

Personal Preparedness in America: Findings From the 2012 FEMA National Survey

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FEMA

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Executive Summary

In 2012, the Nation experienced wildfires in Colorado, tropical storms affecting Florida and the Gulf Coast, earthquakes in California and Alaska, and Hurricane Sandy devastating the East Coast. These disasters highlight the risks facing all Americans and underscore the importance of emergency preparedness for all citizens, regardless of geographic location or sociodemographic status. It is important that citizens recognize their risks and understand the proper actions to take during a disaster. Citizens must also understand that taking advance actions can improve their ability to successfully navigate the immediate disaster and lessen many of the personal impacts left in the wake of disasters.

The Federal Emergency Management Agency (FEMA) and other organizations have sponsored disaster preparedness campaigns to provide the American public with the information they need to get prepared. The need for such campaigns was underscored in Presidential Policy Directive 8: National Preparedness (PPD-8). Signed by President Barack Obama on March 30, 2011, PPD-8 authorizes the Federal Government, and specifically directs the Secretary of Homeland Security to “coordinate a comprehensive campaign to build and sustain national preparedness, including public outreach and community-based and private-sector programs to enhance national resilience.” “Personal Preparedness in America: Findings from the 2012 FEMA National Survey” provides information on the status of the public’s knowledge of, attitudes about, and behaviors related to preparing for a range of hazards. The data can be used to improve collaborative planning, outreach, education, and training to engage all Americans so that they become active participants in creating communities and a Nation resilient to disasters.

Status of Individual Preparedness

FEMA has been measuring levels of specific preparedness behaviors (actions individuals take in advance of a disaster to be better prepared to respond to and recover from different hazards) since 2007. In this period, the levels of preparedness behaviors have fluctuated without showing a clear upward trend.

- Under the category of *Be Informed*, several aspects of knowledge are measured:
 - Nearly half of respondents (46 percent) believe that their community will experience a natural disaster. This is one of the few measures that have shown a consistent upward trend since 2007. Respondents who believe it is likely that a natural disaster will occur in their community were more likely to engage in several preparedness behaviors.
 - Fifty-five percent of respondents reported familiarity with local alert and warning systems, representing a small increase over previous years.
 - Levels of training reported in 2012 include training in CPR (35 percent), training in first aid skills (29 percent), and training in or attending a meeting on disaster preparedness (23 percent). Respondents’ participation in preparedness training, which saw incremental increases in 2009 and 2011, returned to levels similar to those reported in 2007.
 - One-third of respondents (33 percent) reported that they participated in a preparedness drill or exercise, aside from a fire drill, at their workplace, school, or home in the past two years. This was a new question, so no trend data is available.
 - Nearly one-third of respondents (31 percent) reported talking about preparedness with others. Respondents who reported talking about preparedness with others were more likely to have taken

preparedness steps such as making a household emergency plan. This behavior has experienced a decline since 2009.

- Under the category *Make a Plan*, the percentage of respondents who reported making a household emergency plan (43 percent) has fluctuated somewhat over the past few years without any substantial increase since the behavior was first measured in 2007.
- Under the category *Build a Kit*, the percentage of respondents who have disaster supplies in their homes (52 percent) has remained fairly steady over time.

Understanding of Key Protective Actions

The 2012 FEMA National Survey measured familiarity with protective actions for tornadoes and earthquakes by asking respondents to answer “true” or “false” to a number of correct and incorrect actions to take during these two types of disasters. Results showed that in general, respondents were more familiar with the protective actions to take during a tornado than with the actions to take during an earthquake. Findings also showed the need to correct currently held misconceptions about some protective actions. This is the first year that FEMA asked these questions in a nationwide survey.

- Protective actions in the event of a tornado
 - Most respondents knew the following correct information or actions to take during a tornado:
 - Go to a basement or interior room on the lowest floor without windows (99 percent);
 - Find shelter during a tornado, even if they are in a city (95 percent); and
 - Most deaths and injuries in a tornado are caused by flying debris (95 percent).
 - Nearly three-quarters of respondents (72 percent) incorrectly believed that if they are in a vehicle, they should find an overpass and stop underneath it until the tornado passes.
- Protective actions in the event of an earthquake
 - About half of respondents knew the following correct actions to take during an earthquake:
 - Get down close to the ground (65 percent);
 - Get under a big piece of furniture or other cover (65 percent);
 - Do not run out of a building if they are indoors (52 percent);
 - Do not lie on the floor next to a bed (50 percent); and
 - Hold on to something (49 percent).
 - Nearly two thirds of respondents (64 percent) incorrectly believed that they should get in a doorway during an earthquake.

Awareness and Usefulness of Preparedness Information

The 2012 FEMA National Survey measured whether participants were aware of preparedness information disseminated through a variety of channels and whether or not they found it useful. The results highlight the importance of providing citizens with preparedness information, as respondents who recalled receiving preparedness information in the past year were more likely to engage in preparedness behaviors than those who did not recall receiving this information. The results further emphasize the importance of FEMA working with local partners to increase residents' risk awareness and preparedness levels as respondents were more likely to recall information from local community and government sources than from FEMA.

- Nearly two-thirds of respondents (63 percent) had read, seen, or heard information about disaster preparedness in the past year. These respondents were considered to be *Information Aware*.
 - Among the *Information Aware*, media sources were the most common sources of information, with local television reported by 68 percent of respondents and national television reported by 61 percent. Community sources were also often cited by the *Information Aware*, with more than half reporting receiving preparedness information from work (56 percent), school (53 percent), and in conversations with neighbors, friends, or family (53 percent).
- Between 77 percent and 94 percent of respondents who recalled receiving preparedness information found the information useful no matter the source.
- More than half of *Information Aware* respondents (55 percent) indicated that they took steps to prepare after receiving the preparedness information. These respondents reported being motivated because of disasters they have experienced (21 percent) or a belief that a disaster was likely to occur in their community (20 percent).
- Respondents who found at least one source of information useful most frequently remembered preparedness messages that related to knowing what to do in a disaster (62 percent).

An analysis comparing the reported preparedness steps of *Information Aware* and *Not Information Aware* respondents showed that *Information Aware* respondents were more likely than *Not Information Aware* respondents to report that they:

- Participated in disaster training, preparedness exercises, or drills;
- Talked about getting prepared with others in the community;
- Had a household emergency plan that they had discussed with others; and
- Had updated disaster supplies set aside in their home.

Introduction

The 2012 FEMA National Survey was conducted to:

- Provide a snapshot of current personal preparedness behaviors and perceptions regarding the likelihood of a natural disaster occurring in an individual's community;
- Gauge participation in preparedness drills and exercises as well as familiarity with community emergency response plans;
- Compare trends in current personal preparedness behaviors to national surveys conducted in 2007, 2009, and 2011;
- Measure understanding of the protective actions to take during two specific types of disasters—earthquakes and tornadoes; and
- Measure awareness of preparedness information and the relationship between respondents recalling that they had received preparedness information and taking preparedness actions.

Sampling Methodology

The 2012 FEMA National Survey is designed to produce representative estimates of preparedness attitudes and behaviors for the Nation. The survey sample was conducted between June and August of 2012 and included responses from 2,013 U.S. households. The combined landline and cell phone sample represents 98 percent of U.S. households, providing overall results of +/-3.02 percent sampling error (at a 95 percent confidence level). Statistical significance is reported to identify differences in data that does not occur by chance—that there is a “real” difference between groups compared. All significance testing in this report is presented with a 95 percent significance level, indicating that only five times in 100 would the specific results occur by chance. The word “significant” is only used in this report to denote statistical significance. Data was weighted according to geography, age, gender, and race/ethnicity to account for potential biases by adjusting the sample’s demographic distributions to match the distribution in the American Community Survey (ACS) one-year estimates for 2010 population estimates.

Following each section of the findings is a demographic overview highlighting statistically significant differences among demographic segments of the population. The demographic factors examined include the following:

- Race/ethnicity: Hispanic; White, non-Hispanic; Black, non-Hispanic; and Other, non-Hispanic (including those who reported themselves as Asian, American Indian, Alaska Native, Native Hawaiian or other Pacific Islander, or something else);
- Age: 18–34; 35–74; and 75 or older;
- Income: Less than \$25,000 annually and \$25,000 or more annually¹; and

¹ According to the [2010 U.S. Census Bureau Poverty Thresholds for 2010 by Size of Family and Number of Related Children Under 18 Years](#), a family of one adult and four children would need to have a household income of \$25,625 or more to be above the poverty threshold. Any larger families would have a higher threshold. As the 2012 FEMA National Survey does not ask respondents about household size or number of children in the household, “less than \$25,000 annually” serves as a proxy for low-income households.

- Disability status: Individuals with a disability affecting their ability to prepare for and/or respond to a disaster, individuals who care for someone with a disability, and individuals who neither have a disability nor care for someone with a disability.

The methodology, a copy of the survey instrument, and a profile of survey respondents based on the weighted data can be found in [Appendix A: Methodology](#), [Appendix B: 2012 FEMA National Survey Script](#), and [Appendix C: Survey Respondent Profile](#).

Research Findings: What Have We Learned?

The research findings are organized as follows:

[Section 1: Status of Individual Preparedness](#) presents information on respondents' current levels of preparedness and attitudes toward their relative risk. This section provides an overview of residents' preparedness organized by the three *Ready*² campaign categories: "Be Informed, Make a Plan, Build a Kit." This includes familiarity with local hazards and local alert and warning systems, participation in training and drills, talking with others about preparedness, having a household emergency plan, and having disaster supplies. The section also includes a measure of residents' perceptions regarding the risk of experiencing a natural disaster and an analysis of how their perceived risk relates to their level of disaster preparedness.

[Section 2: Understanding of Key Protective Actions](#) describes respondents' knowledge of key protective actions to take during an earthquake or tornado.

[Section 3: Awareness and Usefulness of Preparedness Information](#) reports on respondents' awareness of preparedness outreach and the utility of such outreach. This section examines whether respondents recalled receiving preparedness information in the past year, which serves as the basis for the *Information Aware* and *Not Information Aware* comparison groups used throughout the section. For those who recalled receiving preparedness information, the section specifically discusses where they received the information, whether they found the information useful, whether they took preparedness steps after receiving the information and what motivated them to take those steps, and what they remembered from the information. The section reviews the relationship between awareness of preparedness information and engaging in preparedness behaviors. In addition, the section compares the current levels of preparedness of *Information Aware* and *Not Information Aware* respondents.

Several questions included in the 2012 FEMA National Survey were also asked in the 2007, 2009, and 2011 FEMA Citizen Corps National Surveys. Where relevant, comparisons to that data are made to demonstrate trends in preparedness behavior over time. In addition, the 2011 FEMA Central States Disaster and Earthquake Preparedness Survey (2011 FEMA CUS Earthquake Survey) included questions about how awareness of preparedness information relates to preparedness behaviors. Relevant comparisons to that data are made as well.

A brief overview of demographic factors is presented at the end of each series of questions. The overview highlights notable statistically significant differences in responses among different sociodemographic segments of the population, using a 95 percent confidence interval.

² Launched in February 2003, *Ready* is a national public service advertising campaign designed to educate and empower Americans to prepare for and respond to emergencies, including natural and man-made disasters. Visit <http://www.ready.gov/> for more information.

Section 1: Status of Individual Preparedness

Understanding where citizens stand in terms of disaster preparedness is important to emergency management practitioners so that they know which behaviors to focus on in developing their preparedness education and outreach campaigns. This section reports on the findings from several measures of preparedness behaviors that were also included in the 2007, 2009, and 2011 FEMA Citizen Corps National Surveys and, where possible, highlights trends in these measures across time. This section on preparedness behaviors is organized around the three *Ready* campaign categories:

- ***Be Informed*** about local/community risks and community response systems and plans, and know what to do in an emergency (as learned through drills and training);
- ***Make a Plan*** that maps out one's household emergency plan and discuss it with others in one's household; and
- ***Build a Kit*** of supplies set aside and maintained for use only in disasters.

