



A Resource for the State of Florida

**HURRICANE LOSS REDUCTION  
FOR  
HOUSING IN FLORIDA:**

## **Section 9**

# **Single-Family Home Hurricane Mitigation Survey**

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## Executive Summary

The Metropolitan Center at Florida International University, in collaboration with the International Hurricane Research Center, conducted a statewide survey of Florida residents and single-family homeowners to determine their level of hurricane preparedness, perception of threat and attitudes towards different mitigation strategies. The survey results have serious policy implications because they demonstrate predominant attitudes among Floridians regarding hurricanes which can be used to predict and model behavior.

The survey respondents were dispersed throughout Florida to ensure a representative sample of Florida residents. Due to the sample targeted – Florida residents and single family home owners, the respondents were predominantly White/Caucasian, in the ages of 30 to 65, and speak only English at home. Most respondents are also with household income of more than \$30,000 and estimate their home values at more than \$200,000. Most respondents have purchased their home in the 1990s or more recently. Most of the respondents' homes were built in the 1980s or earlier. The majority of respondents' households have at least two members who are 65 years of age or above.

The survey results demonstrate that Floridians have yet to embrace a culture of preparedness:

- ◆ Only 20% of Floridians discuss hurricane safety more than once every couple of months;
- ◆ Less than half (46.8%) of all Floridians will begin preparing their homes when a “Hurricane Warning” is issued; and
- ◆ Only 20.5% of Floridians would evacuate after a “Hurricane Warning” is issued.

However, Florida residents are becoming increasingly aware of the dangers of hurricanes:

- ◆ 46.1% of respondents feel extremely or somewhat vulnerable to hurricanes;
- ◆ 87.1% feel somewhat to very certain that they have all the information needed to protect themselves and their property from hurricane damage; and
- ◆ 85% have a plan if threatened by a serious hurricane.

While most Floridians believe the community would be better off if everyone protected their homes against hurricanes (86.8%) and would be in favor of their community undertaking a program to strengthen public buildings, utility lines and other infrastructure against hurricane damage (85.7%), Floridians seem to lag behind in their preparations.

- ◆ 48.6% of homeowners do not have any type of shutters or window coverings.
- ◆ 24.9% of those who reported they have some type of window coverings do **not** have shutters on all their windows.
- ◆ Of those who do not have shutters, 36.4% said they do not need, 30.6% said they could not afford them.
- ◆ Only 31.7% of residents whose home is located in an evacuation zone would evacuate if a major hurricane is predicted to hit their area within 24 hours.

In addition, Floridians do not seem willing to take any additional measures to protect themselves and their property from hurricanes by utilizing different programs for hurricane mitigation.

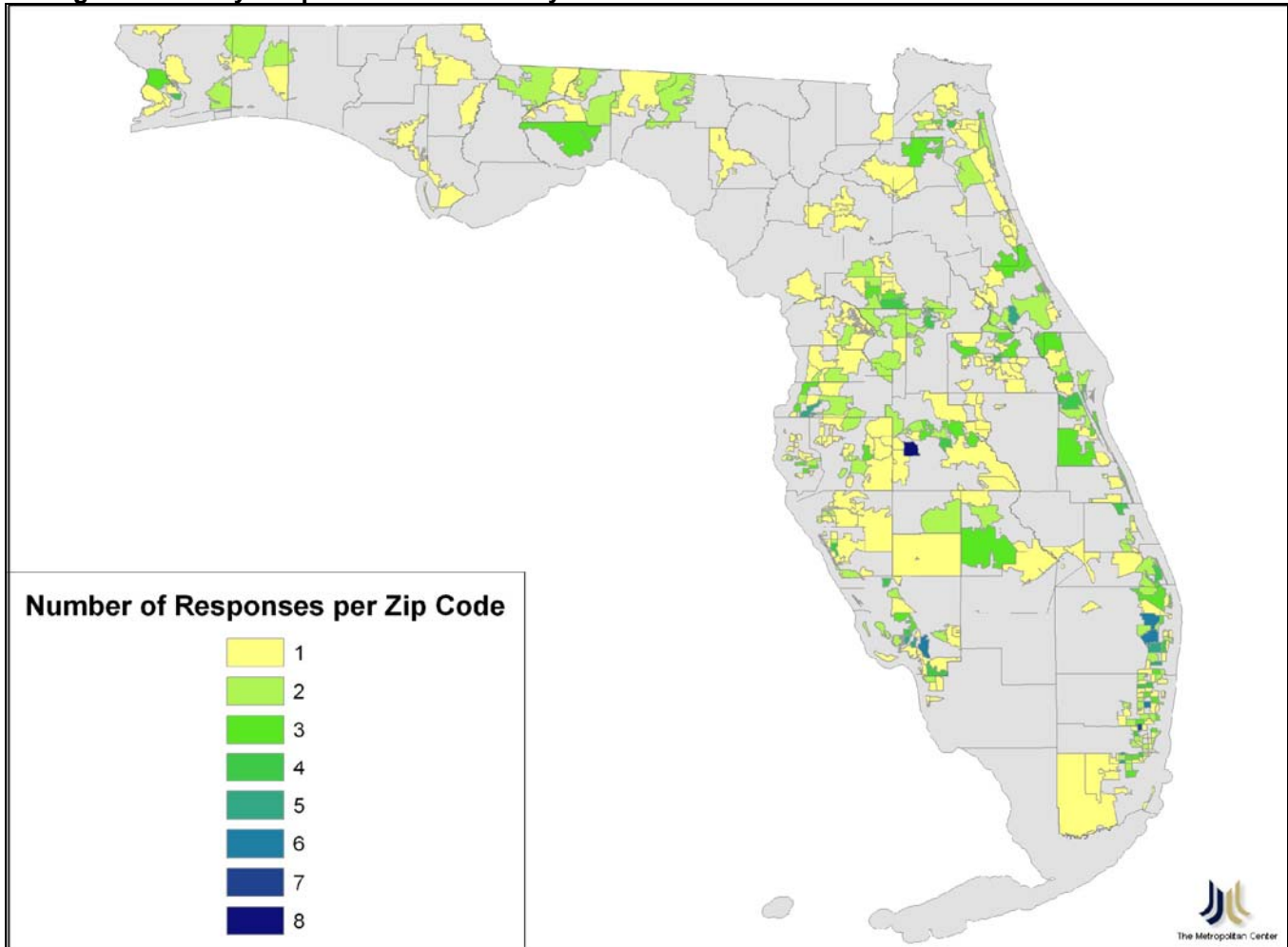
- ◆ Only half the respondents would be interested in a no-cost inspection program to inspect their homes and offer suggestions to make them more hurricane resistant.
- ◆ Other economic incentive program received less support:
  - 0% interest loan
  - A grant program offering up to \$10,000
  - Lower annual insurance premiums

