

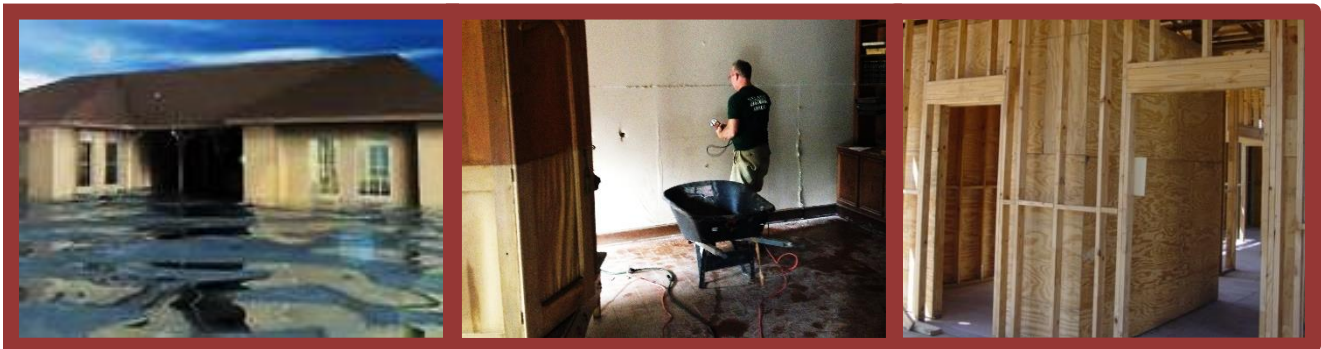
DISASTER RECOVERY INITIATIVE
U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Allocations, Waivers and Alternative Requirements for Grantees Receiving Community Development Block Grant
Disaster Recovery Funds in Response to Disasters Occurring in 2016
*The Continuing Appropriations Act, 2017, The Further Continuing and Security Assistance Appropriations Act, 2017
and The Consolidated Appropriations Act, 2017 (Public Law 114-223, 114-254 and 115-31)*

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LOUISIANA OFFICE OF COMMUNITY DEVELOPMENT, DISASTER RECOVERY UNIT



STATE OF LOUISIANA
ACTION PLAN AMENDMENT No. 3
FOR THE UTILIZATION OF
COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS
IN RESPONSE TO THE GREAT FLOODS OF 2016

Public Comment Period: August 11- 24, 2017

HUD Approved: November 2, 2017

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1. Summary of Changes

The sections below outline the State of Louisiana’s plan to utilize the full amount of funding appropriated to date.

Unmet Needs

The state amended the following areas of the unmet needs from the initial Action Plan:

- The state included updated Small Business Administration data for both homeowners, rental properties and business data in all unmet need calculations.
- The state included updated data from the Governor’s Office of Homeland Security and Emergency Protection (GOHSEP) on the number and amount of project worksheets in the FEMA Public Assistance Program.
- The state included updated NFIP claims data for policyholders impacted by Disaster 4277 and Disaster 4263.
- The state included an update on the impact of the storms on the homeless population including the Continuum of Care Point in Time information, the Temporary Shelter Assistance population and the long-term housing plan for providing assistance to families still in need of support, following the termination of TSA at the end of May 2017.
- The state updated the FEMA match information to include updated Public Assistance match needs and to include TSA match requirements. Hazard Mitigation figures did not significantly change since APA 1.

Method of Distribution and Connection to Unmet Needs

The state refreshed the Method of Distribution and Connection to Unmet Needs to include the updated program budgets, program names, activities and program descriptions, which are based on the updated unmet needs information and the third allocation of funding.

The additional funds from the third appropriation are distributed to the homeowner program (\$37,470,799), rental programs (\$4,163,402) and a newly created watershed planning program (\$9,800,799).

Proposed Use of Funds

Restore Louisiana Homeowner Rehabilitation, Reconstruction and Reimbursement Program

The state provided an updated summary of the program and an increase in funding to continue to provide assistance to homeowners identified in Action Plan Amendment 1.

As allowed for under APA 1, the program has expanded to include applicants with eligible unmet needs who meet the criteria listed in Phase I and who also had structural flood insurance at the time of the flood. As programmatic needs are further identified through the application process, the state continues to allow for the possibility of expanding program eligibility to include homeowners with unmet needs who had structural flood insurance at the time of the flood event in a phased approach and/or based on household income.

In addition, the state added eligible activities allowing the state to provide assistance to local governments and temporary and/or permanent assistance to families seeking to relocate from high-risk, repetitive loss areas to lower-risk areas outside the Special Flood Hazard Area, either on an individual or community basis.