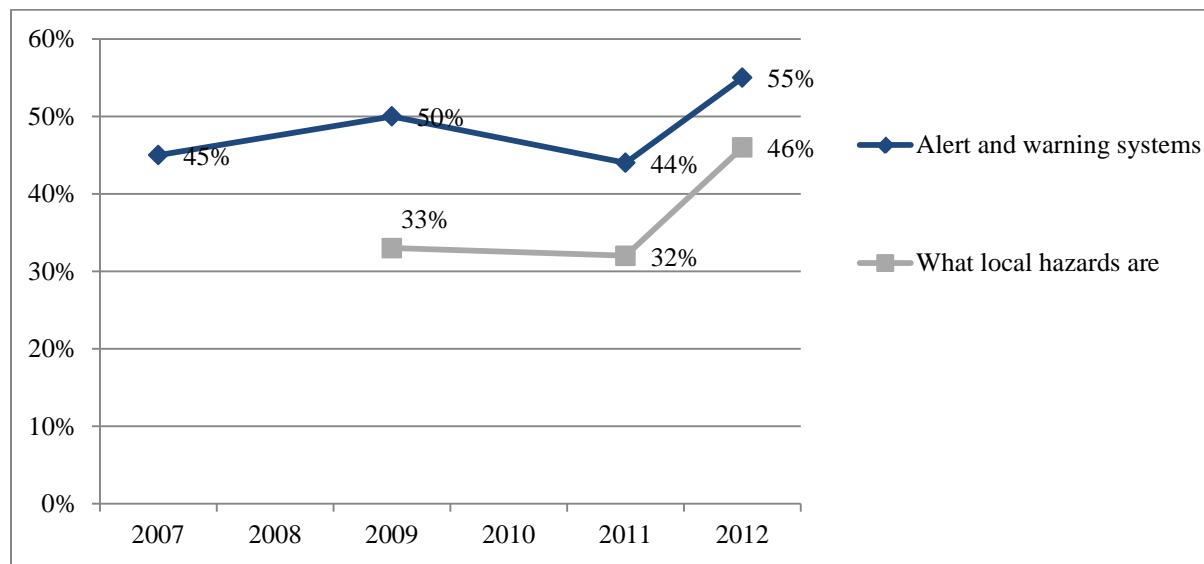
Be Informed

Are Residents Familiar With Local Hazards and Local Alert and Warning Systems?

Understanding local hazards provides residents with the necessary context for knowing the types of disasters they are at risk for experiencing and the actions they must take to prepare. In addition, quick and efficient disaster response is aided by familiarity with local alert and warning systems. Both of these types of information allow residents to customize their household emergency plans and better prepare for a disaster.

As with the previous surveys, the 2012 FEMA National Survey asked respondents whether they are familiar with local hazards and alert and warning systems. As Figure 1 shows, nearly half of the respondents (46 percent) reported familiarity with local hazards, which is a substantial increase from previous years. Familiarity with community alert and warning systems also significantly increased over recent years, with more than half of the respondents (55 percent) reporting this in 2012.

Figure 1: Familiarity With Community Plans and Systems (2007–2012)***



*Each percentage represents top box scores, those stating 4 or 5 (top box, familiar). Respondents were asked “using a scale of 1 to 5 with 5 being ‘very familiar’ and 1 being ‘not at all familiar,’ how familiar are you with...”

**In 2012, the question asked respondents about their familiarity with “What local hazards are.” Previous years’ surveys had asked about familiarity with “Information on what the local hazards are.”

Demographic Factors:

- **Race/ethnicity:** White, non-Hispanic respondents (57 percent) were more familiar with local alert and warning systems than Hispanic respondents (46 percent). Similarly, White, non-Hispanic respondents (50 percent) were more familiar with local hazards than Hispanic respondents (35 percent).
- **Age:** Respondents ages 35 to 74 (50 percent) were more familiar with local hazards than respondents ages 18 to 34 (40 percent).

Did Individuals Participate in Preparedness Training, Exercises, or Drills?

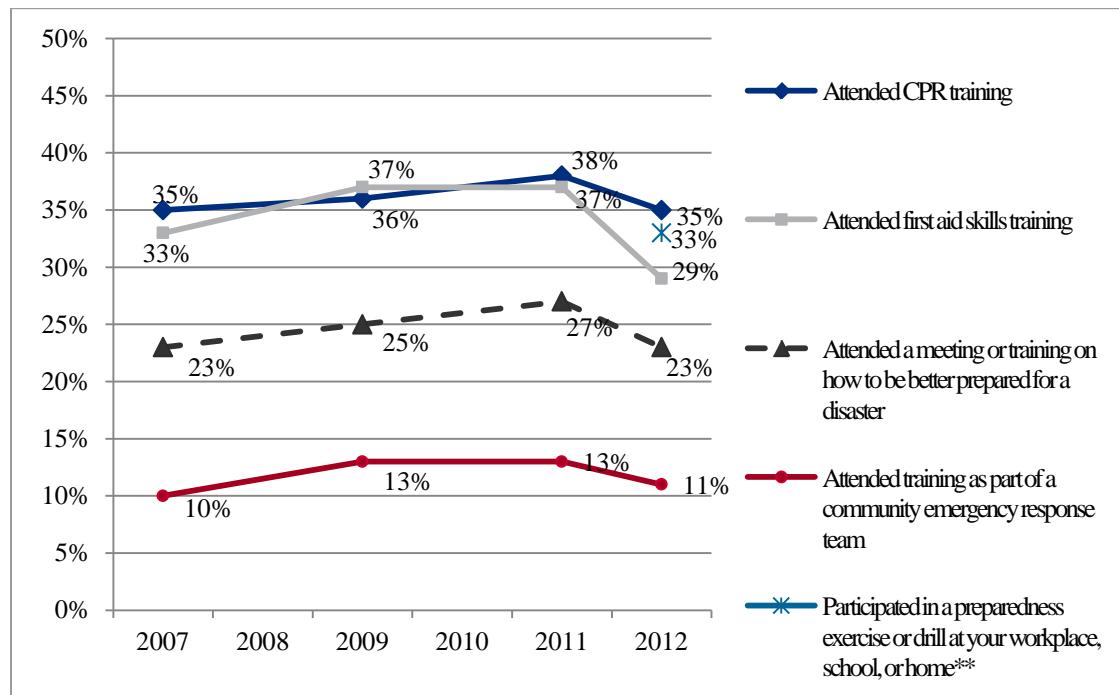
Preparedness education through participation in training, exercises, and drills is widely understood to contribute to the effectiveness with which individuals are able to respond to emergencies and provides them with necessary lifesaving skills such as CPR or first aid. Education allows residents to practice the correct protective actions and determine the best routes in advance, rather than having to develop these strategies during an emergency when stress levels are elevated.

Similar to the 2007, 2009, and 2011 surveys, the 2012 survey asked questions to gauge levels of participation in training, exercises, and drills. As illustrated in Figure 2, results of these surveys show gradual increases in preparedness training participation in 2009 and 2011, while participation in other activities have returned to rates similar to those seen in 2007.

In 2012, FEMA added a new summary question to this series, asking respondents whether they participated in a preparedness drill or exercise, aside from a fire drill, at their workplace, school, or home in the past two years. This item will support development of a baseline measure of participation for PPD-8 campaign initiatives focused on encouraging individuals to participate in specific community-based

preparedness activities. One-third of the respondents (33 percent) reported that they had participated in this type of activity.

Figure 2: Self-Reported Participation in Preparedness Training (2007–2012)*



*Respondents were asked, “In the past 2 years, have you done any of the following...?”

**Participation in a preparedness exercise or drill (excluding a fire drill) at the workplace, school, or home was first measured in 2012 and no data are available for previous years.

Demographic Factors:

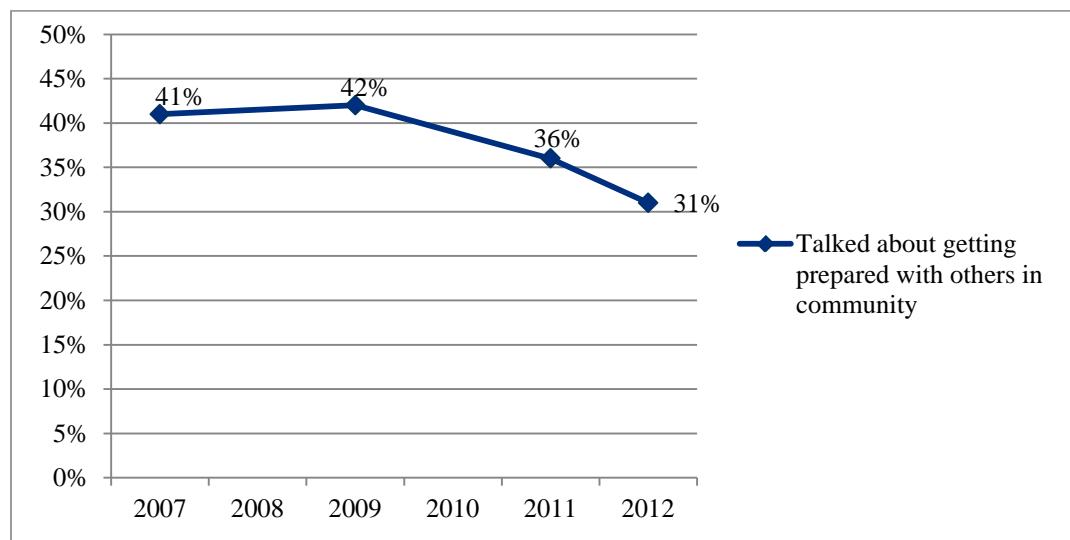
- **Race/ethnicity:** Hispanic respondents (30 percent) were more likely than White, non-Hispanic respondents (21 percent) to attend a preparedness meeting or training.
- **Age:** Respondents ages 75 and older were much less likely than younger respondents to participate in CPR training (13 percent, compared to 39 percent of respondents ages 18–34 and 34 percent of respondents ages 35–74); first aid skills training (9 percent, compared to 34 percent and 29 percent); a preparedness meeting or training (10 percent, compared to 25 percent and 23 percent); and a preparedness drill (9 percent, compared to 42 percent and 31 percent). Those ages 18 to 34 (42 percent) were more likely than respondents ages 35–74 (31 percent) to participate in a preparedness drill.
- **Income:** Respondents with an annual income of \$25,000 or more (25 percent) were more likely than those with lower income (16 percent) to participate in a preparedness meeting or training. Similarly, higher-income respondents (38 percent) were more likely to participate in preparedness drills than lower-income respondents (22 percent).
- **Disability Status:** Respondents with a disability (22 percent) were less likely to attend CPR training than those who care for someone with a disability (31 percent) and those who do not have a disability or care for someone with a disability (37 percent). Respondents with a disability

(22 percent) were also less likely to attend first aid skills training than those who do not have a disability or care for someone with a disability (31 percent).

Did Residents Talk to Others About Preparedness?

Similar to the previous surveys, the 2012 FEMA National Survey asked respondents whether they had talked about preparedness with others in their community in the past two years. As shown in Figure 3, almost one-third of the respondents (31 percent) reported talking with others about getting prepared. This is a significant decrease from prior years where approximately two in five (36 percent to 42 percent) indicated they had talked with others. The downward trend in this behavior, which has been a consistent trend since 2011, is important to note, as the survey results indicated that this behavior was strongly related to other preparedness activities.

Figure 3: Percent of Respondents Who Self-Reported Talking About Preparedness With Others (2007–2012)*



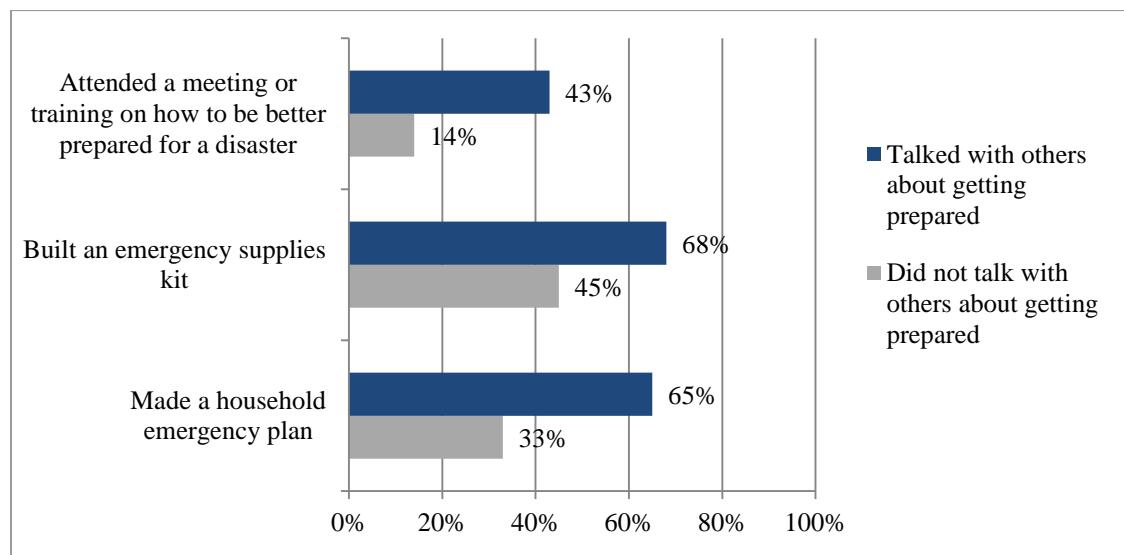
*Respondents were asked, “In the past 2 years, have you done any of the following...Talked about getting prepared with others in your community?”

Demographic Factors:

- **Age:** Respondents ages 35 to 74 (33 percent) were more likely than those ages 75 and older (21 percent) to talk with others in the community.

As shown in Figure 4, individuals who talked with others about getting prepared reported a higher tendency to attend a meeting or training on how to get better prepared (43 percent, compared to 14 percent), build a kit or gather emergency supplies (68 percent, compared to 45 percent), and make a household emergency plan (65 percent, compared to 33 percent).

