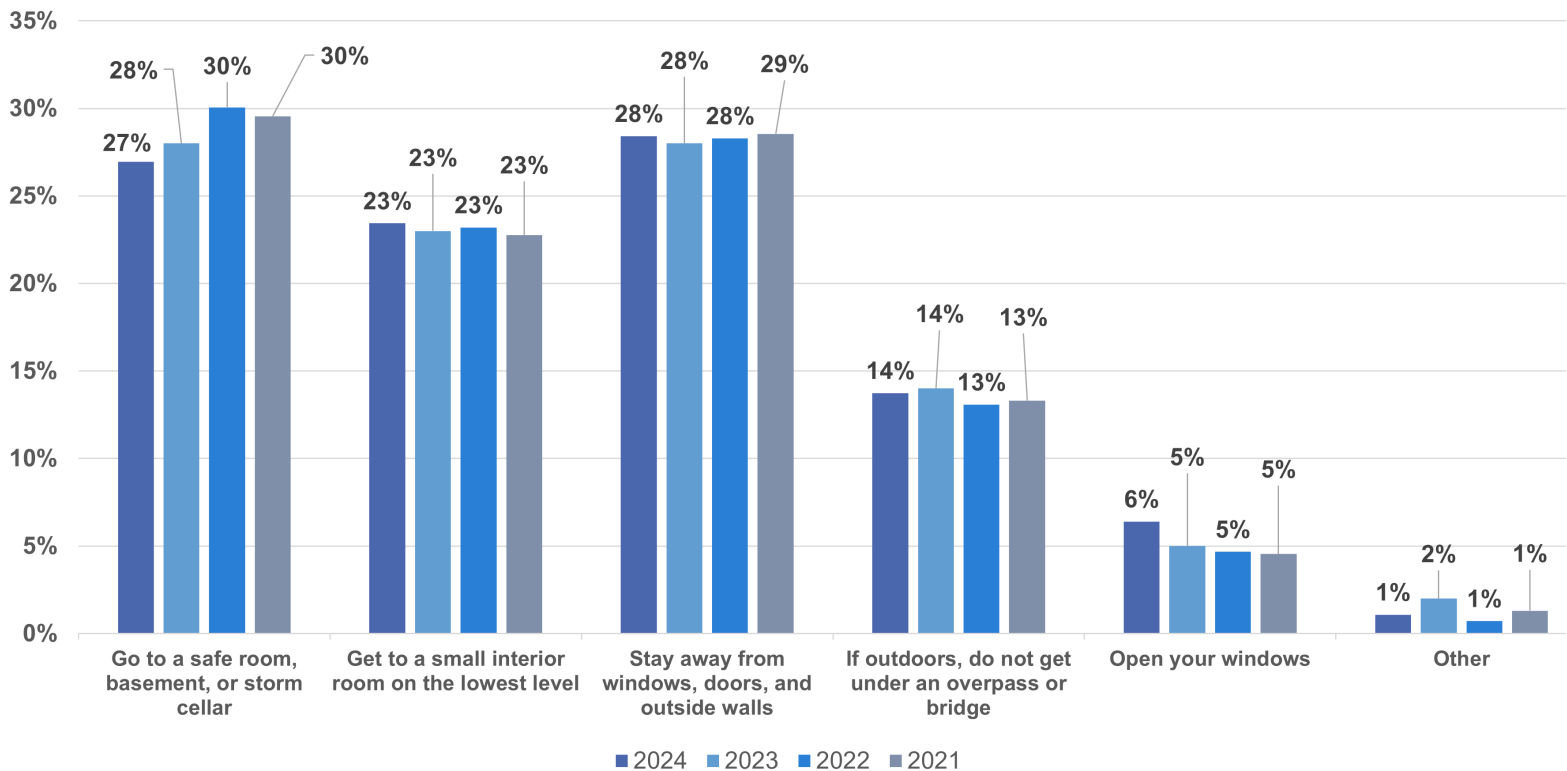
*The findings of this survey question underscore the significance of having multiple avenues to receive weather alerts.*