Restore Louisiana Rental Housing Programs

The state expanded the budget to include the third allocation of funds and updated the definition of affordable rents within the Neighborhood Landlord Rental. The state amended the name of the Infill Rental Repair Program to the Neighborhood Landlord Rental Program.

FEMA Public Assistance Nonfederal Share Program

To meet the unmet needs outlined in the Action Plan and Action Plan Amendment, the state has amended the FEMA Public Assistance Nonfederal Share Match Program to allow for match activities for all eligible FEMA programs requiring a state or local match. This program will work with eligible entities to pay the nonfederal share cost of the disaster cleanup and recovery efforts. The program name was changed from the FEMA Public Assistance Nonfederal Share Program to the FEMA Nonfederal Share Program.

Watershed Modeling and Planning

The first step in identifying the structural and non-structural infrastructure necessary to protect the state from current and future flood risks as part of its overall recovery is to engage in watershed modeling and planning. The state has created a program to develop watershed modeling plans for the regions impacted by the 2016 floods.

Program Budgets

State of Louisiana CDBG-DR Total Allocation				
	First Two Allocations	Third Allocation	Total Allocation	Percentage
Total Allocation	\$1,656,972,000	\$51,435,000	\$1,708,407,000	100%
Restore Louisiana Housing Programs	\$1,423,693,120	\$41,634,201	\$1,465,327,321	
• Homeowner Program	\$1,293,693,120	\$37,470,799	\$1,331,163,919	78%
• Rental Housing Programs	\$ 130,000,000	\$4,163,402	\$134,163,402	8%
Restore Louisiana Economic Recovery and Revitalization Programs	\$62,000,000	\$0	\$62,000,000	4%
Infrastructure Program (FEMA Match)	\$105,000,000	\$0	\$105,000,000	6%
Watershed Modeling and Planning		\$9,800,799	\$9,800,799	1%
Administration and Other Planning Expenses	\$ 66,278,880	\$0	\$66,278,880	4%

2. Executive Summary

In 2016, Louisiana had two separate events that qualified for appropriation under Public Laws 114-223 and 114-254. The state experienced severe storms and flooding in both March (Disaster Number 4263) and August (Disaster Number 4277) 2016 – collectively referred to as the 2016 Severe Storms and Flooding – resulting in 56 of the state’s 64 parishes receiving a federal disaster declaration. From the March event, more than 16,462 homes have Federal Emergency Management Agency (FEMA) Verified Loss and 5,222 renters have FEMA Verified Loss (FVL), for a total of 21,684 households. The National Weather Service designated the August flooding event that dropped an unprecedented 7 trillion gallons of rainwater in

South Louisiana as a “1,000-year” rainfall event. It resulted in the flooding of more than 68,380 homes with FVL and 23,248 renters with FVL, for a total of 91,628 households. The August storm claimed 13 lives.

A. March Storm (DR-4263)

In early March 2016, a storm system brought heavy thunderstorms from west to east across most of Louisiana. In addition to wind damage, record flooding occurred along the Bogue Falaya River in Covington and Bayou Dorcheat at Lake Bistineau. Governor John Bel Edwards declared a state of emergency for several parishes and sent the National Guard to help with search-and-rescue missions.

The State of Louisiana estimates that this storm caused damage to more than 21,684 residences, forced 13,000 evacuations and 2,780 rescues, damaged another 6,143 structures, and caused numerous road closures. Road and bridge damage estimates totaled \$20 million. Agricultural losses totaled approximately \$15 million, with long-term impacts to farmers estimated at \$80 million. In addition, more than 40,000 citizens registered for FEMA Individual Assistance (IA).

Thirty-six Louisiana parishes were declared eligible for FEMA IA: Allen, Ascension, Avoyelles, Beauregard, Bienville, Bossier, Caddo, Calcasieu, Caldwell, Catahoula, Claiborne, DeSoto, East Carroll, Franklin, Grant, Jackson, LaSalle, Lincoln, Livingston, Madison, Morehouse, Natchitoches, Ouachita, Rapides, Red River, Richland, Sabine, St. Helena, St. Tammany, Tangipahoa, Union, Vernon, Washington, Webster, West Carroll and Winn. Seven of these parishes also flooded in August: Ascension, Avoyelles, Livingston, St. Helena, St. Tammany, Tangipahoa and Washington.

B. August Storm (DR-4277)

In mid-August 2016, a slow-moving storm impacted multiple South Louisiana parishes with sustained heavy rain. In what was a 1,000-year flood, within two days more than two feet of rain was measured in some areas, causing extensive surface and river flooding. Both the Amite and Comite rivers overtopped, as well as numerous bayous, lakes and canals located within these drainage basins. Governor John Bel Edwards declared a state of emergency for several parishes and sent the National Guard to help with search-and-rescue missions.