Figure 4: Participation in Preparedness Behaviors by Self-Reported Talking About Preparedness With Others (2012)



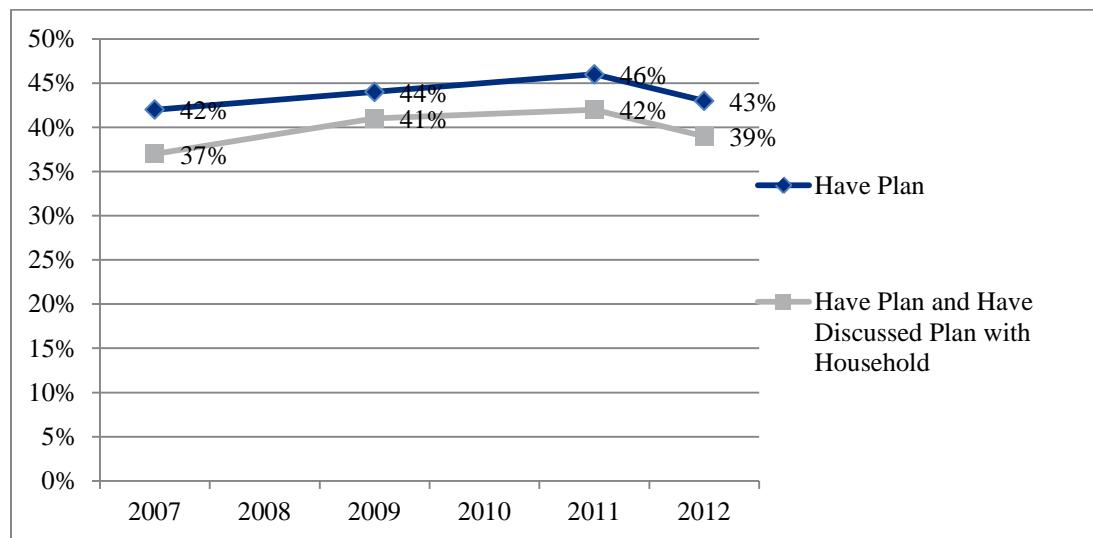
Make a Plan

Do Residents Have a Household Emergency Plan?

Having a household emergency plan in place prior to a disaster is important in making sure all family members know where to go in case of a disaster.

As with previous surveys, the 2012 FEMA National Survey asked respondents whether they had a household emergency plan. For those who had a plan, the survey also asked whether they had discussed the plan with others in their household. As Figure 5 illustrates, while somewhat lower than the 2011 rate, the 43 percent reporting a plan in 2012 is comparable to previous rates. A similar pattern can be seen among respondents who had a household plan that they had discussed with others in the household. The majority of respondents who had a household plan had also discussed the plan with others in their household (39 percent of all respondents; 89 percent of respondents who had a household plan).

Figure 5: Self-Reported Household Plans (2007–2012)*



*Respondents were asked, “Does your household have an emergency plan that includes instructions for household members about where to go and what to do in the event of a disaster?” and “Have you discussed this plan with other members in your household?”

Demographic Factors:

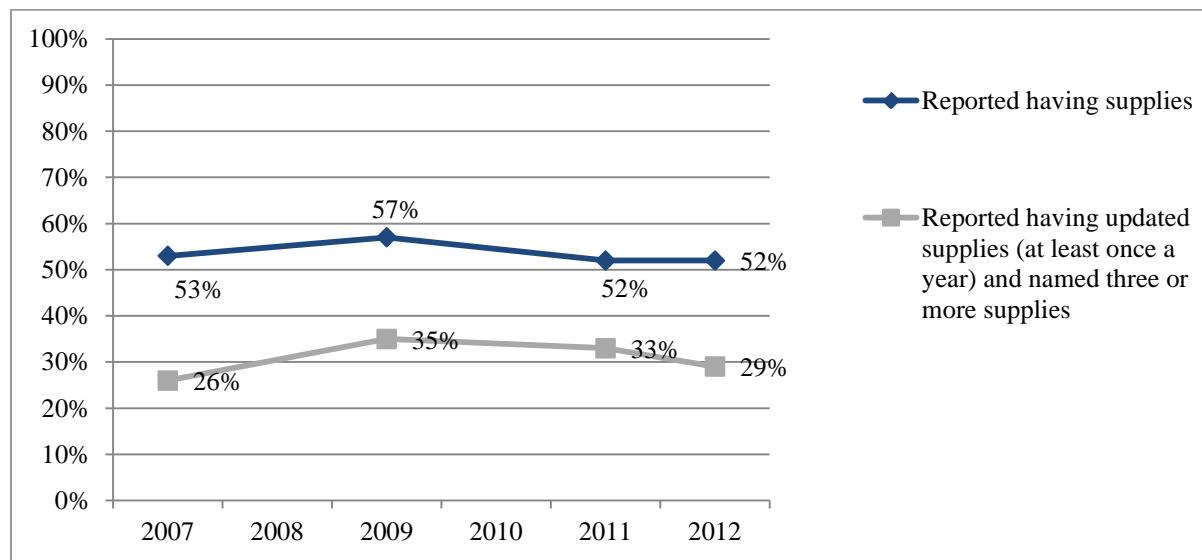
- **Race/ethnicity:** White, non-Hispanic respondents (41 percent) were more likely to have a plan they had discussed with others than Hispanic respondents (26 percent).
- **Income:** Respondents with an annual income of \$25,000 or more (44 percent) were more likely to have a household plan than respondents with a lower income (36 percent). Higher income respondents were also more likely to have a plan they had discussed with others (41 percent, compared to 29 percent).

Build a Kit

Do Residents Have Disaster Supplies in Their Homes?

In addition to having a household emergency plan, having disaster supplies set aside in the home is an important step in emergency preparedness. As with previous surveys, the 2012 FEMA National Survey asked participants whether they had supplies set aside in their home to be used only in the case of a disaster. As shown in Figure 6, more than half of the respondents (52 percent) indicated that they had disaster supplies at home. This measure has remained fairly stable across time. As a more accurate measure of respondents with up-to-date disaster supplies, a measure was calculated to include not only respondents who had disaster supplies, but also those who had updated the supplies within the past year and those who were able to name three or more disaster supplies they had in their home. Results show that the percentage of respondents with updated supplies was about 20 percentage points lower than the percentage of respondents who initially reported having disaster supplies.

Figure 6: Self-Reported Disaster Supplies in Homes (2007–2012)*



*Respondents were asked, “Do you have supplies set aside in your home to be used only in the case of a disaster?” For the second measure, respondents were asked, “Do you have supplies set aside in your home to be used only in the case of a disaster?”; “How often do you update these supplies?”, and “Could you tell me the disaster supplies you have in your home?” Respondents who responded affirmatively to the first two questions and named three or more supplies in the home make up the percentage of those who “have three or more supplies that were updated within the past year.”

Respondents with disaster supplies at home were asked to name the supplies they have. On average, respondents named approximately two supplies each. Table 1 shows the most commonly mentioned supplies. While packaged food, bottled water, and flashlights remained the most commonly reported supplies, some important supplies such as bedding and medications were mentioned by fewer respondents in 2012.

Table 1: Self-Reported Disaster Supplies in Homes (2007–2012)*

| Supply | % of Individuals [†] | | | |
|---|-------------------------------|------|------|------|
| | 2007 | 2009 | 2011 | 2012 |
| Packaged Food | 71 | 74 | 74 | 69 |
| Bottled Water | 73 | 71 | 72 | 66 |
| Flashlight | 40 | 42 | 42 | 42 |
| First Aid Kit | 34 | 39 | 39 | 32 |
| Blankets/Clothing/Bedding | — | 16 | 30 | 18 |
| Batteries | 25 | 27 | 26 | 27 |
| Portable, Battery-Powered Radio | 23 | 20 | 17 | 20 |
| Candles/Matches | — | 8 | 15 | 16 |
| Medications | 9 | 11 | 12 | 8 |
| Fuel | — | 6 | 11 | 8 |
| Generator/Electrical Backup/Alternative Power | — | 10 | 9 | 13 |
| Stove/Lantern/Lamps | — | 3 | 9 | 6 |

*These responses were unaided and asked as part of a multiple-response question. The results represent the total percentage of respondents mentioning the existence of the particular item in their home as part of their disaster preparedness supplies. Respondents were asked, “Could you tell me the disaster supplies you have in your home?”

†Base = individuals who reported that they have disaster supplies set aside in their home. (n=1075)

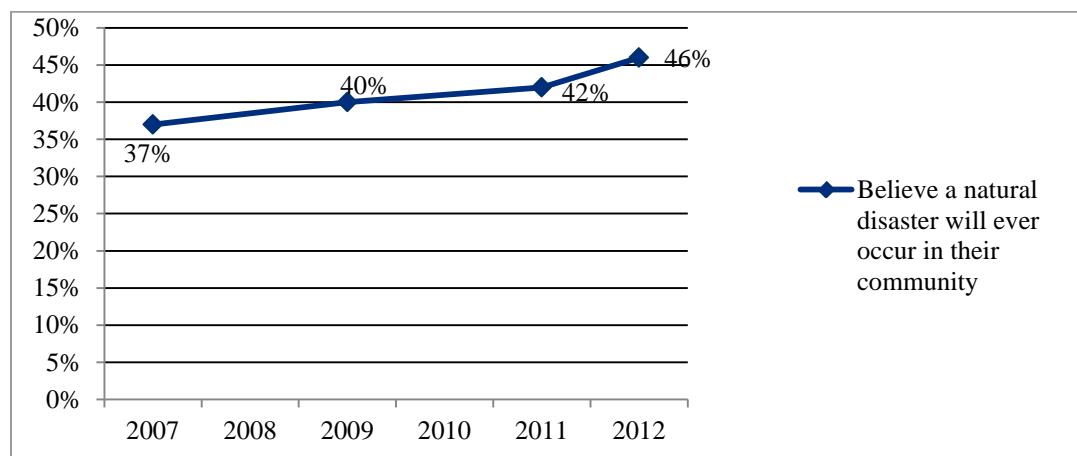
Demographic Factors:

- **Race/ethnicity:** White, non-Hispanic respondents (31 percent) were more likely than Black, non-Hispanic respondents (21 percent) to have supplies they had updated in the past year and of which they could name at least three.
- **Income:** Respondents with an income of \$25,000 or more (31 percent) were more likely than respondents with a lower income (21 percent) to have supplies they had updated in the past year and of which they could name at least three.

Perception of Susceptibility to a Natural Disaster

As with the previous surveys, the 2012 FEMA National Survey asked respondents how likely they think it is that some type of natural disaster will ever occur in their community. As shown in Figure 7, nearly half of the respondents (46 percent) believed that their community was likely to experience some type of natural disaster. This measure has shown a consistent upward trend since 2007.

Figure 7: Perceptions of Risk of a Natural Disaster (2007–2012)*



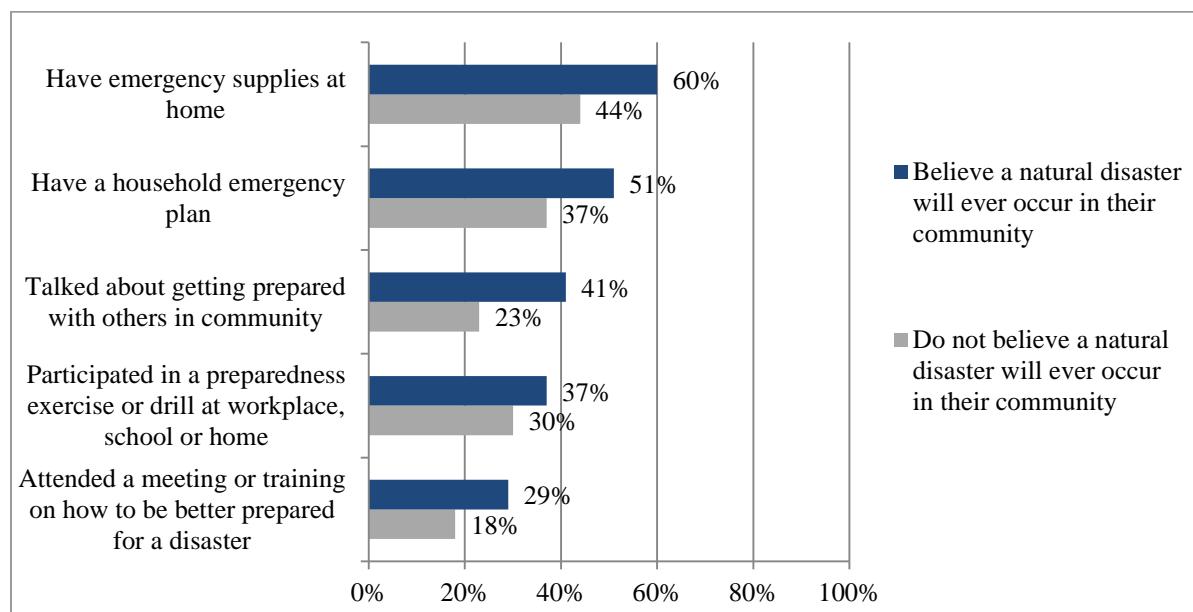
* Respondents were asked, “On a scale of 1 to 5, with 5 being ‘very likely’ and 1 being ‘not likely at all,’ how likely do you think some type of natural disaster will ever occur in your community?” Those stating 4 or 5 (likely or very likely) are considered top-box scores and are represented in the above percentages.