### 4) Please select the precautions you would take if you came under a Tornado Watch.



## Aligning Perceived Level of Tornado Risk with Actual Tornado Frequency

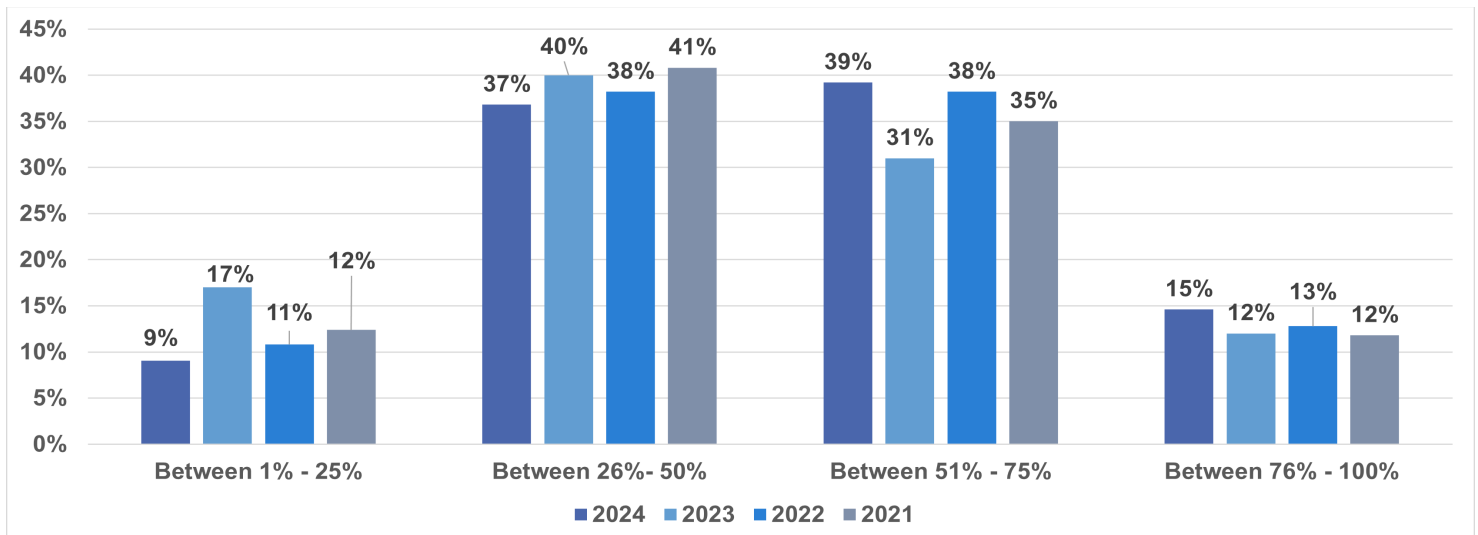
5) Please select the precautions you would take if you came under a Tornado Warning.



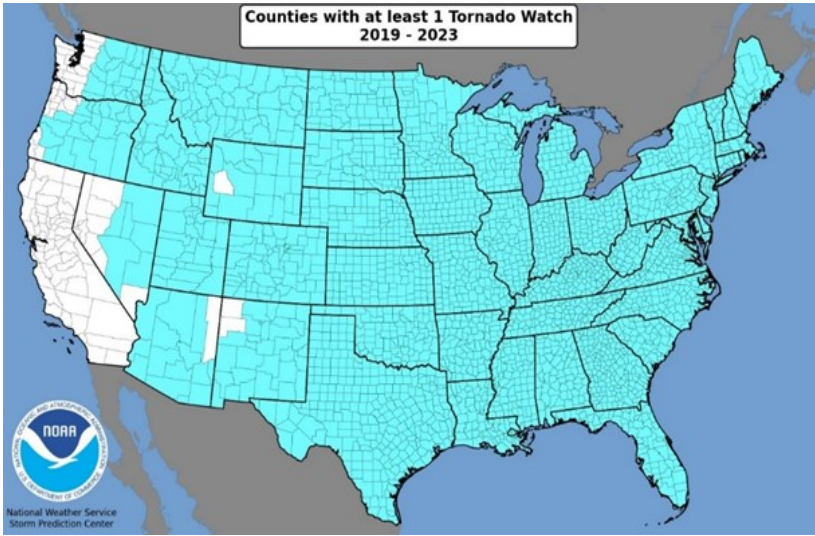
Respondents reported high levels of confidence in their understanding of protective actions to take during a tornado warning, such as taking shelter in a small interior room on the lowest level of the home. However, 6% reported interest in opening or cracking windows when under “warning” conditions.

