

# COMMUNITY RESILIENCE STUDY

**LSU**

Manship School of  
Mass Communication  
Reilly Center For  
Media & Public Affairs



## Nearly One in Five Louisiana Residents Say Their Home Flooded in 2016 Storms

*Low Income Households Most Likely to Say Homes Flooded*



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**FOR FURTHER INFORMATION  
ON THIS REPORT:**

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## Reilly Center for Media & Public Affairs

The Reilly Center for Media & Public Affairs, an integral part of Louisiana State University's Manship School of Mass Communication, uses the intellectual muscle of the school's faculty to help solve practical problems and advance good government initiatives. The Reilly Center's mission is to generate thoughtful programs, dialogue, and research about social, economic, and political affairs, as well as the developing role of the media in American society. The Center is committed to advancing the Manship School's national leadership in media and politics.

The Center's agenda is diverse and fluid – from the annual John Breaux Symposium, which brings in national experts to discuss a topic that has received little or no attention, to conducting the annual *Louisiana Survey*, a vital resource for policymakers, which tracks advancements and regressions of citizen attitudes about state services. The Center's role, within the state's flagship university, is to respond quickly to the needs of state governance in addressing challenges facing Louisiana, particularly in times of crisis such as during Hurricanes Katrina and Rita and the 2010 Deepwater Horizon oil spill. Its action-oriented and partnership-driven philosophy underscores the Reilly Center's dedication to tackling ideas and issues that explore the relationship of media and the public in democratic society.

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# About the Community Resilience Study

Louisiana, and the Baton Rouge metropolitan area in particular, endured a series of tumultuous events in the summer of 2016, including the shooting of Alton Sterling by Baton Rouge police officers, protests in response to this shooting, the murders of law enforcement officers Montrell Jackson, Brad Garafola and Matthew Gerald, and unprecedented flooding.

To better understand how residents of Louisiana have reacted to these events and the profound social issues they raise, the Manship School of Mass Communication at Louisiana State University commissioned the Community Resilience Study. The study consists of a survey administered to a statewide sample of adult Louisiana residents as well as a sample of residents in the metro Baton Rouge area: East Baton Rouge Parish, Ascension Parish and Livingston Parish.

This report, the second from the Community Resilience Study, focuses on impacts of the severe weather in 2016. The first report from this project considered racial issues in the community. Reports from the study are available at [pprllsu.com/projects](http://pprllsu.com/projects).

## Principal Investigators

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## Overview

Severe weather caused widespread damage across Louisiana and the Baton Rouge area in 2016. The *2017 Manship School Community Resilience Study*, a project of Louisiana State University's Manship School of Mass Communication, shows that:

- Statewide, 18 percent of residents reported that their residence flooded during the severe storms of 2016. Approximately one-third (32 percent) of residents in the metropolitan area of Baton Rouge reported that their homes flooded.
- Thirty percent of Louisiana adults reported that their employment was disrupted by the flooding, and 19 percent indicated that this disruption affected their earnings. The personal economic impact was even stronger in the Baton Rouge area where half of residents (52 percent) reported that their work was disrupted due to flooding and approximately one-third (32 percent) lost income as a result.
- In households with annual income less than \$25,000, 27 percent reported that their home flooded in 2016 due to severe storms. The share of respondents with household incomes of at least \$50,000 who reported flooded homes is about half as large. In the Baton Rouge area, individuals in households with the lowest incomes were the most likely to say their homes had flooded (45 percent), but the shares are also substantial (about 30 percent) among respondents in households with higher incomes.
- Across the state, 14 percent of residents reported that someone who had to leave their home due to flooding stayed with them in 2016. The share is even higher in the Baton Rouge metropolitan area (25 percent), where one in four residents took in someone whose home flooded during the severe storms.
- Among state residents, the average rating of the Federal Emergency Management Agency's performance following the storms is 53 on a zero to one hundred scale. The average rating of the state government's response is 61. In the Baton Rouge area, the average ratings of FEMA's and state government's performance are 41 and 54, respectively.

The *2017 Manship School Community Resilience Study* was administered over the telephone from January 8 to February 6, 2017, to both landline and cell phone respondents. The project consists of a representative sample of 1,079 adult Louisiana residents, including a representative sample of 361 adult residents of the metro Baton Rouge area (including East Baton Rouge Parish, Ascension Parish and Livingston Parish). The total sample has a margin of error of +/- 3.1 percentage points. The metro Baton Rouge sample has an overall margin of error of +/- 5.2 percentage points.

