

MAKING RECOVERY COUNT

Phase 3: Mortgage and Insurance Verification Analysis

The following pages capture the initial results of The Mortgage and Insurance Verification Analysis, which compares and contrasts FEMA Registration Intake data pertaining to home insurance and mortgages with similar Census data. While the questions are similar, the phrasing, as well as the condition under which the surveys are completed, differ. For example FEMA Registration Intake asks specifically about *home* insurance, whereas Census surveys information regarding *property* insurance.

The following section provides an overview of the sampling methodology and data set used in the analysis:

The American Community Survey (ACS)

The ACS surveys approximately 3.5 million homes every year and averages more than a 96% response rate (2000-2017). From those surveys, Census provides 1, 3, and 5 years estimates on current demographic, social, economic, and housing topics. 1-year estimates are provided for areas with 65,000 people or more, 3-year estimates are provided for areas with 20,000 people or more, and 5-year estimates are provided for all areas as small as Census tracts and block groups. Each of the estimates are released in the year following the year the data is collected. Since estimates included in the 1 and 3 year estimates are also included in the 5 year estimates, the FEMA Team chose to use the 5-year estimates of the ACS (2005-2009, 2006-2010, 2007-2011, 2008-2012, 2009-2013, 2010-2014, 2011-2015, 2012-2016) for the purpose of the analysis resulting in 27,000,000 records.

Original FEMA Data. Using the National Emergency Management Information System (NEMIS), the FEMA Team submitted a data set consisting of all FEMA Individual Assistance applicants from 232 Presidentially Declared Disasters ranging from the years 2005-2016 to be matched the ACS participants. Census then assigned Protected Identification Keys (PIKs) to applicants of the FEMA data set resulting in 5.5 million records.

FEMA Applicants. The FEMA Team matched the PIK'd FEMA data to ACS 5-year estimates crosswalk data, which was then matched to ACS 5-year estimate data (2005-2009, 2006-2010, 2007-2011, 2008-2012, 2009-2013, 2010-2014, 2011-2015). We chose only ACS records that showed the respondent had a Response Date between the Move-In Year and the Disaster Declaration Date. Where there was more than one qualifying Response Date, we chose the last response prior to the Disaster Date. We were able to match 13% of FEMA applicants to ACS participants resulting in 700,000 records.

Homeowners. The subgroup used for this analysis consisting of FEMA Applicants limited to homeowners who had taken the ACS within 1 year before registering for FEMA assistance resulting in 41,500 records.

This research was conducted as a part of the U.S. Census Bureau's Evidence Building Project Series. The Census Bureau has not reviewed the paper for accuracy or reliability and does not endorse its contents. Any conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau. All results were approved for release by the Census Bureau's Disclosure Review Board, authorization numbers CBDRB-FY20-ERD002-002.

RESEARCH QUESTION

At what rate do owners report not having home insurance during FEMA Registration Intake (RI) but report having housing-related insurance information to the ACS?



6.5% of those sampled who reported a mortgage or contract to purchase in the ACS **reported not having homeowner's insurance** during Registration

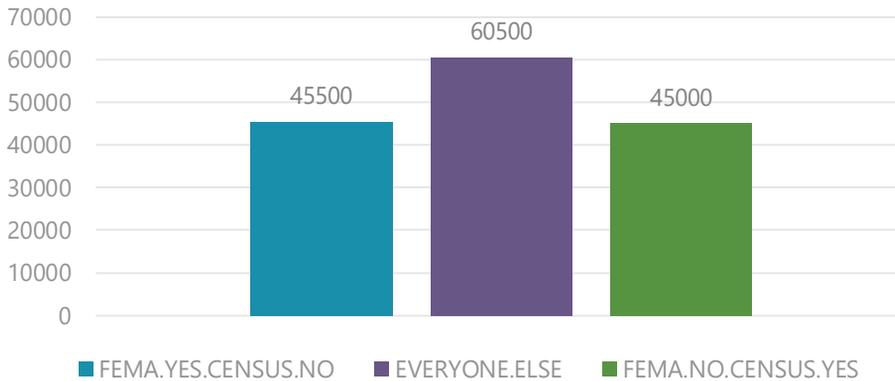
When evaluating the rate of inconsistent reporting in conjunction with the limitations of the sampling population, there are multiple reasons to explain this phenomenon that are not due to malicious intent, such as:

- Change in housing status between ACS submission and FEMA Registration Intake
- Disparity between the wording of the FEMA Registration Intake question and the wording of the ACS question(s)
- Disparity between the context under which the survey questions are being answered
 - For example, disaster survivors are often under a high degree of stress when completing Registration Intake, whereas the ACS is completed in a relatively stress-free involvement
- Misunderstanding of the questions
 - For example, what is meant by "property insurance"?

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- **69.3%** of owners reported home-related insurance consistently between FEMA and the ACS
 - **24.2%** of owners reported having insurance to FEMA but did not report home-related insurance information to the ACS

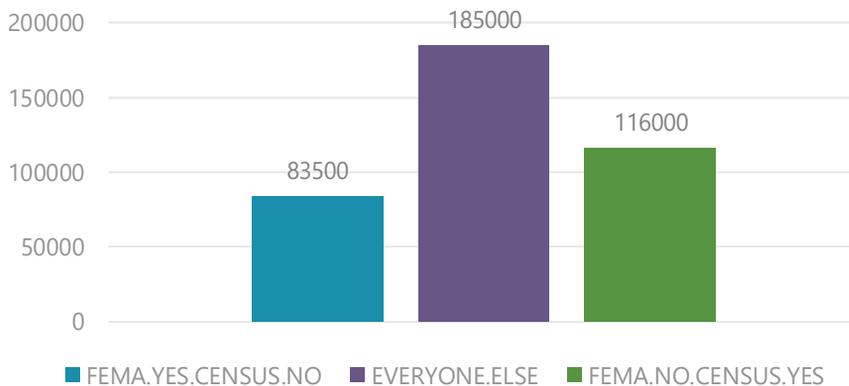
Understanding Responses by Economic Groups

Medians of Family Income by Insurance Responses



Individuals who report insurance information consistently have a median income that is an estimated 15,000 dollars higher than individuals who respond inconsistently between FEMA and Census. Respondents who answered YES to FEMA but NO to CENSUS have the same median income as those who respond in the reverse.