While minimal, any support for opening windows indicates a need for continued education. Cracking or opening windows allows wind pressurization inside a home that can lead to building damage and often complete destruction as well as life-safety issues from debris.

6) How many U.S. counties do you believe have been under a Tornado Watch during the past five years?

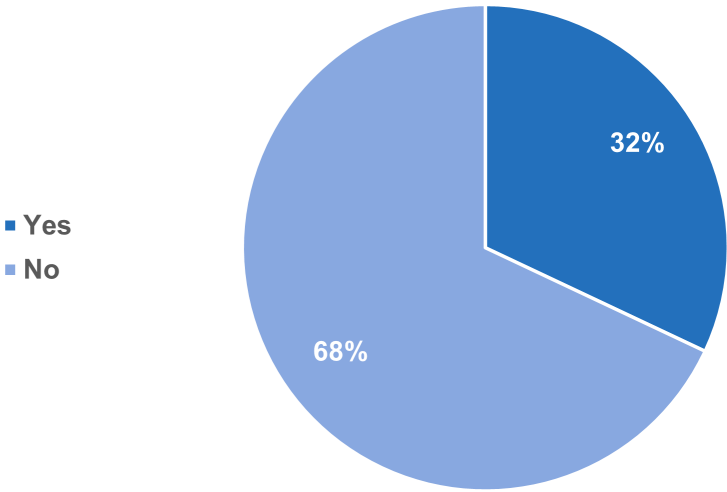


*The National Weather Service data indicates that nearly 95% of U.S. counties have been under a tornado watch over the last 5 years. According to the data, there appears to be a widespread lack of awareness regarding the frequency of counties placed under a tornado watch. This statistic underscores the critical importance of comprehensive tornado safety education not only for those residing in traditional tornado-prone regions but also for individuals and communities nationwide.*



### The Pivotal Role of Garage Doors

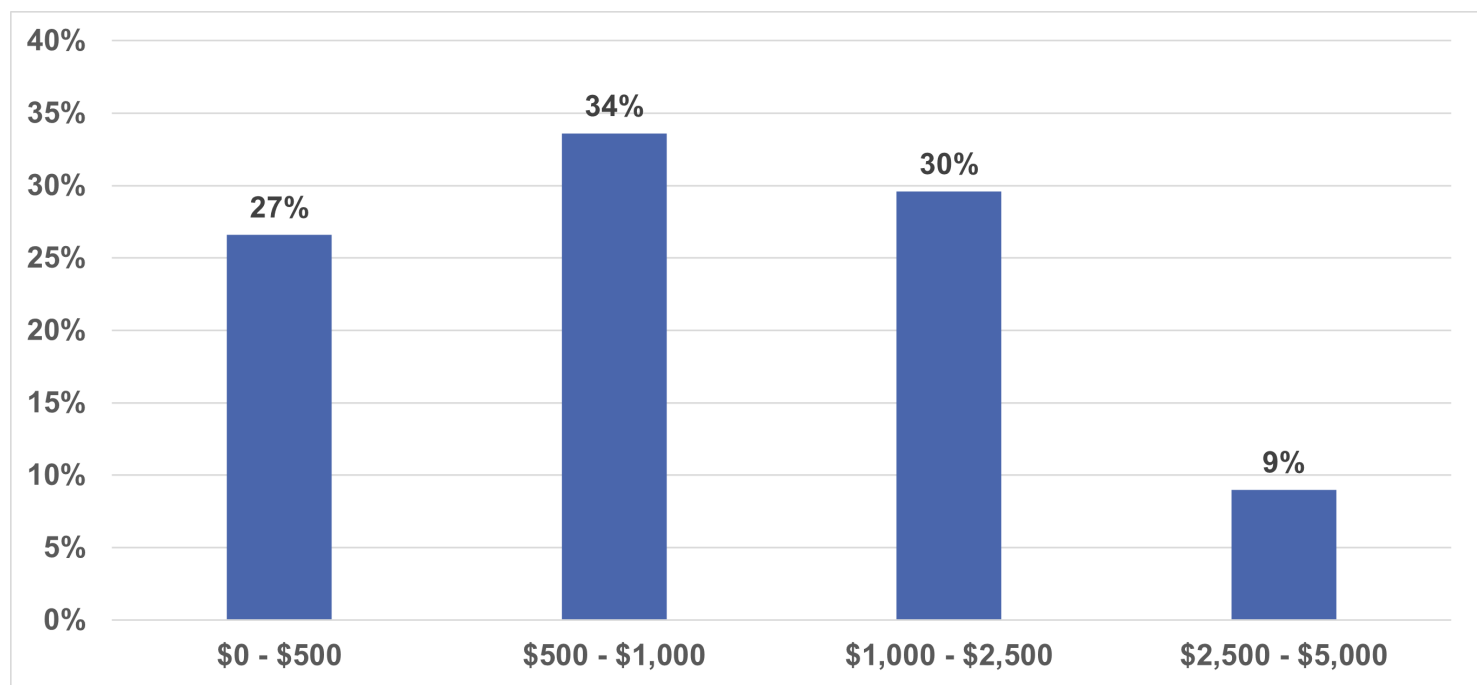
7) Did you know that keeping your garage door intact during a 110 mph or lower windspeed tornado can prevent roof and/or wall damage? (Note: 89% of tornadoes occur at 110 mph or lower.)