## Many Residents Report Impact on Homes and Income

The state of Louisiana endured multiple flood events during 2016. Spring storms dropped more than ten inches of rain in areas of the state, particularly in north Louisiana. Five months later, rainfall across much of the southern part of the state – more than 20 inches in some areas – caused billions of dollars in estimated damage. Rainfall topped 30 inches in areas around Baton Rouge.

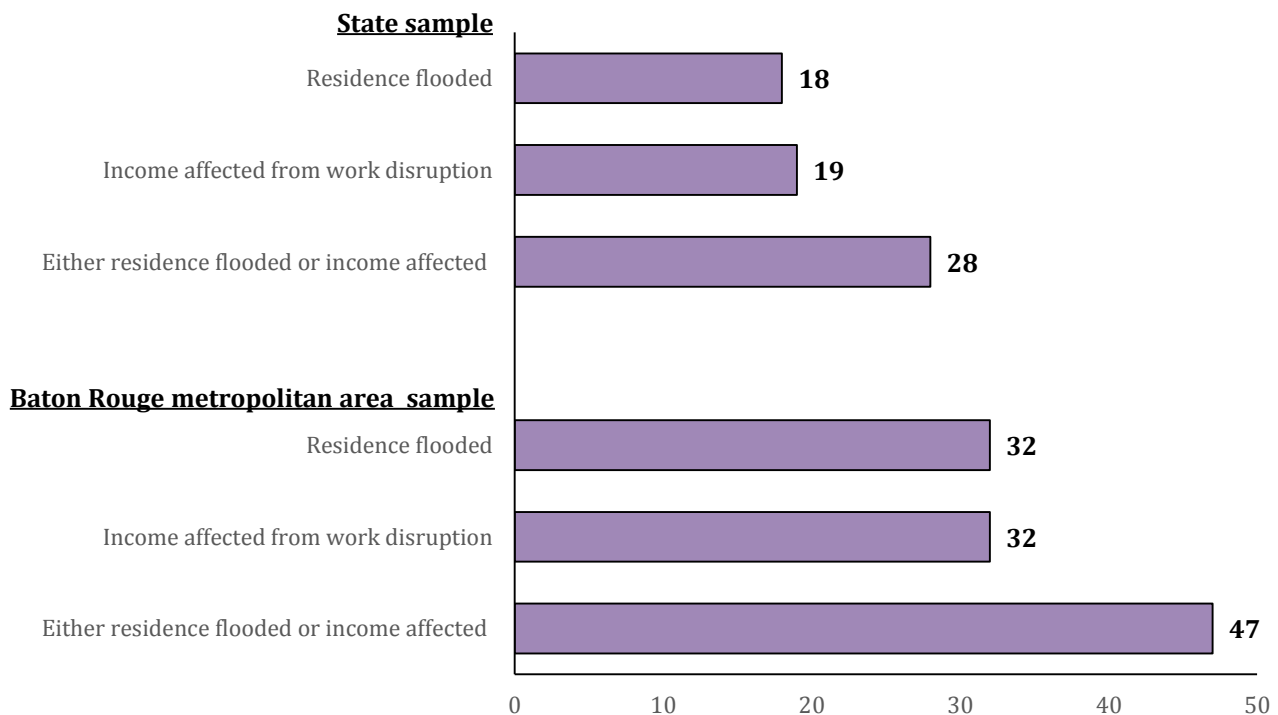
These storms and the flooding they caused have impacted many residents across the state. In all, 18 percent of adult Louisiana residents *reported* that their residence flooded during severe storms in 2016. This estimate, which amounts to more than 600,000 adult residents, appears to exceed estimates based on other data sources, such as the count of 86,000 homeowners with Federal emergency Management Agency (FEMA) verified losses from floods.