Medians of Property Values by Insurance Responses



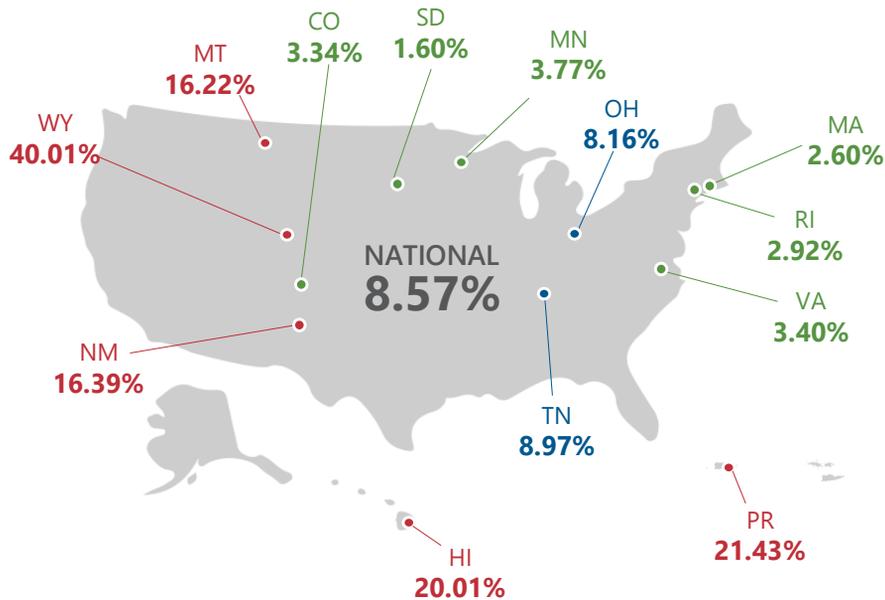
Individuals who report insurance information consistent have a median property value that is an estimated higher than individuals who respond inconsistently between FEMA and Census. Respondents who answered YES to FEMA but NO to CENSUS have the lowest property value among the three groups.

EVERYONE ELSE includes individuals who reported consistent insurance information between the ACS and FEMA Registration intake

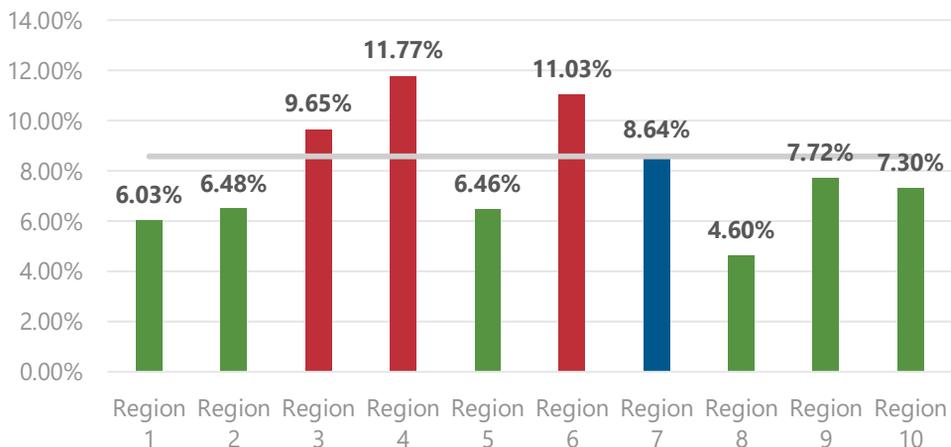
Understanding Responses by State/Region

Due to the sampling method used, median percentages were calculated based on data available and may not be proportionally representative. For example, Rhode Island is only represented by two DRs, whereas Florida is represented by eight. Hazard type and severity of the event may also have an effect on the current result distribution.

Median Percentages of FEMA Registrants who answered NO to FEMA Homeowner's Insurance and YES of Census Property Insurance by State



Median Percentages of FEMA Registrants who answered NO to FEMA Homeowner's Insurance and YES of Census Property Insurance by Region Compared to the National Median Percentage



Understanding Inconsistent Responses by Hazard Type

Similarly to the observations on the previous page, sampling methodology may play a role in the resulting rates.

Table representing the breakdown of incident type, DR count, State/Territory Count, and County Count

Incident Type	# of Disaster	# of State /Territories	# of Designated Counties
Earthquake	4	4	15
Fire	9	3	95
Flood	27	20	372
Hurricane	29	16	520
Mud/Landslide	1	1	1
Other-Explosion	1	1	2
Severe Storm(s)	155	41	2040
Tornado	5	5	32
Typhoon	1	1	1

Median Percent of FEMA Registrants who answered NO to FEMA Homeowner's Insurance and YES of Census Property Insurance by Hazard Type



TYPHOON = N/A

■ = <6%
 ■ = 6.01-9%
 ■ = 9.01-10%
 ■ = >10.01%