Demographic Factors:

- **Race/ethnicity:** White, non-Hispanic respondents (48 percent) were more likely to perceive a risk of experiencing a disaster than Black, non-Hispanic respondents (36 percent).
- **Age:** Respondents ages 35 to 74 (50 percent) were more likely to perceive a risk of experiencing a disaster than respondents ages 18 to 34 (36 percent).
- **Income:** Respondents with an annual income of less than \$25,000 (39 percent) were less likely to perceive a risk of experiencing a disaster than those with an annual income of \$25,000 or more (48 percent).

Respondents who believe it is likely that a natural disaster will occur in their community were more likely to engage in several of the preparedness behaviors. As shown in Figure 8, respondents who perceive their community is at risk of experiencing a natural disaster were more likely to attend a meeting or training on how to be better prepared for a disaster, participate in a preparedness exercise or drill, talk with others in the community about getting prepared, have emergency supplies at home, and/or have a household emergency plan.

Figure 8: Preparedness Behaviors by Perceptions of Risk of a Natural Disaster (2012)



As discussed in previous sections, several key preparedness behaviors—attending preparedness training, talking with others about preparedness, and making a household emergency plan—were down from the 2009 and 2011 levels. In light of the relationship between the perception of risk and preparedness behaviors, this decline in participation in preparedness behaviors appears to be at odds with the increased perception of risk of natural disasters reported in 2012. However, further analysis provides some explanation. The drop in the overall levels of preparedness behaviors across all respondents is because those who did not believe they were at risk of a natural disaster reported even lower levels of participation than in previous years. For example, in 2011, 45 percent of individuals who did not perceive they were at risk still reported having a household emergency plan; in 2012 that number dropped to 37 percent. As the number of people who do not believe they are at risk accounts for more than half the population, the decline in their preparedness behaviors affected the overall behavior levels. The relationship between perceived risk and increased participation in preparedness behaviors continues from 2011 to 2012 and, as illustrated in Table 2, is in fact stronger in 2012.

Table 2: Preparedness Behaviors by Perceptions of Risk of a Natural Disaster (2011–2012)

| | 2012 | | 2011 | |
|--|--|--|---|--|
| | % of Respondents Who Perceive Risk (n=907) | % of Respondents Who Do Not Perceive Risk (n=1057) | % of Respondents Who Perceive Risk (n=1172) | % of Respondents Who Do Not Perceive Risk (n=1570) |
| Attended a meeting or training on how to be better prepared for a disaster | 24 | 18 | 29 | 24 |
| Talked about getting prepared with others in community | 33 | 23 | 38 | 33 |
| Have emergency supplies at home | 51 | 44 | 53 | 51 |
| Have a household emergency plan | 45 | 37 | 47 | 45 |

Section 2: Understanding of Key Protective Actions

Knowing what to do during a disaster is crucial to being able to minimize negative consequences (e.g., injuries, deaths). However, not all disasters require the same response—for example, the appropriate response to an earthquake is quite different from response to a tornado. To gauge citizens’ knowledge of the key protective actions to take during natural disasters, respondents were asked a series of true/false questions about several correct and incorrect actions to take during an earthquake, as well as a separate series of questions about a tornado.³ This section reports these findings.

Did Respondents Understand Protective Actions for Earthquakes?

The survey asked respondents six questions about the correct actions to take during an earthquake. Three of the questions were stated correctly (warranting a correct response of “true”) and three were stated incorrectly (warranting a correct response of “false”). Nearly two-thirds of the participants (65 percent) responded that it was appropriate to get down close to the ground in an earthquake, and nearly as many (61 percent) responded that they should get under a big piece of furniture or other cover. About half of the participants responded that they should not run out of the building if they are indoors (52 percent), not lie on the floor next to a bed (50 percent), and to hold on to something (49 percent). Similar to responses in the 2011 FEMA CUS Earthquake Survey,⁴ many participants incorrectly responded that it is appropriate to get in a doorway during an earthquake. Nearly two-thirds of the respondents (64 percent) incorrectly responded that they should get in a doorway. These findings are shown in Table 3.

³ Although the intent of protective actions questions was to measure knowledge, there is potential that individuals responded based on deductive reasoning instead of their existing knowledge or guessed at the response instead of using the “don’t know” response choice.

⁴ The results of this survey can be found at <https://www.fema.gov/blog/2012-08-29/fema-releases-2011-fema-central-states-disaster-and-earthquake-preparedness-survey>.

Table 3: Understanding of Actions to Take During an Earthquake (2012)*

| Action | % of Individuals | | |
|---|---------------------------|-----------------------------|-----------------------------------|
| | Providing Correct Answers | Providing Incorrect Answers | Providing an Answer of Don't Know |
| Correct Statements (These three statements were stated correctly. Respondents who reported that these were true provided a correct answer.) | | | |
| In an earthquake, you should get down close to the ground. | 65 | 27 | 8 |
| In an earthquake, you should get under a big piece of furniture or other cover. | 61 | 35 | 4 |
| In an earthquake, you should hold on to something. | 49 | 44 | 7 |
| Incorrect Statements (These three statements were stated incorrectly. Respondents who reported that these were false provided a correct answer.) | | | |
| If you are indoors during an earthquake, you should run out of the building. | 52 | 43 | 5 |
| If you are in bed during an earthquake, you should lie on the floor next to the bed. | 50 | 41 | 9 |
| In an earthquake, you should get in a doorway. | 31 | 64 | 4 |

*Respondents were asked, "I'm going to read you a list of actions you could take during an emergency. For each, tell me whether you think it is true or false that the government recommends this action."

Demographic Factors:

- **Race/ethnicity:** White, non-Hispanic respondents (67 percent) were more likely to correctly answer that they should get close to the ground than Hispanic respondents (56 percent). Other, non-Hispanic respondents (71 percent) were more likely to correctly respond that they should get under a large piece of furniture than Black, non-Hispanic respondents (55 percent). Black, non-Hispanic respondents (61 percent) were more likely to respond correctly that they should hold onto something than White, non-Hispanic (49 percent) and Hispanic (42 percent) respondents. Black, non-Hispanic respondents (49 percent) were also more likely to respond correctly that they should not get in a doorway than White, non-Hispanic (27 percent) and Hispanic (35 percent) respondents.
- **Age:** Respondents ages 18 to 34 were more likely to correctly answer about holding onto something (61 percent) and not running outside (59 percent) than those ages 35 to 74 (46 percent and 48 percent, respectively). However, those ages 18 to 34 (24 percent) were less familiar with not standing in a doorway than respondents ages 35 to 74 (33 percent) and those ages 75 and above (41 percent). Participants ages 75 and older (75 percent) were more likely to respond correctly than those ages 35 to 74 about not getting in a doorway (62 percent), but those ages 75 and older (33 percent) were less likely to respond correctly about not lying on the floor next to the bed than participants ages 18 to 34 (56 percent) and ages 35 to 74 (49 percent).
- **Income:** Respondents with an annual income of less than \$25,000 (39 percent) were more familiar with the correct response of not standing in a doorway than those with an annual income of \$25,000 or more (28 percent).

- **Disability Status:** Participants who care for someone with a disability (67 percent) were more likely to correctly respond about getting close to the ground than participants with a disability (58 percent). Respondents with a disability were more likely than participants who do not have a disability or care for someone with a disability to correctly answer about getting under a piece of furniture (69 percent, compared to 60 percent), holding onto something (58 percent, compared to 48 percent), and not standing in a doorway (40 percent, compared to 30 percent).

Did Respondents Understand Protective Actions for Tornadoes?

Respondents were also asked six true/false questions about the protective actions to take during a tornado. In general, participants were more likely to provide the correct responses about the actions to take during a tornado than during an earthquake. As Table 4 illustrates, nearly all of the respondents correctly answered to go to a basement or interior room on the lowest floor without windows (99 percent), that most deaths and injuries in a tornado are caused by flying debris (95 percent), and that if they are in a city they still have to find shelter because tornadoes do affect cities (95 percent). Nearly as many participants (90 percent) responded that a tornado warning means a tornado has been sighted or indicated by weather radar. In addition, nearly two-thirds of the participants (63 percent) correctly responded that opening windows to minimize damage during a tornado is not the correct action. Of concern, however, is that nearly three-quarters of the participants (72 percent) incorrectly responded that if they are in a vehicle, they should find an overpass and stop underneath it until the tornado passes.

Table 4: Understanding of Actions to Take During a Tornado (2012)*

| Action | % of Individuals | | |
|---|---------------------------------|-----------------------------------|---|
| | Providing Correct Answers | Providing Incorrect Answers | Providing an Answer of Don't Know |
| Correct Statements (These three statements were stated correctly. Respondents who reported that these were true provided a correct answer.) | | | |
| If you are indoors during a tornado, you should go to a basement or an interior room on the lowest floor without windows. | 99 | 1 | <1 |
| A tornado warning means a tornado has been sighted or indicated by weather radar. | 90 | 8 | 1 |
| Most deaths and injuries in a tornado are caused by flying debris. | 95 | 3 | 2 |
| Incorrect Statements (These three statements were stated incorrectly. Respondents who reported that these were false provided a correct answer.) | | | |
| If you are indoors during a tornado, you should open the windows to minimize damage. | 63 | 32 | 5 |
| If you are in a vehicle during a tornado, you should find an overpass and stop underneath until the tornado passes. | 25 | 72 | 3 |
| If you are in a city during a tornado, you do not need to find shelter because tornadoes don't impact cities. | 95 | 4 | 1 |

*Respondents were asked, "I'm going to read you a list of actions you could take during an emergency. For each, tell me whether you think it is true or false that the government recommends this action."

Demographic Factors:

- **Race/ethnicity:** White, non-Hispanic participants (97 percent) were more likely to correctly respond that most deaths and injuries in a tornado are caused by debris than Black, non-Hispanic participants (92 percent) and Hispanic participants (90 percent). However, White, non-Hispanic participants (61 percent) were less likely to provide the correct answer to not open windows during a tornado than Black, non-Hispanic participants (72 percent). Black, non-Hispanic participants (99 percent) were also more likely than White, non-Hispanic respondents (89 percent) and Other, non-Hispanic respondents (87 percent) to correctly respond that a tornado warning means a tornado has been sighted or indicated by weather radar. Hispanic participants (89 percent) were less likely than White, non-Hispanic respondents (97 percent) to correctly answer that tornadoes affect cities.
- **Age:** Participants ages 18 to 34 (73 percent) were more likely to correctly respond that opening windows during a tornado is an incorrect action than participants ages 35 to 74 (59 percent) and participants ages 75 and older (59 percent). However, participants ages 18 to 34 (95 percent) were less likely than participants ages 75 and older (88 percent) to correctly answer that a tornado warning means a tornado has been sighted or indicated by weather radar. In addition, participants ages 18 to 34 (20 percent) were less likely to correctly respond not to stop under an overpass until the tornado passes than participants ages 35 to 74 (27 percent) and participants ages 75 and older (31 percent).
- **Income:** Respondents with an annual income of \$25,000 or more (97 percent) were more likely to correctly answer that tornadoes affect cities than respondents with a lower income (91 percent).
- **Disability Status:** Participants who care for someone with a disability were less likely to correctly respond that most deaths and injuries in a tornado are caused by debris (87 percent) but more likely to know that tornadoes affect cities (89 percent) than participants who do not have a disability or care for someone with a disability (96 percent for both). In addition, those who care for someone with a disability (55 percent) were less likely to correctly respond to not open their windows during a tornado than participants with a disability (65 percent) and participants who do not have a disability or care for someone with a disability (64 percent).

Section 3: Awareness and Usefulness of Preparedness Information

In the 2011 FEMA CUS Earthquake Survey, respondents who were aware of earthquake preparedness outreach reported significantly higher levels of preparedness behaviors and participation in preparedness activities (e.g., training and drills) than those not aware of the outreach. To further explore the relationship between awareness of preparedness information and preparedness behaviors, the 2012 FEMA National Survey asked questions about general information on getting better prepared for a disaster. To examine the relationship in further detail, the 2012 FEMA National Survey also asked respondents whether they found the preparedness information useful and whether they took preparedness steps after receiving the information, as noted in the outline below.

All respondents were asked: *Did you receive preparedness information?*

Of those who recalled receiving information (i.e., the *Information Aware*), the following additional questions were asked:

- Where did you obtain the preparedness information?
- Did you find the information useful?
 - For those who found it useful: What was memorable about it?
- What steps did you take after receiving the information?
 - For those who reported taking steps: What motivated you to take the steps?