There are several reasons why a survey would yield larger estimates of impact. For example, respondents may misreport their experience with flooding, either from faulty memory or from a desire to present themselves to researchers as having experienced greater impact. There are more benign reasons as well. This survey targets the population of adult *individuals* in the state while the administrative data on FEMA verified losses includes only homeowners (34 percent of occupied housing units in Louisiana are rental properties) and does not count multiple individuals living in the same household. Additionally, survey respondents may use a different standard for what constitutes a flooding in their residence than government assessments. Although the risk of misreporting means these survey estimates must be taken with some caution, these other factors suggest that the broader impact of severe weather on Louisiana is likely greater than officials statistics suggest.

The storms impacted Louisiana residents beyond flooding of residence. Thirty percent of Louisiana

**Figure 1: Reported Impact of 2016 Floods on Homes and Income**

Percent of respondents saying they experienced these impacts



SOURCE: *Manship School Community Resilience Study*

adults reported that their employment was disrupted by the flooding, and 19 percent indicated that this disruption affected their earnings.

Altogether, approximately one-fourth (28 percent) of Louisiana residents were directly affected by severe storms in 2016 either because their homes flooded or because they lost income as a result of work disruptions.

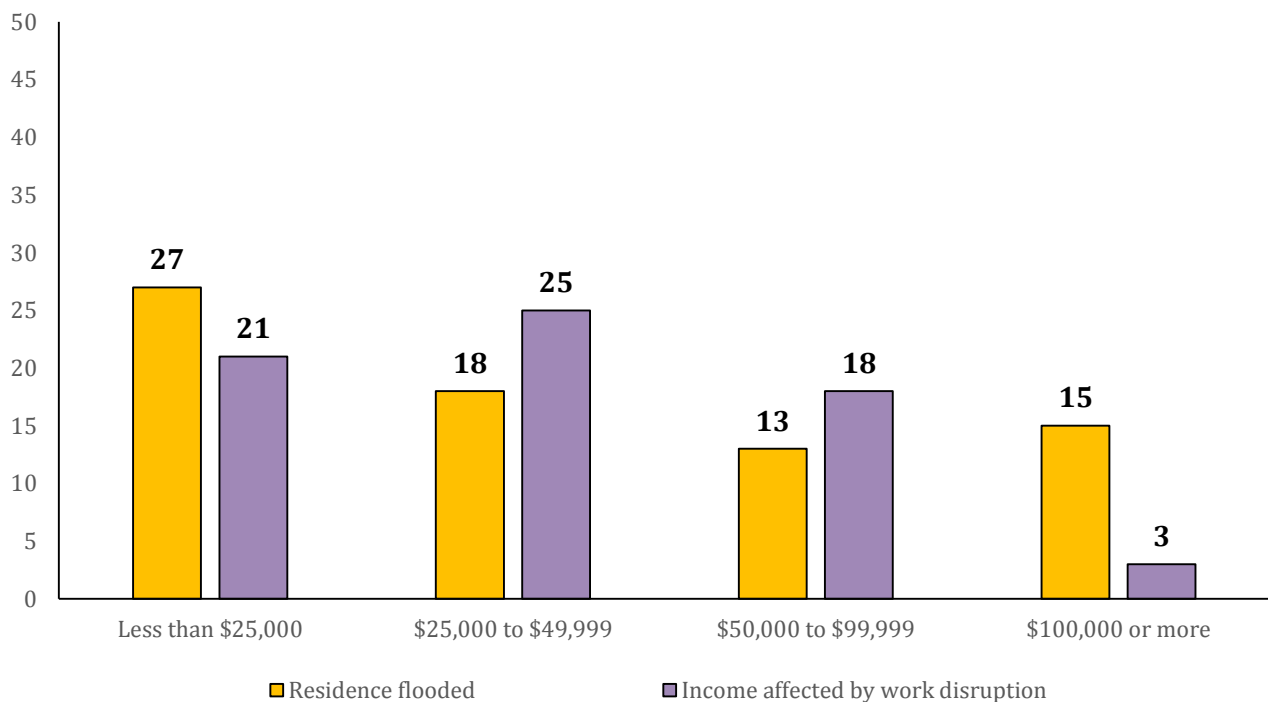
Reports of impact were higher in the metropolitan area of Baton Rouge. Approximately one-third (32 percent) of residents in this area reported that their homes flooded. Reports of personal economic impact were also higher than in the state as a whole. Half of residents (52 percent) reported that their work was disrupted due to flooding and approximately one-third (32 percent) lost income as a result. The share of those reporting direct impact either by flooded residence or by loss of income was 47 percent among residents of the Baton Rouge metropolitan area.