## Methodology

The Florida State Department of Community Affairs selected the Metropolitan Center at Florida International University in collaboration with the International Hurricane Research Center to conduct a statewide survey of Florida residents and single-family homeowners to determine their level of hurricane preparedness, perception of threat and attitudes towards different mitigation strategies. A sampling framework was constructed to ensure a ninety-five (95) percent confidence interval with a five point plus or minus variance. Surveys were conducted from March 27, 2006 to April 12, 2006 via phone by expert phone interviewers.

- 726 homeowners completed the survey
- 707 of surveys were completed by single-family homeowners
- 703 surveys met the following criteria
  - Single-family homeowners
  - Florida Residents

**Figure 1. Survey Response Distribution by ZIP Code**



## Sample Demographics

### Age

Due to the sampling criteria of homeownership, the sample disproportionately over represents certain age groups.

- ◆ The majority of respondents are 30 to 65 years of age (59.5%).
- ◆ Only 5.7% of respondents are less than 30 years of age.
- ◆ 36.5% of respondents are between 30 and 55 years of age.
- ◆ 34.9% are 66 years of age or older.
- ◆ 76.2% of respondents have been Florida residents for more than 10 years.
- ◆ Only 2.7% have been Florida residents for two years or less.

### Ethnic/Racial Background

- ◆ Approximately 89% of respondents identified themselves as White/Caucasian.
- ◆ Among minority groups the percentage distribution is as follows:
  - 4.1% African American/Black
  - 0.5% Asian
  - 0.8% Native American
  - 4.6% "Other"
- ◆ Only 10.5% of respondents identified themselves as Hispanic, while 89.2% were non-Hispanic.
- ◆ The majority of respondents (90.7%) speak only English at home.
- ◆ Only 2.3% of people surveyed indicated they speak exclusively Spanish at home.

### Family Status/Household Characteristics

- ◆ The majority of respondents (72%) are currently married.
- ◆ Only 7.8% are single.
- ◆ 8.4% are divorced or separated.
- ◆ Almost half of respondents (49.2%) have a two-member household.
- ◆ 35% have three or more members of their household.
- ◆ 15.7% have a single-member household.
- ◆ Only 15.6% of respondents have children under the age of 12 in household. 50.6% of those have more than two children of that age.
- ◆ Almost half of the people surveyed (46.4%) have household members who are 65 years of age or above. More than a half of those (54.3%) have at least two members in that age group.

## Education

- ◆ Almost half the respondents (49.8%) have a household member with a college degree or higher.
- ◆ 17.2% have a household member with a graduate degree.
- ◆ 25% have a member with only a high school degree.
- ◆ Only 3.2% have not completed high school.