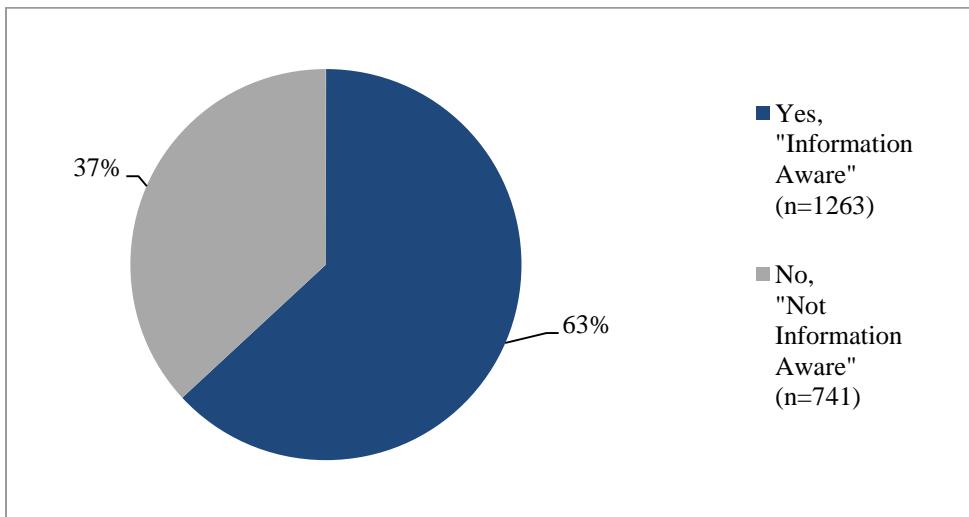
Information Aware respondents:
Those who had read, seen, or heard information about how to get better prepared for a disaster in the past year (n=1263)

Were Respondents Aware of Preparedness Information?

Providing information about how to prepare for a disaster can help individuals understand the risks for which they need to prepare and the steps to take. The survey asked respondents whether they had read, seen, or heard any information in the past year about how to get better prepared for a disaster. As Figure 9 shows, nearly two-thirds of the respondents (63 percent) recalled receiving preparedness information.

The distinction between those who recalled receiving preparedness information in the past year (the *Information Aware* respondents) and those who did not recall the preparedness information in the past year (the *Not Information Aware* respondents) is used as a comparison group in the final section of this report.

Figure 9: Percentage of Respondents Who Recalled Receiving Preparedness Information (2012)*



*Respondents were asked, “In the past year, have you read, seen, or heard any information about how to get better prepared for a disaster?”

Demographic Factors:

- **Income:** Respondents with an annual income of \$25,000 or more (65 percent) were more likely to report receiving preparedness information than those with a lower income (56 percent).

Where Did *Information Aware* Respondents Obtain Their Preparedness Information and Did They Consider It Useful?

The survey asked those respondents who recalled receiving preparedness information (i.e., *Information Aware* respondents) where they had read, seen, or heard the information. This was done by reading a series of 16 potential sources of preparedness information and asking respondents whether they recalled receiving preparedness information from each source. *Information Aware* respondents cited an average of five sources of preparedness information in the past year. For each identified source, respondents were also asked whether they found the information from that source useful. Respondents who found at least one source of preparedness information useful are referred to as *Information Aware/Useful*.

The survey questions specified three types of information sources: media sources, community sources, and government sources. Results for each are discussed below.

Media Sources

Media sources were cited by nearly all of the *Information Aware* respondents (92 percent), and they were the most commonly cited among the three types. As Table 5 shows, the most commonly reported media sources were local television (68 percent) and national television (61 percent). Social media (31 percent) and email (18 percent) were the least reported media sources. Respondents generally rated all media sources of preparedness information as useful, although social media was cited as useful by the smallest percentage of respondents (77 percent).

Table 5: Media Sources of Information About How to Get Better Prepared for a Disaster (2012)*

| Media Source | % of <i>Information Aware</i> Individuals Reporting Source (n=1263) [†] | % of Those Individuals Reporting Source Useful |
|---------------------|--|--|
| Local Television | 68 | 94 (n=854) |
| National Television | 61 | 91 (n=778) |
| Radio | 47 | 90 (n=562) |
| Internet | 46 | 94 (n=517) |
| Newspaper | 42 | 90 (n=617) |
| Social Media | 31 | 77 (n=358) |
| Email | 18 | 86 (n=221) |

*Respondents were asked, “We’re specifically interested in where you may have read, seen, or heard information on preparing for a disaster? I am going to ask you if you received it through a list of sources. Was it...” Those who reported receiving information from each source, respondents were also asked, “Did you find the information you received from [insert source] useful?”

[†]Base = individuals who in the past year have read, seen, or heard any information about how to get better prepared for a disaster[Information Aware respondents]. (n=1263)

Demographic Factors:

- **Race/ethnicity:** Other, non-Hispanic respondents were more likely to cite social media (54 percent), email (33 percent), and the Internet (67 percent) than White, non-Hispanic respondents (29 percent, 17 percent, and 46 percent, respectively). In addition, Other, non-Hispanic respondents (67 percent) were more likely to cite the Internet than Hispanic respondents (39 percent).
- **Age:** Respondents ages 75 and older were more likely to cite local television (78 percent) and the newspaper (75 percent) than those ages 18 to 34 (60 percent and 30 percent, respectively) and those ages 35 to 74 (62 percent and 44 percent, respectively). Respondents ages 75 and older were less likely than respondents younger than 75 to cite the Internet (25 percent, compared to 61 and 44 percent). Interestingly, social media was more likely to be cited by those ages 75 and older (44 percent) than by those ages 35 to 74 (29 percent).
- **Income:** Respondents with an annual income of \$25,000 or more (50 percent) were more likely to recall receiving preparedness information from the Internet than respondents with a lower income (38 percent), while respondents with an income of less than \$25,000 (42 percent) were more likely to cite social media than those with a higher income (29 percent).
- **Disability Status:** Respondents with a disability were more likely to report local television (79 percent) and national television (73 percent) than respondents who care for someone with a disability (64 and 61 percent, respectively) and respondents who do not have a disability or care for someone with a disability (68 and 60 percent, respectively). However, those with a disability (28 percent) were less likely to report Internet sources than those who care for someone with a disability (44 percent) and those who do not have a disability or care for someone with a disability (49 percent).

Community Sources

Fewer respondents cited community sources, but those who did indicated similar levels of usefulness as those who recalled receiving information from media sources. Community sources were cited by more than three-quarters of the *Information Aware* respondents (77 percent). As Table 6 shows, more than half

of the respondents (53 percent) recalled receiving preparedness information through conversations with neighbors, friends, or family and the majority of those respondents (90 percent) found the information useful. More than half of the respondents who work either full- or part-time (56 percent) cited work. Among respondents who reported being a student, more than half (53 percent) cited their school. Similarly, more than two in five respondents with children in school (43 percent) cited their child's school as a source of preparedness information. Less commonly cited sources include community organizations (27 percent) and church or faith-based organizations (20 percent).

Table 6: Community Sources of Information About How to Get Better Prepared for a Disaster (2012)*

| Community Source | % of <i>Information Aware</i> Individuals Reporting Source (n=1263) [†] | % of Those Individuals Reporting Source Useful |
|--|--|--|
| Work ^{‡‡} | 56 | 94 (n=338) |
| Conversations with neighbors, friends, or family (online or offline) | 53 | 90 (n=674) |
| Your school ^{†††} | 53 | ** |
| Your child's school ^{††††} | 43 | 92 (n=121) |
| Community organization | 27 | 86 (n=400) |
| Church/faith-based organization | 20 | 92 (n=254) |

*Respondents were asked, “We’re specifically interested in where you may have read, seen, or heard information on preparing for a disaster. I am going to ask you if you received it through a list of sources. Was it...” Those who reported receiving information from each source, respondents were also asked, “Did you find the information you received from [insert source] useful?”

**This measure is not reportable due to the low number of respondents answering the question. (n=25).

†Base = individuals who in the past year have read, seen, or heard any information about how to get better prepared for a disaster[Information Aware respondents]. (n=1263)

‡‡Base = individuals who reported working full- or part-time and who in the past year have read, seen, or heard any information about how to get better prepared for a disaster (n=957)

†††Base = individuals who reported being a student and who in the past year have read, seen, or heard any information about how to get better prepared for a disaster. (n=84)

††††Base = individuals who reported having a child in school and who in the past year have read, seen, or heard any information about how to get better prepared for a disaster. (n=291)

Demographic Factors:

- **Race/ethnicity:** Black, non-Hispanic respondents (78 percent) were more likely to cite work than all other respondents (ranged from 51 percent to 53 percent) and more likely than White, non-Hispanic respondents to cite church or faith-based organizations (32 percent, compared to 18 percent). Hispanic respondents (98 percent) were more likely to cite their school than White, non-Hispanic respondents (36 percent).
- **Age:** Respondents ages 75 and older (32 percent) were more likely than those younger than 75 (17 percent of those ages 18–24 and 20 percent of those ages 35–74) to cite church or faith-based organizations and community organizations (42 percent of respondents ages 75 and older, compared to 21 percent and 29 percent of the two groups younger than 75).
- **Income:** Respondents with an annual income of \$25,000 or more (57 percent) were more likely to recall receiving preparedness information from work than those with a lower income (42 percent). Respondents with an income of less than \$25,000 (73 percent) were more likely to cite

their school than respondents with a higher income (45 percent). Those with a lower income (33 percent) were also more likely to cite church or faith-based organizations than those with an income of \$25,000 or more (17 percent).

Government Sources

Government sources of preparedness information were the least frequently reported. Even so, they were cited by nearly half of the *Information Aware* respondents (47 percent). Information received from a local government entity or spokesperson was the most commonly reported of the government sources, with one-third of the respondents (33 percent) citing this source. Two in ten respondents (21 percent) cited FEMA and 1 in 10 (11 percent) cited the Ready.gov website. The usefulness of these sources ranged from 86 percent to 91 percent. These results highlight the importance of FEMA working with local partners on increasing risk awareness and preparedness, as respondents were more likely to recall information from local government sources than from FEMA.

Table 7: Government Sources of Information About How to Get Better Prepared for a Disaster (2012)*

| Government Source | % of <i>Information Aware</i> Individuals Reporting Source (n=1263) [†] | % of Those Individuals Reporting Source Useful |
|---|--|--|
| Local government entity or spokesperson | 33 | 86 (n=467) |
| FEMA | 21 | 89 (n=267) |
| Ready.gov website | 11 | 91 (n=135) |

*Respondents were asked, “We’re specifically interested in where you may have read, seen, or heard information on preparing for a disaster. I am going to ask you if you received it through a list of sources. Was it...” Those who reported receiving information from each source, respondents were also asked, “Did you find the information you received from [insert source] useful?”

[†]Base = individuals who in the past year have read, seen, or heard any information about how to get better prepared for a disaster[Information Aware respondents]. (n=1263)

Demographic Factors:

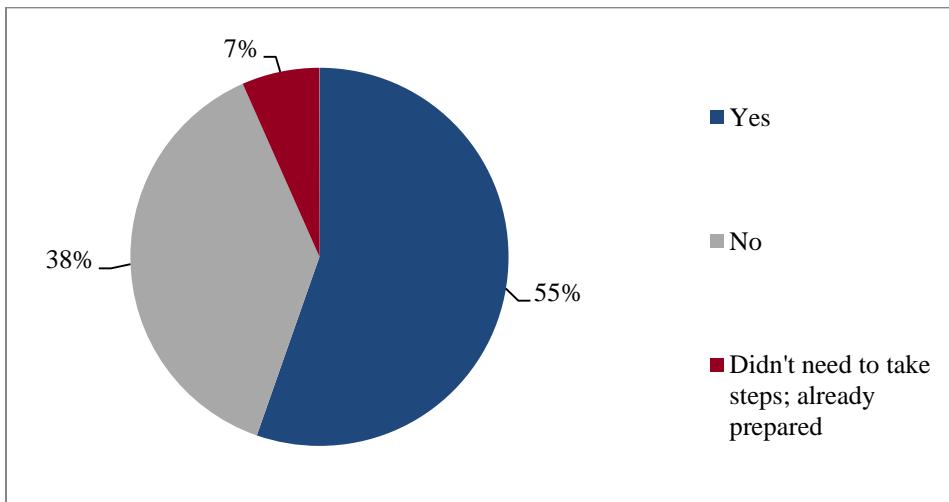
- **Race/ethnicity:** Other, non-Hispanic respondents (33 percent) were more likely to cite FEMA than Black, non-Hispanic respondents (14 percent). White, non-Hispanic respondents (92 percent) were more likely to report the Ready.gov website useful than Other, non-Hispanic respondents (68 percent).
- **Disability Status:** Respondents with a disability (38 percent) were more likely to recall receiving information from a local government spokesperson than respondents who care for someone with a disability (26 percent).