*The findings reveal that a significant majority (68%) of respondents lack awareness regarding the importance of having a properly braced or impact-resistant garage door for ensuring the structural integrity of their homes during tornadoes.*

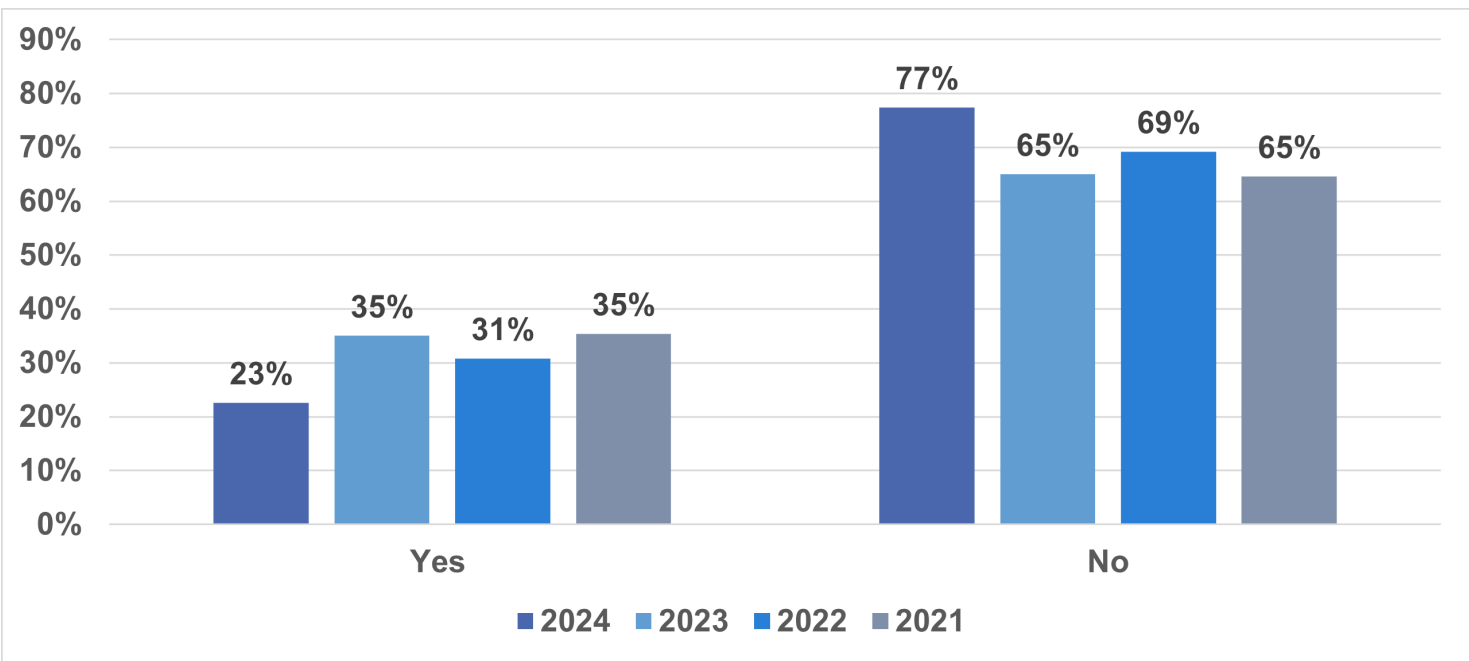
*This highlights the need for awareness efforts to educate individuals about garage doors' pivotal role in safeguarding homes during severe weather events. Analysis by NIST stemming from the aftermath of the 2011 Joplin, MO tornado outbreak indicates that homes observed with intact garage doors are more likely to retain their roofs and walls adjacent to the garage, even in windspeeds up to EF-2 (135 mph) intensity.*