An estimated 8,000 people were evacuated to emergency shelter sites. The American Red Cross, the state and faith-based organizations operated these sites. A state-operated medical site was established to serve individuals with medical needs. Roughly 30,000 search and rescues were performed, with 11,000 citizens sheltered at the peak of the flood.

The damage to infrastructure, businesses and homes across the southern region of the state was extensive. Large sections of state roads remained under water for extended periods. An estimated 30 state roads washed out and 1,400 bridges require inspection. Along with more than 200 highways that closed during the event, sections of Interstates 10 and 12 closed for multiple days due to floodwaters. Some stretches of I-10 remained closed for nearly a week, significantly interrupting interstate commerce.

More than 91,628 homes have documented damages to date, with the number expected to rise as FEMA registrations and inspections conclude. An estimated 31 percent of homes in the declared parishes were impacted by flooding, with only 11 percent of households in these areas carrying flood insurance. Based on current registration numbers and historic trends, it is estimated that nearly 200,000 households will apply for IA, with an estimated housing unmet need in excess of \$2.7 billion.

Immediately following the August 2016 flooding event, the Louisiana Department of Economic Development partnered with Louisiana State University to conduct an assessment of economic losses resulting from the floods. Key details are:

- At the peak of the August event, 19,900 Louisiana businesses or roughly 20 percent of all Louisiana businesses were disrupted by the flooding event. FEMA has since referred approximately 22,000 businesses to SBA for recovery assistance.
- A disruption of 278,500 workers or 14 percent of the Louisiana workforce occurred at the peak of the flooding event.
- An economic loss estimated at roughly \$300 million in labor productivity and \$836 million in terms of value added during the period immediately surrounding the flood.
- Approximately 6,000 businesses experienced flooding.
- The LSU Ag Center estimates Louisiana agricultural losses of over \$110 million.

Twenty-two Louisiana parishes were declared eligible for FEMA IA: Acadia, Ascension, Avoyelles, East and West Baton Rouge, East Feliciana, Evangeline, Iberia, Iberville, Jefferson Davis, Lafayette, Livingston, Pointe Coupee, St. Helena, St. James, St. Landry, St. Martin, St. Tammany, Tangipahoa, Vermilion, Washington and West Feliciana. Seven of these parishes also flooded in March: Ascension, Avoyelles, Livingston, St. Helena, St. Tammany, Tangipahoa and Washington.

C. Anticipated Unmet Needs Gap

During the October 10 Congressional Session, state government officials, including Gov. John Bel Edwards, traveled to Washington D.C. and worked collaboratively with Louisiana’s Congressional Delegation to secure long-term disaster recovery resources in response to DR-4263 and DR-4277. Working with limited disaster loss unmet need information, Louisiana’s delegation proposed a relief package of nearly \$3.8 billion. This package focused primarily on housing needs, as the state has prioritized housing as the most urgent and pressing recovery concern following the two flooding events. Through this Action Plan Amendment, the state now presents revised unmet need estimates based on current best available data. Over time, the state will likely continue to update these estimates as additional assessments are made and more complete data become available.

Accounting for the initial allocation of \$437,800,000, the second allocation of \$1,219,172,000 and the third allocation of \$51,435,000 for long-term recovery purposes, the state has calculated a remaining unmet need of \$5,052,750,943.

Summary of Total Unmet Needs			
Category	Losses/Gaps	Known Investments	Remaining Unmet Need
Owner-Occupied Housing	\$2,448,293,435		\$2,448,293,435
Homeowner Rehabilitation and Reconstruction (CDBG-DR)		(\$1,331,163,919)	(\$1,331,163,919)
Rental Housing	\$304,167,128		\$304,167,128
Neighborhood Landlord Rental Program (CDBG-DR)		(\$49,163,402)	(\$49,163,402)
Multi-family Gap Program (CDBG-DR)		(\$45,000,000)	(\$45,000,000)
Piggyback Program (CDBG-DR)		(\$19,000,000)	(\$19,000,000)
Public Housing	\$8,539,159	(\$4,492,053)	\$4,047,106