What Did *Information Aware* Respondents Do After Receiving Preparedness Information?

Ultimately, the goal of disseminating preparedness information is to encourage people to take preparedness actions. To determine whether the information that respondents recalled receiving was successful in this goal, *Information Aware* respondents were asked whether they took steps to prepare for a disaster after receiving the information. The responses to this question are illustrated in Figure 10. More than half of the *Information Aware* respondents (55 percent) reported taking steps to prepare after receiving the preparedness information. In addition, a small portion of the *Information Aware* respondents

(7 percent) indicated they did not need to take steps to prepare because they were already prepared. Respondents who did not take steps to get prepared after receiving preparedness information recalled receiving information from fewer sources and reported remembering fewer messages from the information that they had received.

Figure 10: Percent of Information Aware Respondents Who Took Steps After Receiving Preparedness Information in the Past Year (2012)*†



*Respondents were asked, “Still thinking about those useful sources of information, after receiving this information, did you take any steps to prepare for a disaster?”

†Base = individuals who in the past year have read, seen, or heard any information about how to get better prepared for a disaster [Information Aware respondents]. (n=1263)

Respondents who took preparedness steps after receiving the preparedness information were also asked what steps they took. Unaided responses were recorded using a pre-coded list. These responses are shown in Table 8. Nearly three-quarters (73 percent) built a kit/updated supplies. More than one-quarter (29 percent) made a household emergency plan. Less commonly reported steps include learning about the impact of local hazards and how to respond (7 percent), participating in preparedness training (7 percent), talking about preparedness with people they know (7 percent), reading about ways to become prepared (6 percent), and participating in a preparedness drill (4 percent).

Table 8: Steps Taken by Respondents After Receiving Preparedness Information in the Past Year (2012)*

| Preparedness Steps Taken | % of Information Aware Individuals Who Took Steps After Receiving Preparedness Information (n=690) [†] |
|---|---|
| I made a kit/updated supplies | 73 |
| I made a household emergency plan | 29 |
| I learned about the impact of my local hazards and how to respond | 7 |
| I participated in preparedness training | 7 |
| I talked with people I know about preparedness | 7 |
| I read about ways to become prepared | 6 |
| I participated in a preparedness drill | 4 |

*Respondents were asked, “Based on the information you received about getting prepared, what steps did you take to become better prepared?” Responses are based on a pre-coded list.

[†]Base = individuals who in the past year have read, seen, or heard any information about how to get better prepared for a disaster and reported taking steps to prepare for a disaster after receiving the information. (n=690)

Demographic Factors:

- **Race/ethnicity:** Black, non-Hispanic respondents (45 percent) were more likely to make a household plan after receiving preparedness information than White, non-Hispanic respondents (28 percent) and Hispanic respondents (20 percent). Other, non-Hispanic respondents (25 percent) were more likely than White, non-Hispanic respondents (6 percent) to learn about local hazards.
- **Age:** Respondents ages 35 to 74 (59 percent) were more likely to take steps to prepare than those ages 75 and older (47 percent). However, respondents ages 75 and older (14 percent) were more likely to report not needing to take steps because they were already prepared than respondents ages 35 to 74 (7 percent) and those ages 18 to 34 (5 percent). Respondents ages 75 and older (18 percent) were more likely to learn about local hazards than respondents ages 18 to 34 (3 percent) and those ages 35 to 74 (8 percent).
- **Disability Status:** Respondents who care for someone with a disability (63 percent) were less likely than those who do not have a disability or care for someone with a disability (75 percent) to build a kit/update supplies.

What Motivated *Information Aware* Respondents to Take Preparedness Steps?

Respondents who reported taking steps to prepare after receiving preparedness information were asked what motivated them to take those steps. Unaided responses were recorded using a pre-coded list. As Table 9 shows, one in five respondents reported being motivated by disasters they had experienced (21 percent) or the perceived likelihood of a disaster occurring in their community (20 percent). Nearly as many respondents reported being motivated by wanting to protect themselves in a disaster (19 percent) or feeling it was their responsibility to take care of their family in a disaster (17 percent). Other reported motivations included being motivated by their social networks, such as their job or school (6 percent), a friend or family member (4 percent), and a trusted leader (2 percent).

Table 9: Motivational Factors to Take Preparedness Steps by Respondents Who Reported They Took Steps After Receiving Preparedness Information (2012)*

| Motivation | % of Individuals Who Reported Being Motivated by Each Factor (n=690) [†] |
|--|---|
| Disasters I have experienced motivated me to get better prepared | 21 |
| It is likely that a disaster will occur in my community | 20 |
| I feel like it is my responsibility to take care of my family in a disaster | 19 |
| I want to protect myself in a disaster | 17 |
| Disasters in other places motivated me to take steps to become better prepared | 15 |
| It just seems like something I should do | 9 |
| If a disaster occurred in my community, it would be severe | 6 |
| My job or school encouraged me to take steps to become better prepared | 6 |
| A friend or family member encouraged me to take steps to become better prepared | 4 |
| People I know have taken steps to get prepared | 4 |
| If a disaster occurred in my community, the police and fire department might not be able to take care of needs | 3 |
| A trusted leader encouraged me to take steps to become better prepared | 2 |

*Respondents were asked, “What motivated you to take these steps to become better prepared?” Responses are based on a pre-coded list.

[†]Base = individuals who in the past year have read, seen, or heard any information about how to get better prepared for a disaster and reported taking steps to prepare for a disaster after receiving the information. (n=690)

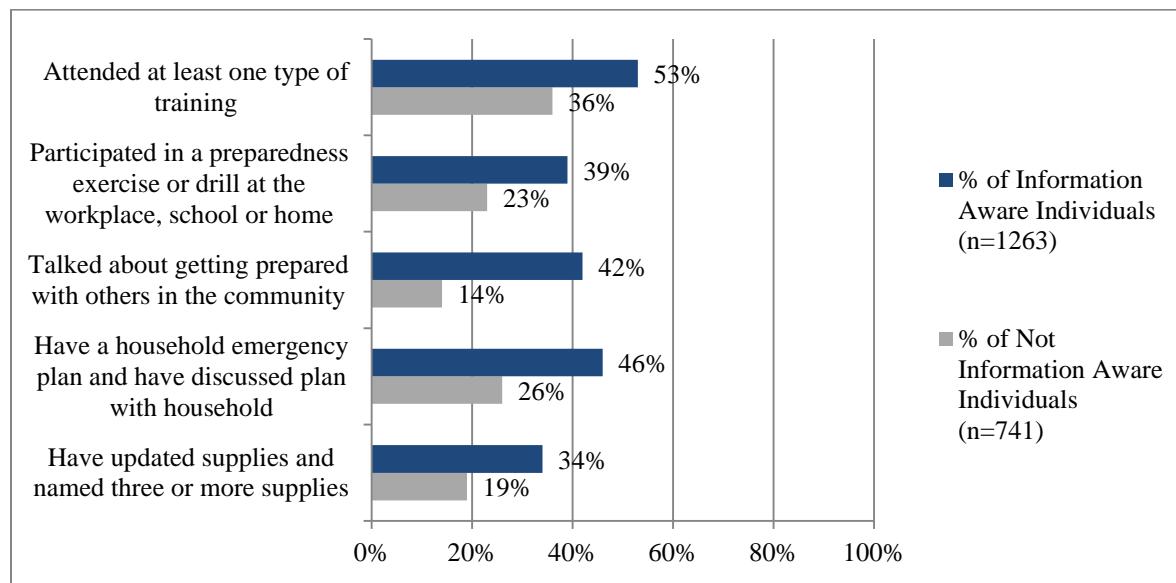
Demographic Factors:

- **Race/ethnicity:** Black, non-Hispanic respondents (37 percent) were more likely than White, non-Hispanic respondents (18 percent) to report being motivated by disasters they had experienced. Hispanic respondents (33 percent) were more likely to be motivated by the belief that it is likely that a disaster will occur in their community than Black, non-Hispanic respondents (7 percent). Other, non-Hispanic respondents (22 percent) were more likely than White, non-Hispanic respondents (4 percent) to be motivated by a friend or family member.
- **Age:** Respondents ages 75 or older (41 percent) were more motivated by a desire to protect themselves in a disaster than those ages 18 to 34 (16 percent) and those ages 35 to 74 (15 percent). Respondents ages 35 to 74 (18 percent) were more motivated by disasters in other places than those ages 18 to 34 (3 percent). Those ages 35 to 74 (2 percent) were less motivated by a friend or family member encouraging them to prepare than those ages 18 to 34 (9 percent).
- **Income:** Respondents with an annual income of less than \$25,000 were more likely to be motivated by disasters they have experienced (34 percent) and a belief that if a disaster occurred in their community, the police and fire department might not be able to take care of their needs (10 percent) than respondents with a larger income (18 percent and 2 percent, respectively).

Did the *Information Aware* Take More Preparedness Steps Than the *Not Information Aware*?

The goal of providing preparedness information is to educate citizens about potential risks and encourage citizens to take preparedness steps. As shown in Figure 11, there were higher percentages of *Information Aware* respondents who reported engaging in preparedness behaviors than *Not Information Aware* respondents. In all five categories presented in Figure 11, *Information Aware* respondents reported being significantly more likely to take preparedness steps than *Not Information Aware* respondents. Nearly half of the *Information Aware* respondents (46 percent) have a household emergency plan and have discussed it with members of their household, which is nearly double the percentage of *Not Information Aware* respondents who have done this (26 percent). More than two in five *Information Aware* respondents (42 percent) talked with others in the community about getting prepared, while only 14 percent of the *Not Information Aware* respondents reported this.

Figure 11: Self-Reported Preparedness Steps Taken by *Information Aware* Versus *Not Information Aware* Respondents (2012)



What Preparedness Messages Were Remembered by *Information Aware/Useful* Respondents?

To provide additional insight into the usefulness of the preparedness information, *Information Aware/Useful* respondents were asked what they remembered from the preparedness information that they recalled receiving. It is important to note that the question forced respondents to report what they learned without aided recall. Their responses were coded into predetermined categories. Note that these questions were directed only at those who found the information useful.

Information Aware/Useful respondents: Those who recalled receiving preparedness information and found at least one source of information useful (n=1236)

The largest portion of respondents recalled that the preparedness information provided general information about knowing what to do to prepare for a disaster (62 percent), while fewer recalled more specific information. Two in five respondents (40 percent) recalled information about gathering supplies/building a kit, and about one in five (21 percent) recalled receiving information about making a household emergency plan.

Table 10: Memorable Messages From the Preparedness Information Recalled by *Information Aware/Useful Individuals* (2012)*

| Messages From the Preparedness Information | % of <i>Information Aware/Useful Individuals</i> Reporting Message (n=1236)[†] |
|---|--|
| It gave me information about knowing what to do | 62 |
| It gave me information about gathering supplies/getting a kit | 40 |
| It gave me information about having a household emergency plan | 21 |
| It provided me with information about the impact of my local hazards and how to respond | 16 |
| It provided me with information about preparedness training | 15 |
| It provided me with information about my local alert and warning systems | 12 |
| It provided me with information about preparedness drills | 8 |
| It told me where to seek out more information | 7 |

* For all respondents who found at least one source of information they reported reading, seeing, or hearing useful, a follow-up question asked respondents what they remembered about the information they received. Responses are based on a pre-coded list.

[†]Base = individuals who found information from at least one source they read, saw, or heard in the past year useful [Information Aware/Useful respondents]. (n=1236)

Demographic Factors:

- **Race/ethnicity:** Black, non-Hispanic respondents (25 percent) were less likely to recall information about gathering supplies/building a kit than Hispanic respondents (43 percent) and White, non-Hispanic respondents (43 percent). Hispanic respondents (15 percent) were more likely to recall information about preparedness drills than White, non-Hispanic respondents (7 percent).
- **Age:** Respondents ages 35 to 74 (44 percent) were more likely than those ages 75 and older (27 percent) to recall information about gathering supplies/building a kit.

Conclusions

The 2012 FEMA National Survey provides a snapshot of several behaviors and knowledge items related to disaster preparedness, as well as trends over time. Results indicated that there was an increase in perceived risk of experiencing a disaster compared to reports in previous years. In addition, there were increases in familiarity with local hazards and familiarity with local alert and warning systems. Rates of building a disaster supplies kit have remained fairly stable over time, but many of the other preparedness behaviors, including attending preparedness training, making a household emergency plan, and talking with others about preparedness have continued to show fluctuations over time.