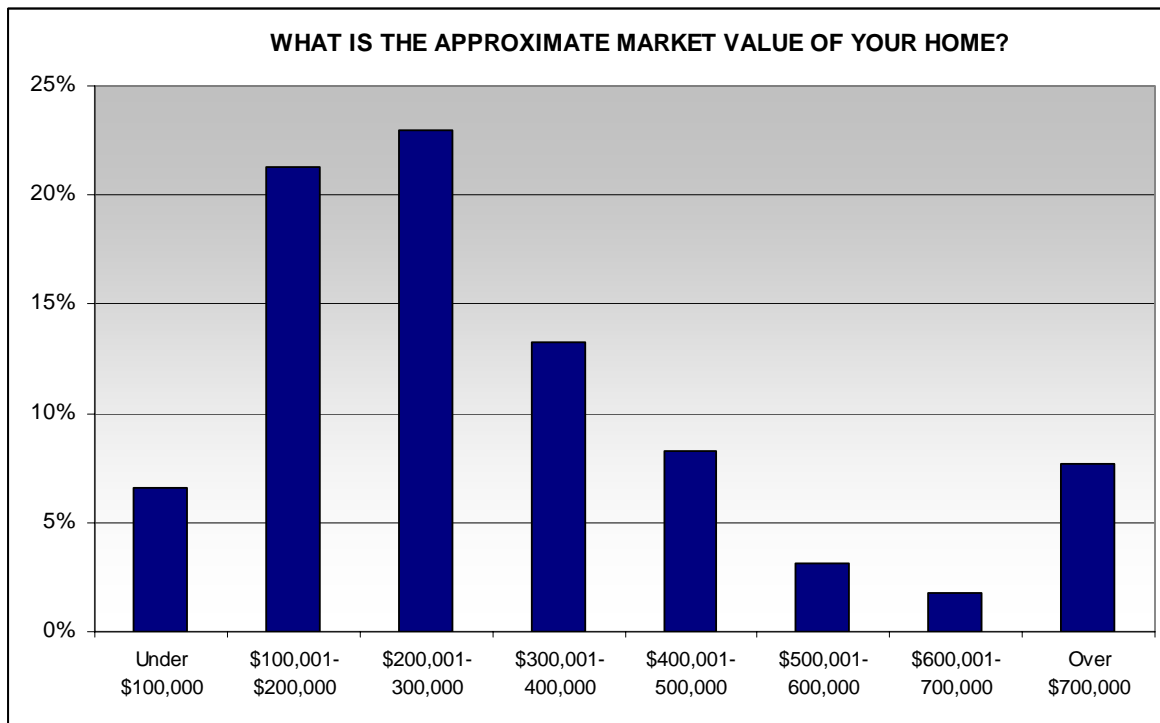
## Economic Characteristics

- ◆ Almost half the respondents (49.4%) have a household income of more than \$30,000.
- ◆ 8% of respondents have a household income of less than \$20,000.

## Home Characteristics

- ◆ More than a third of the respondents (34.2%) estimate their home value at more than \$300,000.
- ◆ Only 6.6% estimate their home value to be under \$100,000.
- ◆ 7.7% consider their home value to be more than \$700,000.

Figure 2



- ◆ More than a quarter of the respondents (26.8%) have purchased their homes in the last 6 years.
- ◆ 16.9% of respondents have purchased their homes more than 20 years ago
- ◆ The majority of respondents (54.1%) indicated their homes were build in the 1980s or more recently.
- ◆ 30% live in homes build in the 1990s or more recently (post-hurricane Andrew).

## Hurricane Experience and Information

Floridians have become increasingly familiar with hurricanes both through their personal experience with them, but also through the information they receive from media outlets.

- ◆ 95.2% have experienced a tropical storm, hurricane or both.
- ◆ 49.8% of all homeowners have had physical damage to their property due to a hurricane.
  - Only 9.3% assessed their home damage as “major.”
  - 39.2% indicated their homes suffered no damage, while 47.1% reported “slight” or “moderate” damage.
  - 80.8% reported their homes had suffered wind damage, while only 6.4% indicated water damage, from the ocean surge or hurricane-related flooding.
  - Roof damage is the most commonly reported effect of hurricanes (72.2%).

Floridians seems satisfied with the amount and type of information they receive about hurricanes.

- ◆ 61.2% are certain that their households have all the information needed to protect themselves and their homes from hurricane damage, while 25.9% are “somewhat certain.”
- ◆ Television is the major source of hurricane information for Florida residents (86.9%), followed by Internet (5.4%) and radio (4.3%).
- ◆ One in nine Floridians have never discussed hurricane safety within their household
- ◆ An overwhelming number of residents (95.6%) are satisfied with the current system of watches and warnings.
- ◆ Moreover, 69.3% would oppose a color-coded warning system.