## Low-income Households More Likely to Report Flooding

When looking at the impact statewide, individuals with lower household incomes disproportionately reported flooded homes. In households with annual income less than \$25,000 (roughly the bottom 30 percent of household incomes), 27 percent reported that their home flooded in 2016 due to severe storms. The share of respondents with household incomes of at least \$50,000 (roughly the top 45 percent of household incomes) who reported flooded homes is about half as large (figure 2). Similarly, individuals with lower household incomes were more likely to report their incomes had been affected by work disruption as a result of the storms: More than 20 percent of individuals in households with annual incomes below \$50,000 had their income affected by the storms, but only three percent of those with earning above \$100,000 had their incomes affected.

**Figure 2: Reported Impact of Storms by Household Income in Louisiana**

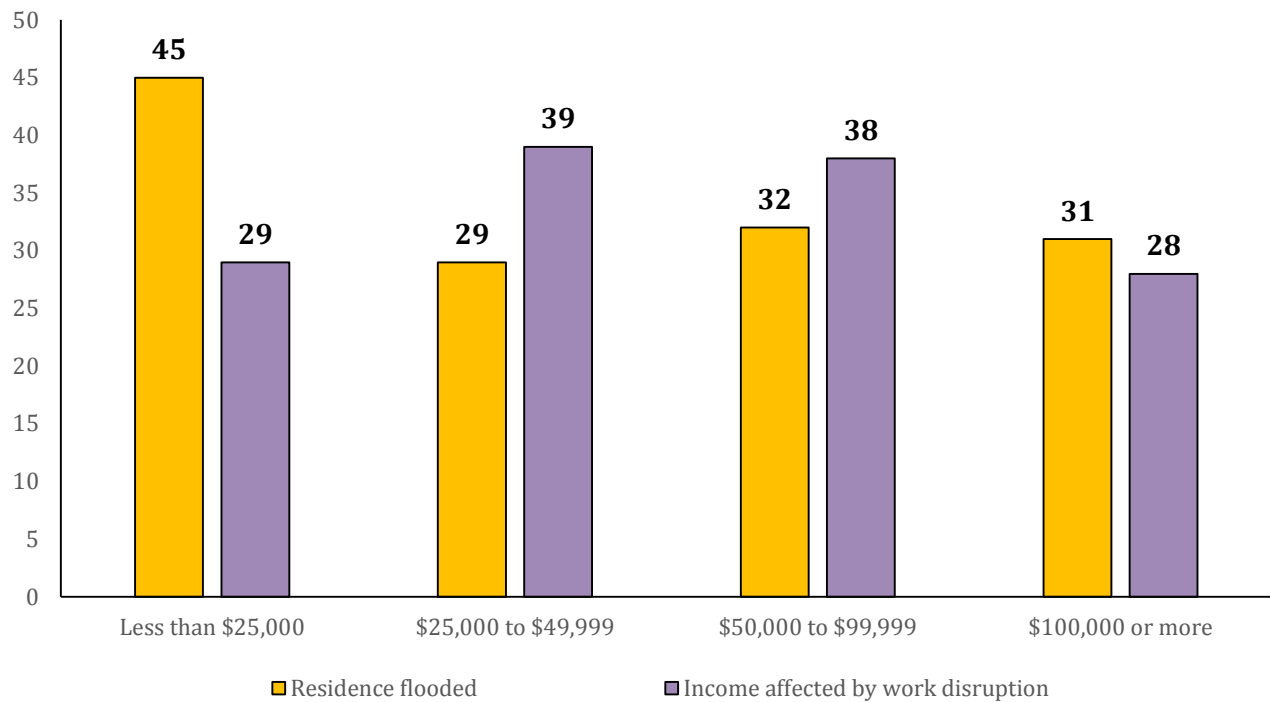
Percent of respondents saying they experienced these impacts



SOURCE: *Manship School Community Resilience Study*

**Figure 3: Reported Impact of Storms by Household Income in Baton Rouge Metropolitan Area**

Percent of respondents saying they experienced these impacts



SOURCE: *Manship School Community Resilience Study*

In the Baton Rouge area, reports of impact were more common across all income groups. Nevertheless, a gap remains in shares reporting a flooded residence (figure 3). Individuals in households with the lowest incomes were the most likely to say their homes had flooded (45 percent), but the shares are also substantial (about 30 percent) among respondents in households with higher incomes. On the other hand, unlike in the state sample, there is no identifiable difference in loss of income by household income in the Baton Rouge area.