Respondents were more familiar with correct actions to take during a tornado than during an earthquake. The lowest percentage of correct responses about actions to take during an earthquake came from respondents incorrectly indicating that getting in a doorway is a correct action to take. For responses to a tornado, the majority of the respondents incorrectly answered that, when in a vehicle, stopping under an overpass until the tornado passes is a correct action. Several respondents also incorrectly indicated that opening windows during a tornado to minimize damage is the correct response. The results of this survey show the need to correct currently held misconceptions about protective actions. Since protective actions are always in the context of a specific situation, a primary challenge is providing clear advice to the public about important conditions and actions for different circumstances. Organizations communicating protective actions use a variety of methods, including surveys and other research, to understand how the public perceives the advice and then to refine the language and strategies for communicating advice more effectively. The 2012 FEMA National Survey and other surveys, including the 2011 FEMA CUS Earthquake Survey—which focused on individual awareness and understanding of earthquake protective actions, including “Drop, Cover, and Hold On,”—look at how to improve preparedness messaging by focusing on the role of preparedness and response efficacy and confidence in the ability to know what to do for different types of hazards.

In addition to providing measures of current preparedness behaviors and knowledge, the findings highlight the importance of reaching American citizens with preparedness information. Respondents who recalled receiving preparedness information in the past year were more likely to engage in several of the preparedness behaviors, including attending preparedness training, making a household plan, making a disaster supplies kit, participating in a preparedness drill, and talking with others about preparedness. Of the respondents, the majority (63 percent) recalled receiving preparedness information and most found the information useful. In addition, 35 percent of respondents reported taking actions to prepare after receiving preparedness information. Of those who took preparedness steps, nearly three-quarters made a disaster supplies kit and nearly 3 in 10 made a household plan. In developing preparedness information to distribute, the results of surveys such as this one can be useful in determining which preparedness steps most need to be encouraged, which steps citizens are most likely taking already, and what changes should be made to preparedness messages in order to increase preparedness steps.

Next Steps

With a strong commitment to using social science research as a foundation for implementing effective messaging and tools to increase individual and community preparedness, FEMA is developing a comprehensive strategy to more fully engage our Nation's citizens as critical partners. FEMA's next steps for refining preparedness messages and executing a campaign to drive action at the community level will be based on data collected from the 2012 FEMA National Survey, earlier FEMA national household surveys, and research on preparedness conducted by others.⁵

As part of the strategy development, FEMA and the American Red Cross hosted a workshop on motivating the public to prepare in June 2012. This workshop convened academics, researchers, and practitioners to make recommendations on the next generation of public preparedness messaging and education and outreach strategies. Some recommendations that participants from the workshop mentioned included modifying the current "three-step" message, "Be Informed, Make a Plan, Build a Kit," exploring the benefits of audience segmentation and appropriate messengers; defining preparedness; and defining success. To begin implementing these recommendations, FEMA will conduct focus groups for public input on framing preparedness messages and will create an interagency process to validate the science behind effective personal protective actions for a range of hazards.

FEMA is committed to a unified approach and is working with our partners to establish a campaign designed for whole community participation that will complement and align with existing Federal, State, local, territorial, tribal, nongovernmental organization, and private sector awareness campaigns. The foundation of this initiative will be to create opportunities for millions of Americans to practice specific preparedness steps collectively and to build on those actions year to year. This focus on knowledge and behavior will provide a basis from which to measure the increasing numbers of citizens who understand the hazards most relevant to their community and who have practiced the corresponding protective actions. Everyone has a role to play in strengthening the resilience of our Nation. FEMA and its partners throughout the public, private, and community sectors are dedicated to improving efforts to provide actionable and effective information.

⁵ The Citizen Preparedness Surveys Database is a compilation of research conducted since September 11, 2001, on personal and business preparedness. <http://www.ready.gov/research/citizen-preparedness-research>.

Appendices

Appendix A: Methodology

Survey Administration

The 2012 FEMA National Survey was fielded from June 2012 to August 2012. The survey was administered using ICF International's (an applied research and consulting firm contracted to support the survey design, data collection, and analysis and reporting) computer-assisted telephone interviewing system. Spanish-speaking interviewers were provided as an option for Spanish-speaking respondents. As 30 percent of households nationwide are cellular phone only (i.e., have no traditional landline residential phone) or do not have a landline telephone,⁶ the 2012 survey methodology used a dual-frame sample, with cellular and landline surveys. Together, the landline and cellular phone samples provided a representative sample of the household population. Findings from the two telephone samples were analyzed for differences; it was determined that minimal differences existed (e.g., the cell phone sample was slightly younger, more frequently male and higher income and the landline sample was slightly older and more likely to be retired).

The sample was selected via random digit dialing (RDD) from a list-assisted sampling frame. The RDD sampling technique provided a probability sample of respondents in which every person with a telephone (either landline or cellular telephone) had a known probability of being selected for the study. The RDD sampling frame represents the noninstitutionalized United States adult population residing in households equipped with landline or cellular telephones. The frame excludes adults in penal, mental, or other institutions; adults living in other group quarters such as dormitories, barracks, convents, or boarding houses (with 10 or more unrelated residents); adults living in a household without a telephone; and/or adults who did not speak English or Spanish well enough to be interviewed in either language.

Representative Sample

The survey sample included responses from 2,013 U.S. households. The combined landline and cell phone sample represents 98 percent of U.S. households, providing overall results at +/-3.02 percent sampling error (at a 95 percent confidence level).

The national sample was designed for 200 completed surveys for each of the 10 FEMA regions. The landline sample was stratified by FEMA region; the cell phone sample was national.

Statistical significance is reported to identify differences in data that do not occur by chance—that there is a “real” difference between groups compared. All significance testing in this report is presented with a 95 percent significance level, indicating that only 5 times out of 100 would the specific result occur by chance. The word “significant” is only used in this report to denote statistical significance.

Weighting

Each telephone number in the national sample had an equal chance of selection. However, operational aspects associated with RDD surveys, such as nonresponse, may produce respondents that over-represent

⁶ Blumberg, S.J., & Luke, J.V. Wireless substitution: Early release of estimates from the National Health Interview Survey, July–December 2010. National Center for Health Statistics. Retrieved January 16, 2013, from <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201106.htm>.

or under-represent certain population segments. Weighting the data according to geography, age, gender, and race/ethnicity accounted for potential biases and adjusted the sample's demographic distributions to match the distribution in the American Community Survey (ACS) one-year estimates for 2010 population estimates. (See Appendix C for the survey respondents' profile based on the weighted data.)

Office of Management and Budget and Institutional Review Board Reviews

In accordance with the Paperwork Reduction Act, the Office of Management and Budget (OMB) approved a multiyear collection on July 19, 2010. The OMB Control Number for this survey is 1660-0105.

This research study was granted Institutional Review Board (IRB) exemption by ICF International's internal IRB under 45 CFR 46.101(b).

Appendix B: 2012 FEMA National Survey Script

Introduction

S1. Hello, my name is _____ and I am calling on behalf of FEMA, the Federal Emergency Management Agency. FEMA has asked my organization, ICF International, to assist them in obtaining people's views about how well prepared they are for an emergency or disaster in their communities.

S1a. Is this a private residence?

- 01 Yes
- 02 No

[Interviewer: If it is not a private residence]

Thank you very much, but we are only interviewing private residences. Thank you for your time.

S2. I would like to speak with an adult, age 18 or older, who lives in the household. Would that be you?

- | | | |
|----|---------|-----------------------------|
| 01 | Yes | Continue |
| 02 | No | Ask to transfer to an adult |
| 99 | Refused | End interview |

NEWS2. May I speak with an adult member of the household?

- | | | |
|----|-------------------|-------------------|
| 01 | Yes, transferring | Schedule callback |
| 02 | Not available | Schedule callback |
| 99 | Refused | End interview |

S3. Hello, my name is _____ and I am calling on behalf of FEMA, the Federal Emergency Management Agency. FEMA has asked my organization, ICF International, to assist them in obtaining people's views about how well prepared they are for an emergency or disaster in their communities.

Cell Phone Screener

CELSCRN1. Your safety is important. Are you driving in a car, walking down the street, in a public place, or other location where talking on the phone might distract you or jeopardize your safety and/or confidentiality?

- | | | |
|----|------------|----------------|
| 01 | Yes | Go to CELSCRN2 |
| 02 | No | Go to CELSCRN3 |
| 97 | Don't know | Go to CELSCRN3 |
| 99 | Refused | Go to CELSCRN3 |

CELSCRN2.I would like to call you at a more convenient time. What day and time would be best?

[Interviewer: Set up callback]

- | | | |
|----|-------------------|---------------|
| 01 | Schedule callback | |
| 99 | Refused | End interview |

CELSCRN3. Are you at least 18 years old?

- | | | |
|----|------------|---------------|
| 01 | Yes | |
| 02 | No | End interview |
| 97 | Don't know | End interview |
| 99 | Refused | End interview |

If respondent is not age 18 or older, doesn't know, or refuses to respond:

Thank you very much for your time.

Screener

INTRO2A. The survey will only take about 15 minutes.

Your telephone number was chosen randomly. I will not ask for your name, address, or other personal information that can identify you. You do not have to answer any question you do not want to, and you can end the interview at any time. Your participation in this survey is entirely voluntary. Your answers to the survey questions will be held confidential by ICF International. Your name or any other information that could identify you will not be associated with your responses or used in any reports. If you have any questions, I will provide a telephone number—either here at ICF International or FEMA—for you to call to get more information or to validate this research.

This interview may be monitored and recorded for quality assurance purposes.

- 01 Continue
- 02 Respondent wants more information
- 99 Refused End interview

Contact information was provided to respondents wanting more information about the survey.

Section A

A2. Are there children under the age of 18 living in your residence?

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

[Interviewer: Ask those with children under the age of 18 in the residence]

A3. Does at least one of the children currently attend a school outside of your home, including day care or part-time kindergarten?

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

A4. Which best describes your job status?

[Interviewer: Read list, choose up to two responses]

- 01 Work full time
- 02 Work part time
- 03 Student
- 04 Unemployed
- 05 Retired
- 95 Other
- 97 Don't know
- 99 Refused

I'd like to ask you some questions about different kinds of disasters. Throughout this survey, when I use the term "disaster," I am referring to events that could disrupt public services, threaten lives, or damage property.

Perceived Risk

On a scale of 1 to 5, with 5 being “very likely” and 1 being “not likely at all,” how likely do you think...?

- C1. Any type of **natural disaster** such as an earthquake, a hurricane, a flood, a tornado, or wildfires **will ever occur** in your community?

05 Very likely
04
03
02
01 Not likely at all
97 Don't know
99 Refused

Participation in Preparedness Training, Exercises, and Community Engagement

- G3. In the past 2 years, have you done any of the following? Have you...

- G3a. Attended a meeting on how to be better prepared for a disaster?
G3b. Attended CPR training?
G3c. Attended first aid skills training?
G3d. Attended training as part of a community emergency response team?
G3e. Talked about getting prepared with others in your community?
G3f. Aside from a fire drill, participated in a preparedness exercise or drill like the Great ShakeOut at your workplace, school, or home?

01 Yes
02 No
97 Don't know
99 Refused

Disaster Supplies

- I1. For this next set of questions, I'd like to ask you about some specific things you may or may not have done to prepare yourself and/or your household.

Do you have supplies set aside in your home to be used only in the case of a disaster?

01 Yes
02 No
97 Don't know
99 Refused

[Interviewer: Ask those who have disaster supplies in their home]

I2. Could you tell me the disaster supplies you have in your home?

[Interviewer: Do not read list] [PROBE: Anything else? Record all responses]

- 01 Bottled water
- 02 Packaged food
- 03 A flashlight
- 04 A portable, battery-powered radio
- 05 Batteries
- 06 A first aid kit
- 07 Eyeglasses
- 08 Medications
- 09 Photocopies of personal identification
- 10 Financial documents
- 11 Cash
- 12 Blankets/clothing/bedding
- 13 Generator/electrical backup/alternative power
- 14 Candles/matches
- 15 Stove/lantern/lamps
- 16 Fuel (includes gas, propane, firewood, kerosene, cooking fuel)
- 17 Camping gear/tents/sleeping bags
- 18 Guns, ammo, weapons, hunting gear
- 19 Boots
- 20 Whistle
- 95 Other (specify)
- 97 Don't know
- 99 Refused

[Interviewer: Ask those who have disaster supplies in their home]

I3. How often do you update these supplies? Would you say...

- 01 Never
- 02 Less than once a year
- 03 Once a year
- 04 More than once a year
- 97 Don't know
- 99 Refused

Household Plan

J1. Does your household have an emergency plan that includes instructions for household members about where to go and what to do in the event of a disaster?

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

[Interviewer: Ask if the household has an emergency plan]

J2. Have you discussed this plan with other members in your household?

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

Community Plan

K1. Using a scale of 1 to 5 with 5 being “very familiar” and 1 being “not at all familiar,” how familiar are you with...

[Randomize]

- a. Alerts and warning systems in your community?
- b. What your local hazards are?

05 Very familiar

04

03

02

01 Not at all familiar

97 Don't know

99 Refused

Sources of Information

RECINFO. In the past year, have you read, seen, or heard any information about how to get better prepared for a disaster?

01 Yes

02 No

97 Don't know

99 Refused

[Interviewer: Ask if respondent read, saw, or heard information on preparing for a disaster]

INFSRC. We're specifically interested in where you may have read, seen or heard information on preparing for a disaster? I am going to ask you if you received it through a list of sources. Was it...