8) Bearing in mind that strong garage doors can prevent roof or wall damage in most tornadoes, how much would you be willing to spend to upgrade your garage door?

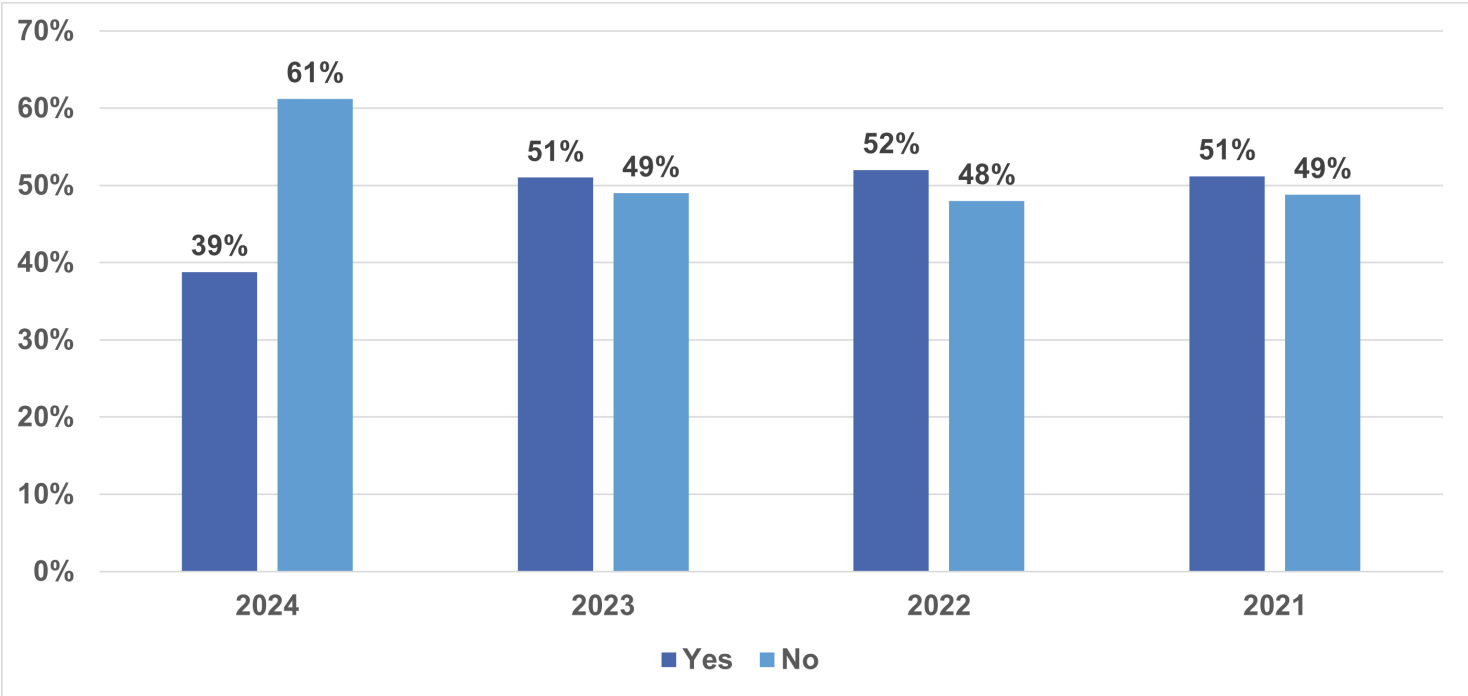


Understanding Certified Shelters and FEMA Safe Rooms Provide “Near-Absolute” Protection

9) Do you have a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500 standard?