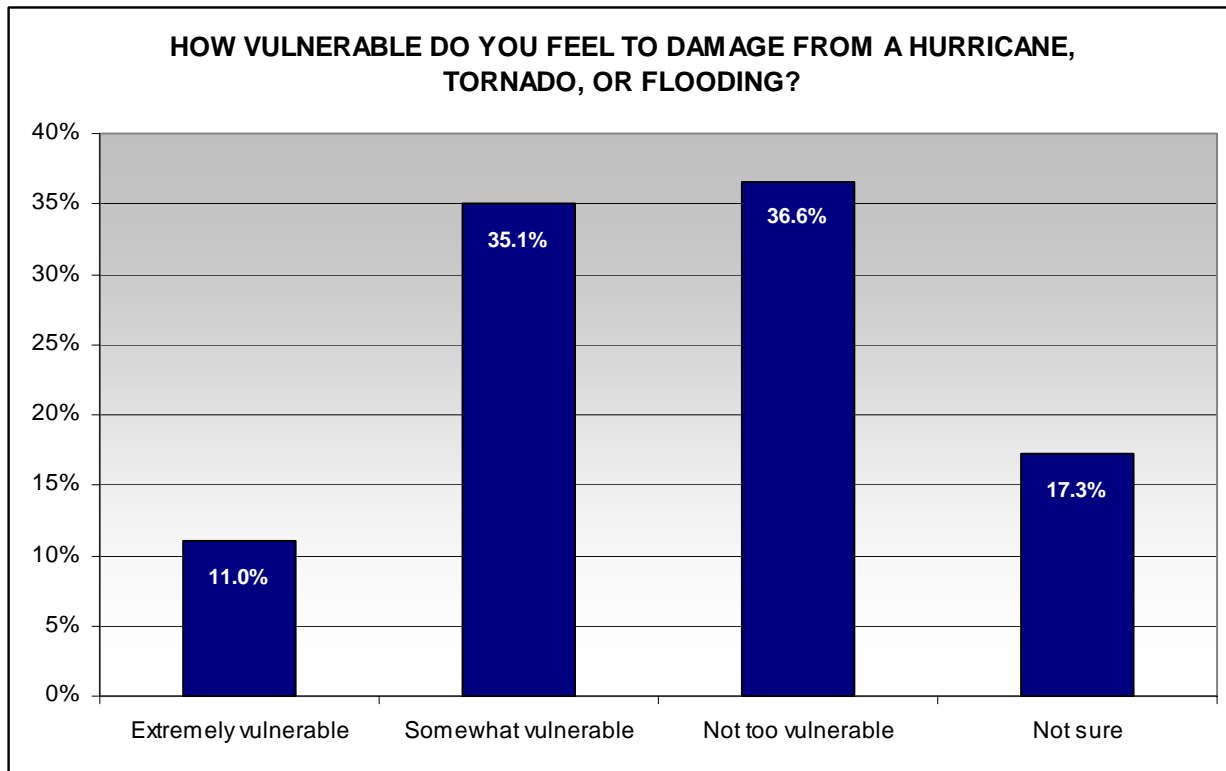
Based on their prior experience and information they received, 36.6% of respondents think that it is very or somewhat likely that they will not be able to go to work sometime during the upcoming hurricane season

## Perception of Danger and Preparedness

While Floridians are aware of the dangers posed by hurricanes, they do not seem to be taking action in terms of preparations for hurricane season. Moreover, while a significant number of Floridians have suffered hurricane damage in previous years, prior hurricane experience does not seem to be a major predictor of hurricane preparations.

- ◆ 52.3% of Floridians who have experienced a category 2 hurricane and 55.1% of those with a category 3 hurricane experience, do not have window coverings, shutters or impact-resistant windows.
- ◆ Less than half of Floridians feel somewhat to extremely vulnerable to damage from hurricanes, tornadoes, or flooding (46.1%)
  - More than a quarter (26.7%) of Floridians who have been living in a home physically damaged by a hurricane, do not feel too vulnerable to hurricane damage
  - 45.9% of Floridians who feel vulnerable to hurricane damage do not have a plan for what to do should serious hurricane activity occur
  - Floridians who feel vulnerable to hurricane damage are likely to consider moving from the State of Florida (52.8%)
  - Lack of hurricane information does not have an effect on how vulnerable Floridians feel
    - 63% of Floridians who feel vulnerable are confident they receive all information necessary to prepare for hurricanes, compared to 65% of those who do not feel vulnerable.