[Interviewer: Randomize]

- INFSRC1. On national TV?
- INFSRC 2. On local TV?
- INFSRC 3. On the Internet?
- INFSRC 4. Through email?
- INFSRC 5. On the radio?
- INFSRC 6. In the newspaper?
- INFSRC 7. On social media?
- INFSRC 8. At church or from a faith-based organization?
- INFSRC 9. From a community organization?
- INFSRC 10. Through conversations with neighbors, friends, or family (online or offline)?
- INFSRC 11. At work? **[Interviewer: Ask if respondent works full time or part time]**
- INFSRC 12. From your child's school? **[Interviewer: Ask if children in household attend school]**
- INFSRC 13. From your school? **[Interviewer: Ask if respondent is a student]**
- INFSRC 14. From FEMA?
- INFSRC 15. From a local government entity or spokesperson?
- INFSRC 16. On the Ready.gov website?
- INFSRC 17. Anywhere else? (Specify)

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

[Interviewer: Ask if respondent read, saw, or heard information on preparing for a disaster from any sources]

SCUTL. Did you find the information you received **[Interviewer: Insert response from INF SRC1-17 that was selected (=01 YES)]** useful?

- INF SRC1. On national TV
- INF SRC 2. On local TV
- INF SRC 3. On the Internet
- INF SRC 4. Through email
- INF SRC 5. On the radio
- INF SRC 6. In the newspaper
- INF SRC 7. On social media
- INF SRC 8. At church or from a faith-based organization
- INF SRC 9. From a community organization
- INF SRC 10. Through conversations with neighbors, friends, or family (online or offline)
- INF SRC 11. At work **[Interviewer: Ask if respondent works full time or part time]**
- INF SRC 12. From your child's school **[Interviewer: Ask if children in household attend school]**
- INF SRC 13. From your school **[Interviewer: Ask if respondent is a student]**
- INF SRC 14. From FEMA
- INF SRC 15. From a local government entity or spokesperson
- INF SRC 16. On the Ready.gov website
- INF SRC 17. Anywhere else (Specify)

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

[Interviewer: Ask if respondent found any sources of information to be useful]

INFUSET. Of those sources that you found useful [If INFSRC=1 response: from that source], what do you remember about the information?

[Pre-coded list] [Multiple responses]

- 01 It gave me information about knowing what to do
- 02 It gave me information about gathering supplies/getting a kit
- 03 It gave me information about having a household emergency plan
- 04 It provided me with information about the impact of my local hazards and how to respond
- 05 It provided me with information about my local alert and warning systems
- 06 It provided me with information about preparedness training
- 07 It provided me with information about preparedness drills
- 08 It told me where to seek out more information
- 09 The information was new to me
- 10 The information was clever or catchy
- 11 Other [Specify]
- 97 Don't know
- 99 Refused

[Interviewer: Ask if respondent read, saw, or heard information on preparing for a disaster from any sources]

INFOUSE2. Still thinking about those useful sources of information, after receiving this information, did you take any steps to prepare for a disaster?

- 01 Yes
- 02 No
- 03 Didn't need to take steps—already prepared
- 97 Don't know
- 99 Refused

[Interviewer: Ask if respondent took any steps to prepare for a disaster]

INFUS3. Based on the information you received about getting better prepared, what steps did you take to become better prepared?

[Pre-coded list] [Multiple responses] [For responses 01-10 and 12; Options 11, 97 and 99 cannot be chosen with any other responses]

- 01 I made a kit/updated supplies
- 02 I made a household emergency plan
- 03 I learned about the impact of my local hazards and how to respond
- 04 I signed up for my local alert and warning systems
- 05 I participated in preparedness training
- 06 I participated in a preparedness drill
- 07 I went to a website to learn more
- 08 I read about ways to become prepared
- 09 I talked with people I know about preparedness
- 10 I asked someone a question about preparedness
- 11 Nothing
- 12 Other [Specify]
- 97 Don't know
- 99 Refused

[Interviewer: Ask if respondent took any steps to prepare for a disaster]

INFOUSE4. What motivated you to take these steps to become better prepared?

[Pre-coded list] [Multiple responses]

- 01 It is likely that a disaster will occur in my community
- 02 If a disaster occurred in my community, it would be severe
- 03 People I know have taken steps to get prepared
- 04 If a disaster occurred in my community, the police and fire department might not be able to take care of needs
- 05 I feel like it is my responsibility to take care of my family in a disaster
- 06 I want to protect myself in a disaster
- 07 My job or school encouraged me to take steps to become better prepared
- 08 A friend or family member encouraged me to take steps to become better prepared
- 09 A trusted leader encouraged me to take steps to become better prepared
- 10 It just seems like something I should do
- 11 Disasters I have experienced motivated me to get better prepared
- 12 Disasters in other places motivated me to take steps to become better prepared
- 13 Nothing
- 14 Other [Specify]
- 97 Don't know
- 99 Refused

Knowledge of Protective Actions

ACTION_EQ. I'm going to read you a list of actions you could take during an emergency. For each, tell me whether you think it is true or false that the government recommends this action?

[Randomize]

ACTION_EQ1. In an earthquake, you should get down close to the ground.

ACTION_EQ2. In an earthquake, you should get under a big piece of furniture or other cover.

ACTION_EQ3. In an earthquake, you should hold on to something.

ACTION_EQ4. If you are indoors during an earthquake, you should run out of the building.

ACTION_EQ5. If you are in bed during an earthquake, you should lie on the floor next to the bed.

ACTION_EQ6. In an earthquake, you should get in a doorway.

01 True

02 False

97 Don't know

99 Refused

SDCH. Thanks, I just have a few more questions. The Federal Emergency Management Agency wants you to know that during an earthquake, you should Drop, Cover, and Hold on. That means, you should drop to the ground, take cover by getting under a sturdy desk or table, and hold on to it until the shaking stops. If you are inside during an earthquake, do not go outside until it is safe to do so.

ACTION_TN. I'm going to read you a list of actions you could take during an emergency. For each, tell me whether you think it is true or false that the government recommends this action?

[Randomize]

ACTION_TN1. If you are indoors during a tornado, you should go to a basement or an interior room on the lowest floor without windows.

ACTION_TN2. If you are indoors during a tornado, you should open the windows to minimize damage.

ACTION_TN3. If you are in a vehicle during a tornado, you should find an overpass and stop underneath until the tornado passes.

ACTION_TN4. If you are in a city during a tornado, you do not need to find shelter because tornadoes don't impact cities.

ACTION_TN5. A tornado warning means a tornado has been sighted or indicated by weather radar.

ACTION_TN6. Most deaths and injuries in a tornado are caused by flying debris.

- 01 True
- 02 False
- 97 Don't know
- 99 Refused

TRNDO. The Federal Emergency Management Agency wants you to know that a tornado warning means that a tornado has been sighted or indicated by weather radar. Most deaths and injuries in a tornado are caused by flying debris. During a tornado, if you are indoors and there is not an underground shelter or safe room available, you should go to a basement or an interior room on the lowest floor such as a bathroom or closet without windows. You should not open the windows. If you are in a vehicle, overpasses do not provide any protection. You should stay in your vehicle with the seat belt on, put your head down below the windows, and cover with your hands and a blanket if possible. If you can safely get noticeably lower than the level of the roadway, exit your car, and lie in that area, covering your head with your hands. If you are in a city during a tornado, you should find shelter as tornados can impact cities.

Demographics

Last, I would like to ask you for some information about you and your household. Again, all information that you provide will be held confidential.

N4. What is the highest level of education that you attained? Would it be...?

- 01 Less than 12th grade (no diploma)
- 02 High school graduate or GED
- 03 Some college but no degree
- 04 Associate degree in college
- 05 Bachelor's degree
- 06 Master's degree
- 07 Doctorate degree
- 97 Don't know
- 99 Refused

DIS1. Because of a physical, mental, or emotional condition, would you have difficulty preparing for an emergency?

[If necessary] For example, types of conditions could include a mobility, hearing, vision, cognitive, or intellectual disability or physical, mental, or health condition

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

DIS2. Because of a physical, mental, or emotional condition, would you have difficulty responding in an emergency?

[If necessary] For example, types of conditions could include a mobility, hearing, vision, cognitive, or intellectual disability or physical, mental, or health condition

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

DIS3. Do you currently live with or care for someone with a disability who requires assistance?

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

N7. Which of the following best describes your race? Would you consider yourself to be...?

- 01 White
- 02 Black or African American
- 03 Asian
- 04 American Indian or Alaska Native
- 05 Native Hawaiian or Other Pacific Islander
- 95 Something else (Specify)
- 97 Don't know
- 99 Refused

N8. Are you of Hispanic or Latino or Spanish origin?

- 01 Yes
- 02 No
- 97 Don't know
- 99 Refused

N9. In what year were you born?

Enter response _____ [RANGE 1900–1994]

- 9997 Don't know
- 9999 Refused

N10. Which of the following income ranges represents your annual household income in 2011? Feel free to stop me at the correct range. Was your household income...?

- 01 Less than \$25,000
- 02 \$25,000 to less than \$50,000
- 03 \$50,000 to less than \$75,000
- 04 \$75,000 or more
- 97 Don't know
- 99 Refused

N11. What state do you live in? __ __

N12. What is your zip code? _____ //RANGE 00000-99996//

9997 Don't know

9999 Refused

N13. Record gender [DO NOT ASK]

01 Male

02 Female

Questions About Phones

Cell1. Do you personally use a cell phone?

01 Yes

02 No

97 Don't know

99 Refused

LL1. Do you have at least one landline telephone line in your home that you use for making and receiving phone calls?

[If necessary] A landline is a traditional phone, not a cell phone.

[If necessary] We only want to know about the lines you actually use to make calls, not lines dedicated to Internet or fax.

01 Yes

02 No

97 Don't know

99 Refused

Dual1. Of all the telephone calls that you receive, are...

01 All or almost all calls received on cell phones

02 Some received on cell phones and some on regular phones

03 Very few or none on cell phones

97 Don't know

99 Refused

CLOSE1. Those are all of the questions that I have. On behalf of ICF International and FEMA, I would like to thank you for your time and participation. Thank you again.

Appendix C: Survey Respondent Profile

| Gender | Weighted |
|--------|----------|
| Male | 48% |
| Female | 52% |

| What is the highest level of education you have received? | Weighted |
|---|----------|
| Less than 12th grade | 5% |
| High school graduate or GED | 17% |
| Some college but no degree | 25% |
| Associate degree in college | 12% |
| Bachelor's degree | 23% |
| Master's degree | 14% |
| Doctorate degree | 4% |

| Which of the following income ranges represents your annual household income in 2010? | Weighted |
|---|----------|
| Less than \$25,000 | 20% |
| \$25,000 to less than \$50,000 | 23% |
| \$50,000 to less than \$75,000 | 18% |
| \$75,000 or more | 26% |
| Refused | 11% |

| Which of the following best describes your race? Would you consider yourself to be...? | Weighted |
|---|-----------------|
| White | 70% |
| Black or African American | 12% |
| Asian | 4% |
| American Indian or Alaska Native | 3% |
| Native Hawaiian or Other Pacific Islander | 1% |
| Other | 9% |
| Refused | 4% |

| Are you of Hispanic, Latino, or Spanish origin? | Weighted |
|--|-----------------|
| Yes | 14% |
| No | 84% |
| Refused | 2% |

| Race/Ethnicity | Weighted |
|-------------------------------------|-----------------|
| White non-Hispanic | 66% |
| Black/African American non-Hispanic | 11% |
| Other non-Hispanic | 9% |
| Hispanic | 14% |

| In what year were you born? (Reported in age clusters) | Weighted |
|---|-----------------|
| 18–24 | 9% |
| 25–34 | 19% |
| 35–44 | 19% |
| 45–54 | 18% |
| 55–64 | 15% |
| 65–74 | 10% |
| 75+ | 6% |
| Refused | 4% |

| Which best describes your job status? | Weighted |
|--|-----------------|
| Work full time | 47% |
| Work part time | 9% |
| Student | 9% |
| Unemployed | 10% |
| Retired | 20% |
| Other | 9% |

| Are there children under the age of 18 living in your residence? | Weighted |
|---|-----------------|
| Yes | 36% |
| No | 64% |

| Does at least one of the children currently attend a school outside of your home, including day care or part-time kindergarten? | Weighted |
|--|-----------------|
| Yes | 77% |
| No | 23% |

| Do you have a disability or health condition that might affect your capacity to prepare for to an emergency situation? | | Weighted |
|---|--|-----------------|
| Yes | | 9% |
| No | | 91% |

| Do you have a disability or health condition that might affect your capacity to respond to an emergency situation? | | Weighted |
|---|--|-----------------|
| Yes | | 7% |
| No | | 92% |

| Do you currently live with or have primary responsibility for <u>assisting</u> someone with a disability who requires assistance? | | Weighted |
|--|--|-----------------|
| Yes | | 14% |
| No | | 85% |