### Many Residents Opened Their Homes to Victims of Flood

Across the state, 14 percent of residents reported that someone who had to leave their home due to flooding stayed with them in 2016. The share is even higher in the Baton Rouge metropolitan area (25 percent), where one in four residents took in someone whose home flooded during the severe storms.

### Residents Rate State Government Response Better than FEMA Response

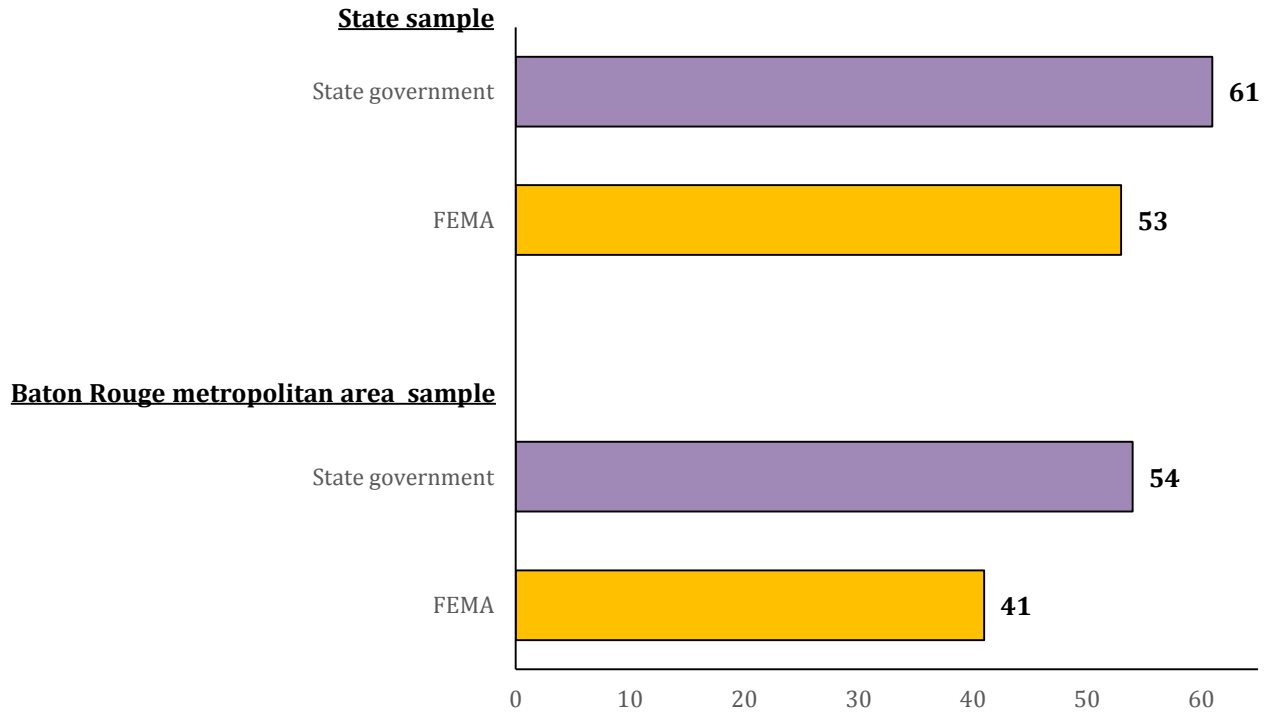
We asked respondents to rate the performance of the Federal Emergency Management Agency (FEMA) following the floods of 2016 on a scale from zero to one hundred, with the former being a poor job and the latter being an excellent job. The average rating in the state sample was 53. Similarly, we asked respondents to rate the performance of Louisiana state government following the floods on the same scale. The average response was higher at 61.

Overall, ratings in the Baton Rouge area were lower – but the state nevertheless outperformed FEMA, on average, in the view of the public. Residents of the Baton Rouge area rated FEMA’s performance at 41 and the performance of state government at 54, on average.