Figure 3



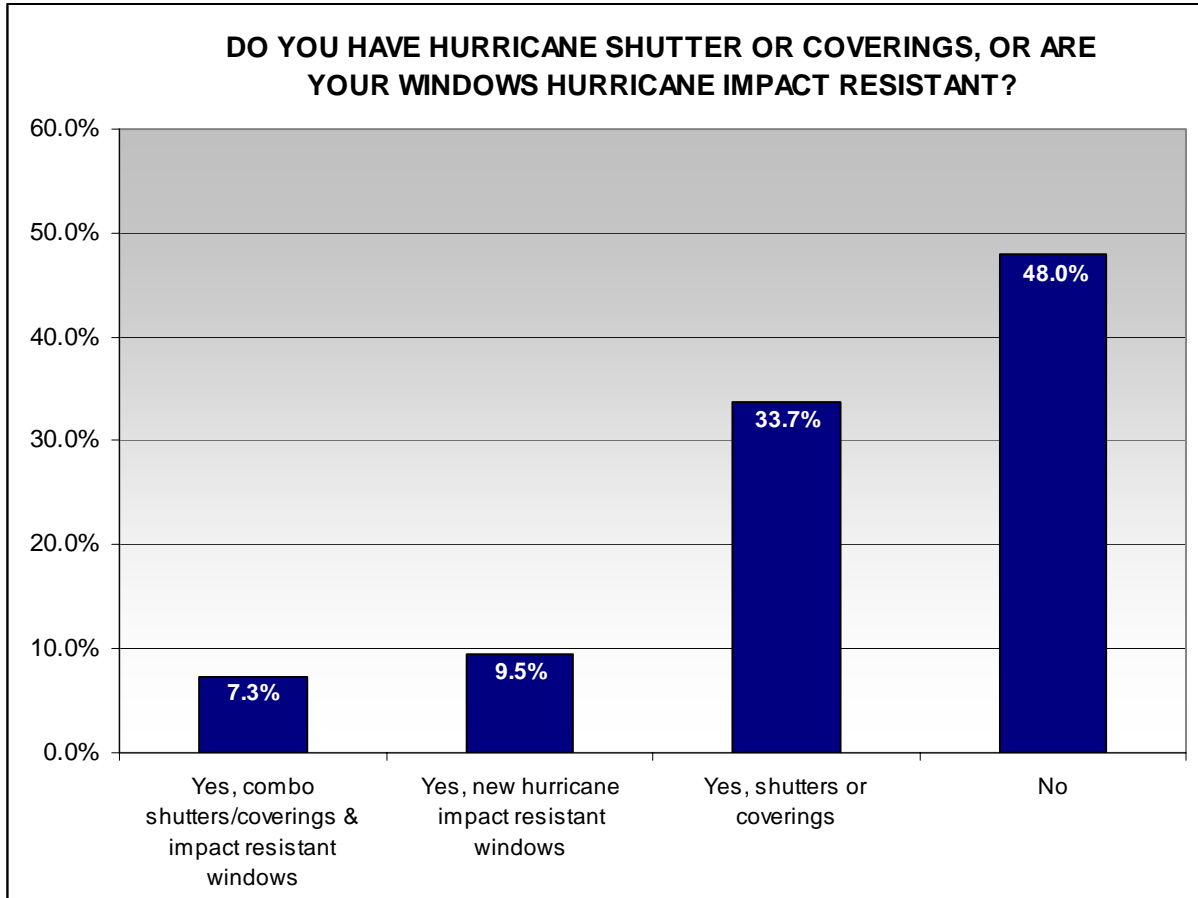


- ◆ While Floridians feel vulnerable to hurricanes now, hurricane safety was not at all important to 61.2% for making a decision to purchase their home. Only 14% considered it very important.
- ◆ 65.4% do not consider a safe room, or a specially reinforced inner room where household members might wait out a hurricane, to be important in their home purchase decision.
- ◆ The existence of a safe room would not influence the home purchase decisions of 65.4% of respondents.

While significant numbers of Floridians feel they are adequately prepared for hurricanes, they do not seem to be willing to make an effort to prepare their homes better.

- ◆ Despite the recent increase in hurricane activity, 82.9% of Floridians would not consider moving from the state of Florida.
- ◆ A significant number of Floridians (41.1%) feel their home is already prepared and could be secured within a couple of hours.
- ◆ 7.7% would not make any special preparations to their homes.
- ◆ 48.6% of homeowners do not have any type of shutters or window coverings.
- ◆ Less than half of respondents (47.4%) believe that having shutters for their home increases its market value.
- ◆ Economic considerations seem to influence decisions whether to have window covering and/or shutters. 63.6% of those who believe that having shutters increases their homes' market value and only 48.5% of those who do not believe the same have shutters installed.
- ◆ 75.1% of those who reported they have some type of window coverings have shutters on all their windows.
- ◆ 55.6% of respondents reported their shutters have been commercially installed, while 33.1% installed the shutters themselves.
- ◆ Of those that cover their windows, 36.6% use storm panels, 25.8% use plywood, 19% have accordion shutters, 6.1% use roll-down shutters, and 5.7% use awnings.
- ◆ Of those who do not have shutters, 36.4% said they do not need, 30.6% said they could not afford them.
- ◆ The overwhelming majority of Florida residents (85%) have a plan for what to do if threatened by a hurricane.
  - 45.9% of Floridians who reported they have a plan do not have any type of window coverings or shutters.
  - 45% of those who have a plan reported their homes are already prepared for a hurricane.
  - 19.3% of respondents who indicated they do not have a hurricane plan would not make any special preparations to their homes.
  - Only 0.3% would start preparing their homes at the start of the hurricane season.
  - 92.5% of Floridians residing in evacuation zones, and 82.7% of those not in an evacuation zone, have a plan for what to do when threatened by a hurricane.