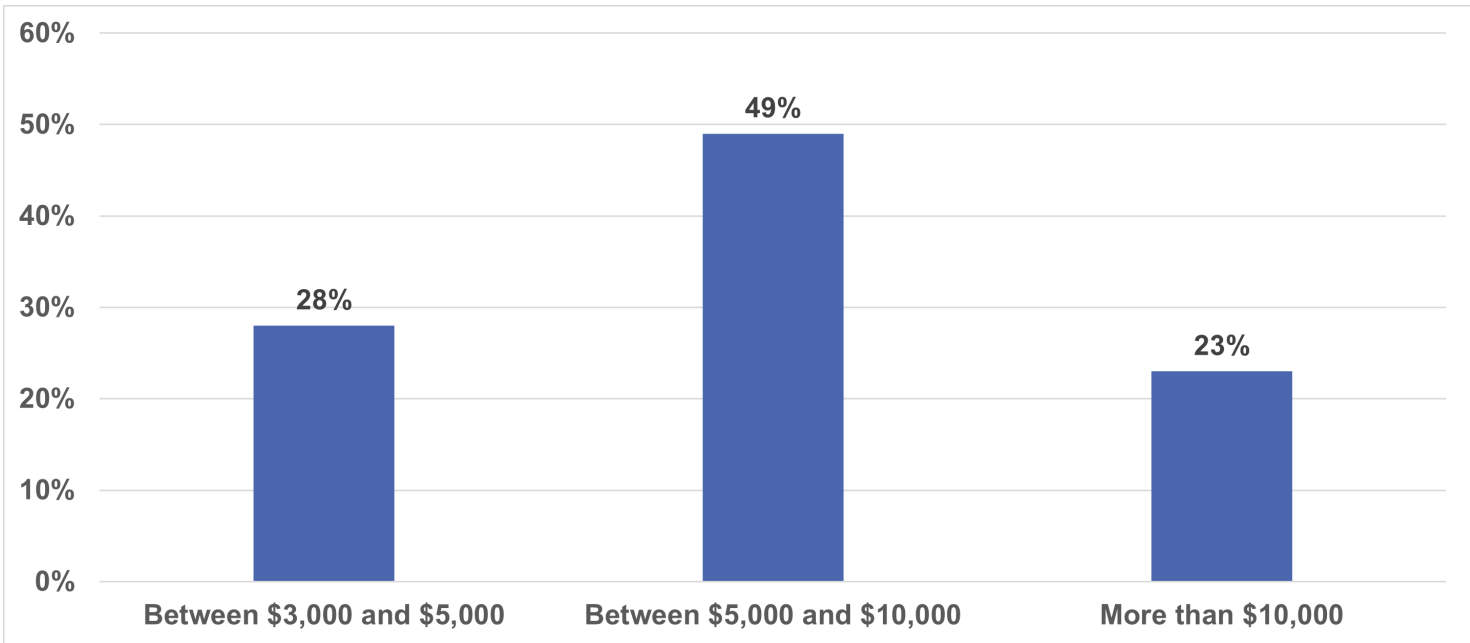


10) Are you aware that a tornado safe room constructed consistent with FEMA guidance or a shelter tested and approved to meet the International Code Council/National Storm Shelter Association 500 standard can provide near-absolute protection in tornadoes up to 250 miles-per-hour?