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**Figure 4: More Favorable Assessments of State Government Response than FEMA Response**

Average performance rating of \_\_\_\_\_ following 2016 floods, on scale from zero (a poor job) to one hundred (an excellent job)



SOURCE: *Manship School Community Resilience Study*

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# Survey Methodology

The data in this report were collected from a randomly selected sample of adult (18 years or older) residents of Louisiana via telephone interviews conducted from January 8 through February 6, 2017. The project includes live-interviewer surveys of 418 respondents contacted via landline telephone and 661 respondents contacted via cell phone, for a total sample of 1,079 respondents. This total statewide sample includes an oversample of 361 residents of East Baton Rouge Parish, Ascension Parish and Livingston Parish. The oversample includes 108 landline interviews and 252 cell phone interviews. The two-part sampling strategy enables representative claims about the state population and Baton Rouge metro area residents when survey weights are applied, as they are in all the numbers cited above. The design of the landline samples ensures representation of both listed and unlisted numbers by use of random digit dialing. The cell phone samples are randomly drawn from known, available phone number banks dedicated to wireless service.

The response rate is 19.1 percent. This response rate is the percentage of eligible residential households or personal cell phones in the sample for which an interview is completed. The rate is calculated using the American Association for Public Opinion Research's method for Response Rate 3 as published in their Standard Definitions. Response rates for telephone surveys have declined for several decades and frequently fall in the single digits even among the very best survey research organizations. The response rate for this survey is within the typical range for reputable live-interviewer telephone survey firms.

The combined landline and cell phone sample for the statewide sample is weighted using an iterative procedure that matches race, education, household income, gender and age to known profiles for the adult population of Louisiana found in the Census Bureau's American Community Survey 2015 one-year estimates. The sample is also weighted for population density by parish. An identical approach is used to weight the metro Baton Rouge sample using population profiles of the three sampled parishes. Weighting cannot eliminate every source of nonresponse bias. However, proper administration of random sampling combined with accepted weighting techniques has a strong record of yielding unbiased results.

The statewide sample has an overall margin of error of +/- 3.1 percentage points. The metro Baton Rouge sample has an overall margin of error of +/- 5.2 percentage points.

In addition to sampling error, as accounted for in the margin of error, readers should recognize that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

Louisiana State University's Public Policy Research Lab, a division of the Reilly Center for Media & Public Affairs, conducted the telephone interviews and computed the survey weights.

# Question Wording & Toplines

NOTE: Unless otherwise indicated, results are for the total sample. Not all respondents were asked each question, and questions asked to a subset of respondents are labelled accordingly. For these questions, percentages are for only those respondents who were asked the particular question. Percentages may not sum to 100 due to rounding.

Q1.

We would like to ask you about your experiences during the floods in Louisiana last spring and summer. Was your residence flooded during any of these severe storms during 2016?

	<b>Louisiana</b>	<b>Metro Baton Rouge</b>
Yes	18	32
No	81	68
Don't know / Refused (Volunteered)	0	0

Q2. [ASKED ONLY IF Q1 IS 'No']

Did anyone stay with you who had to leave their homes because of flooding?

	<b>Louisiana</b>	<b>Metro Baton Rouge</b>
Yes	17	36
No	83	64
Don't know / Refused (Vol.)	0	0

Q3.

Was your work disrupted due to any flooding in 2016?

	<b>Louisiana</b>	<b>Metro Baton Rouge</b>
Yes	30	52
No	70	48
Don't know / Refused (Volunteered)	0	0

Q4. [ASKED ONLY IF Q3 IS 'Yes']

Did this affect your income?

	<b>Louisiana</b>	<b>Metro Baton Rouge</b>
Yes	61	62
No	39	38
Don't know / Refused (Vol.)	0	0

Q5.

Following the Louisiana floods in 2016, how would you rate the performance of FEMA, the Federal Emergency Management Agency, on a scale from 0 to 100 - zero being a poor job and 100 being an excellent job?

	<b>Louisiana</b>	<b>Metro Baton Rouge</b>
Average response	53	41
Percent don't know / refused (Vol.)	8	9

Q6.

Using the same scale, how would you rate the performance of the Louisiana state government following the Louisiana floods in 2016?

	<b>Louisiana</b>	<b>Metro Baton Rouge</b>
Average response	61	54
Percent don't know / refused (Vol.)	13	8