**Figure 4**

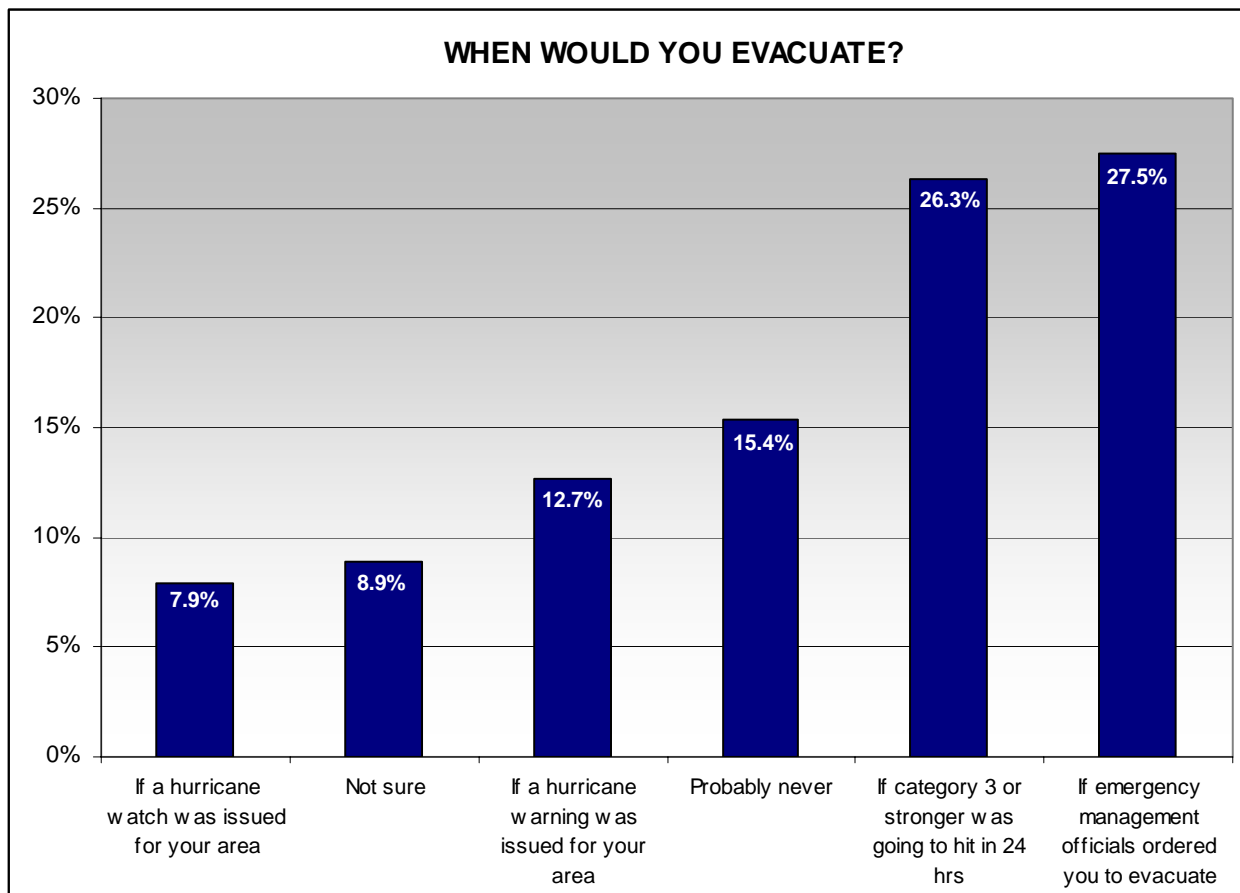


# Evacuations

Floridians are still not clear on who should or who should not evacuate:

- ◆ 8.1% of respondents indicated they do not know whether their home is located in an evacuation zone or not.
- ◆ 10.2% would not evacuate under any circumstances.
- ◆ The majority of Floridians would evacuate under the threat of a category 3 hurricane or stronger (26.3%), or if ordered by emergency management officials (27.5%).