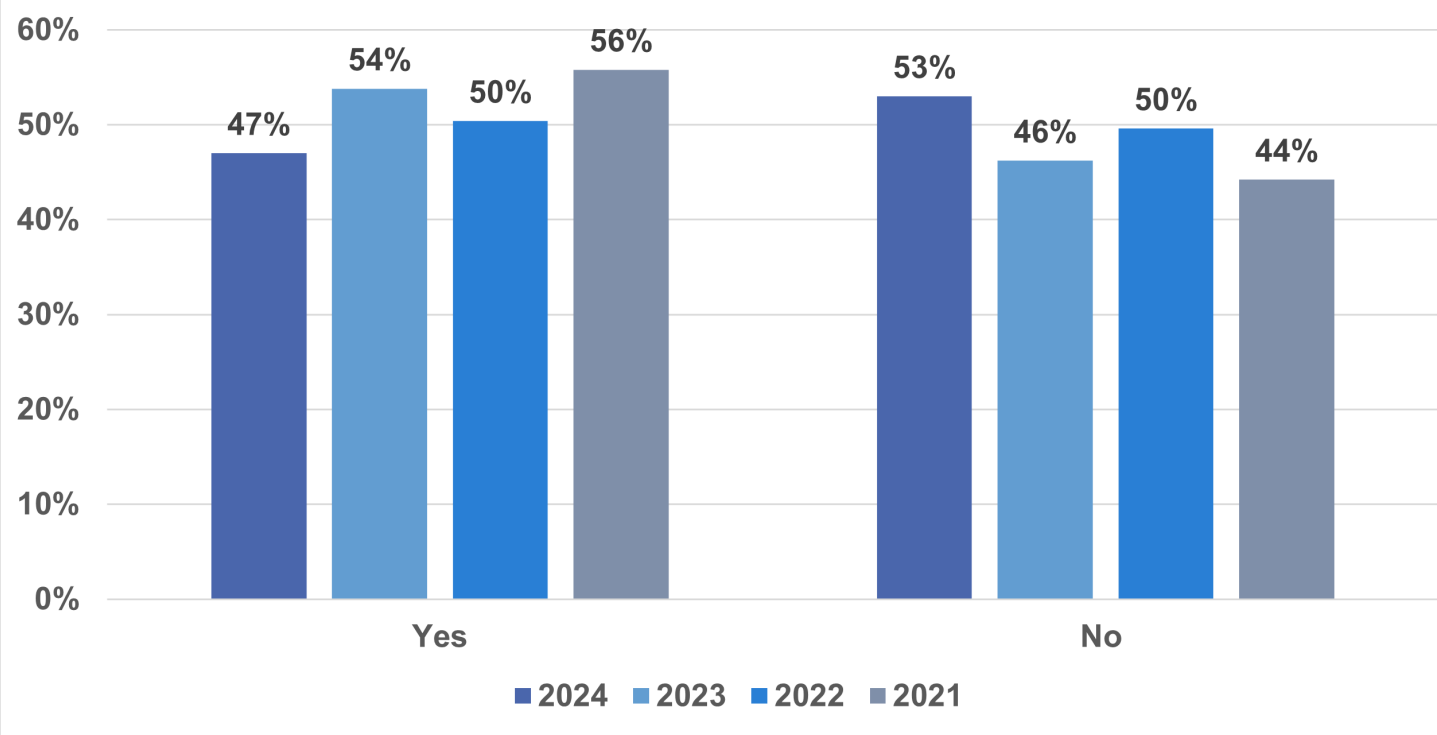
Understanding the Cost of Safe Rooms and Shelters

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



The survey identifies a significant gap in awareness regarding the life-saving potential of safe rooms, with 61% of participants being unaware of their near-absolute protection during tornadoes, while 72% overestimate the associated costs.

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



This insight underscores a crucial communication opportunity that can significantly enhance public safety awareness. Even in the absence of a designated tornado safe room, most homes can be constructed to withstand wind speeds up to EF-2 (135 mph) intensity due to lessons-learned about resilient construction in hurricane zones.

By understanding this, individuals can make informed decisions regarding home design, construction, and renovations that can withstand severe weather events.