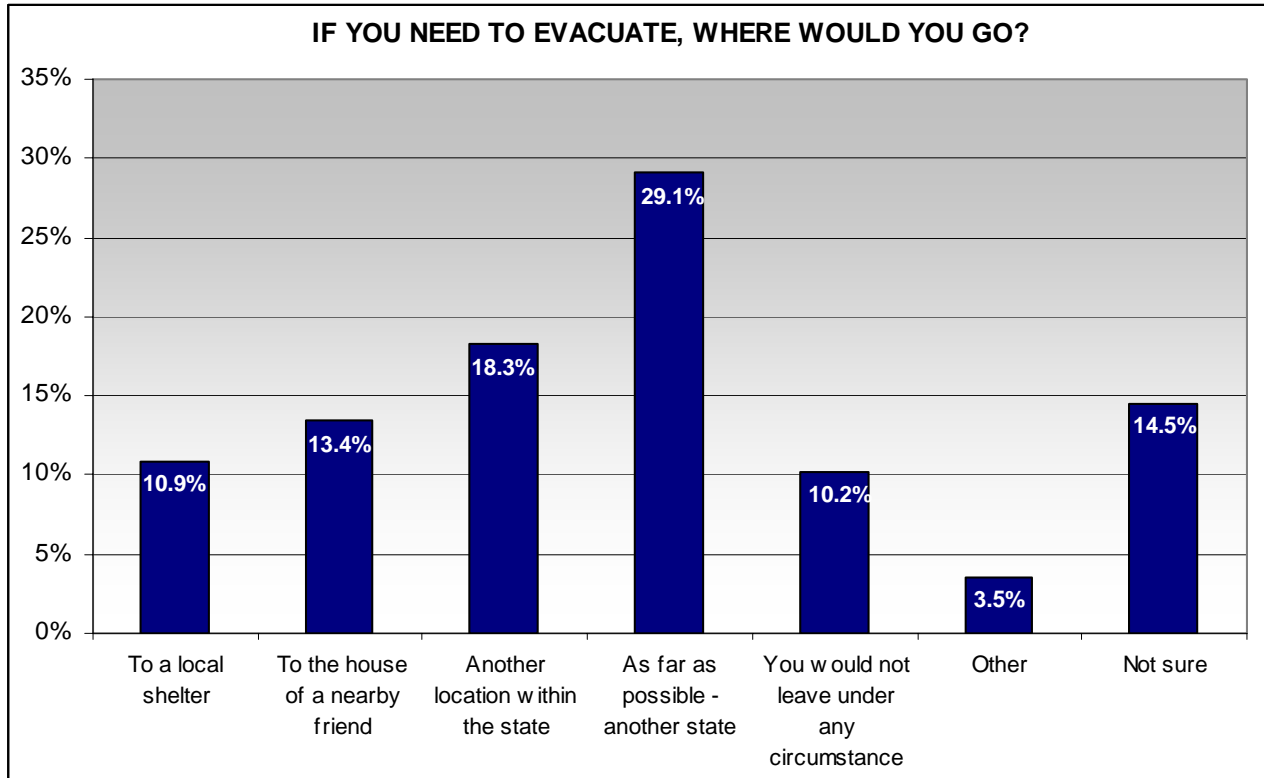
Figure 5



- ◆ 8.5% of residents whose home is located in an evacuation zone would probably never evacuate;
- ◆ Only 31.7% of residents whose home is located in an evacuation zone would evacuate if a major hurricane is predicted to hit their area within 24 hours;
- ◆ People who live in evacuation zones are only slightly more likely to evacuate than those who live elsewhere
  - 28.2% of people **not** living in an evacuation zone would evacuate if emergency management officials ordered evacuations, compared to 24.6% of people living in evacuation zones

- While 11.6% of people living in an evacuation zone would evacuate if a hurricane watch was issued for their area, only 6% of people **not** living in evacuation zones would not evacuate
- ♦ Respondents mentioned the following evacuation destinations most often
  - As far as possible / Another state (29.1%)
  - Another location within the state (18.3%)
  - The house of a nearby friend (13.4%)
  - To a local shelter (10.9%)

**Figure 6**

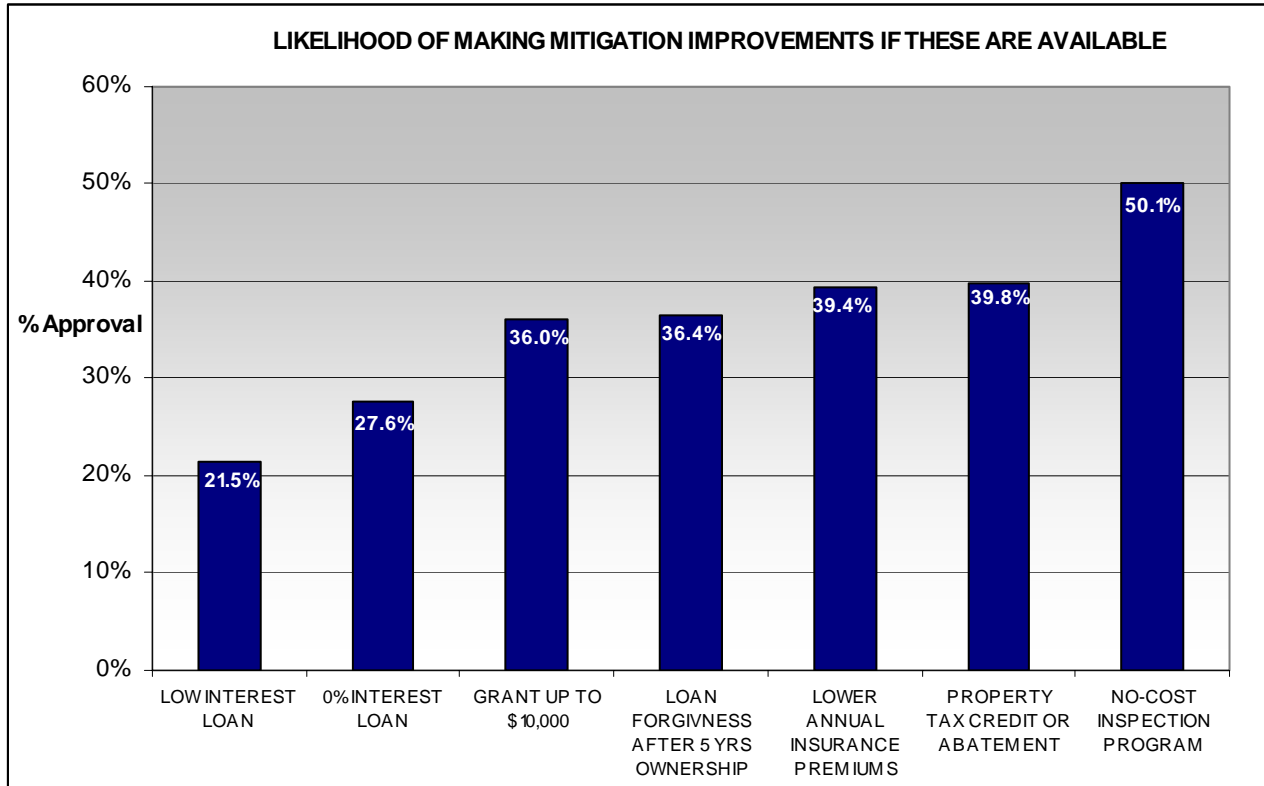


## Hurricane Mitigation Strategies

While the overwhelming majority of Floridians favor mitigation strategies, the majority are not interested in programs – loans or grants – that would help them finance preparing their homes against hurricanes.

- ◆ The overwhelming majority of Florida residents (86.8%) believe the community would be better off if everyone protected their homes against hurricanes.
- ◆ 85.7% would be in favor of their community undertaking a program to strengthen public buildings, utility lines and other infrastructure against hurricane damage.
- ◆ However, Floridians are still largely ill-informed about measures they could take to mitigate damages to their homes.
  - Only 20.1% are aware adding a bead of adhesive to the joint between the roof trusses and roof sheathing would make their home more hurricane resistant.
  - Only 32.2% are aware that adding addition bracings to their roof will make it more hurricane resistant.
  - However, 69.1% are aware of the need to have a safe-room during hurricanes.
- ◆ While the majority of respondents (96.1%) indicated they have homeowner's insurance, a significant number also are not aware of some of the benefits offered by insurance companies.
  - Only 37.5% are aware that their insurance company is required to offer discounts or lower deductibles for homes that have hurricane safety features like shutters.
  - Only 1.3% have taken advantage of these discounts.
- Floridians are predominantly not interested in investing in mitigation improvements.
  - Only 20% are somewhat or very interested in incorporating mitigation improvements into a new mortgage or home equity loan.
  - Only 26.6% are somewhat or very interested in getting a lower mortgage rate by incorporating the cost of improvements into a new mortgage or home equity loan.
  - A low interest loan is not likely to motivate 53.9% of Floridians to undertake hurricane protection measures.
  - A 0% interest loan would motivate only 27.6% to undertake hurricane protection measures.
  - A grant program offering up to \$10,000 is somewhat to very likely to motivate 36.4% to undertake hurricane protection measures.
  - Only 36% would be interested in a loan, which would be forgiven if they remained in their home for five years.
  - Lower annual insurance premiums would encourage only 39.4% to undertake hurricane protection measures.
  - Only 39.8% would be interested in a property tax credit or abatement.
  - However, half of the respondents (50.1%) would be interested in a no-cost inspection program to inspect their homes and offer suggestions to make them more hurricane resistant.

Figure 7



- Only 9.5% of Floridians are aware of [www.Floridawindincentives.org](http://www.Floridawindincentives.org), an interactive internet database allowing Florida homeowners to search for wind insurance incentives that are available for building features reducing damage during high wind events like hurricanes.