Homeless Assistance	\$5,250,232		\$5,250,232
Rapid Rehousing (CDBG-DR)		(\$16,000,000)	(\$16,000,000)
PSH Support Services (CDBG-DR)		(\$5,000,000)	(\$5,000,000)
Agriculture Losses (DR-4277)	\$110,244,069		\$110,244,069
Agriculture Losses (DR-4263)	\$80,285,185		\$80,285,185
Business Structures	\$595,600,000		\$595,600,000
Business Equipment	\$262,800,000		\$262,800,000
Business Inventories	\$1,425,500,000		\$1,425,500,000
Business Interruption Loss	\$836,400,000		\$836,400,000
SBA Business/EIDL Loans		(\$176,333,300)	(\$176,333,300)
Small Business Program (CDBG-DR)		(\$51,200,000)	(\$51,200,000)
Small Business Technical Assistance Program (CDBG-DR)		(\$800,000)	(\$800,000)
Louisiana Farm Recovery Program		(\$10,000,000)	(\$10,000,000)
PA State Share	\$101,300,000		\$101,300,000
HMGP State Share	\$92,705,885		\$92,705,885
TSA State Share	\$4,619,343		\$4,619,343
FEMA Match Share Program (CDBG-DR)		(\$105,000,000)	(\$105,000,000)
Infrastructure Enhancement	\$600,000,000		\$600,000,000
Watershed Modeling (CDBG-DR)		(\$9,800,799)	(\$9,800,799)
Totals	\$6,875,704,436	(\$1,822,953,493)	\$5,052,750,943

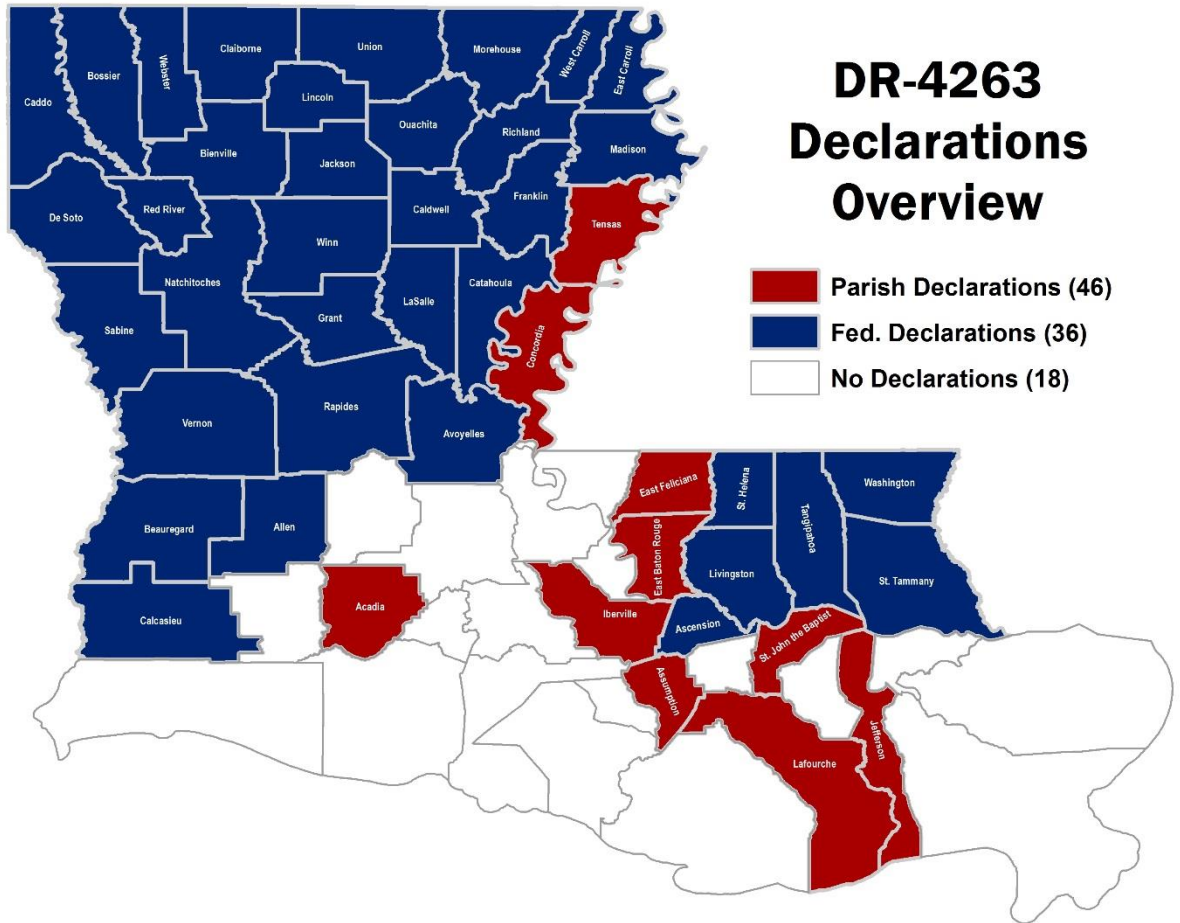
**CDBG-DR investments are inclusive of program delivery costs.*

D. Conclusion

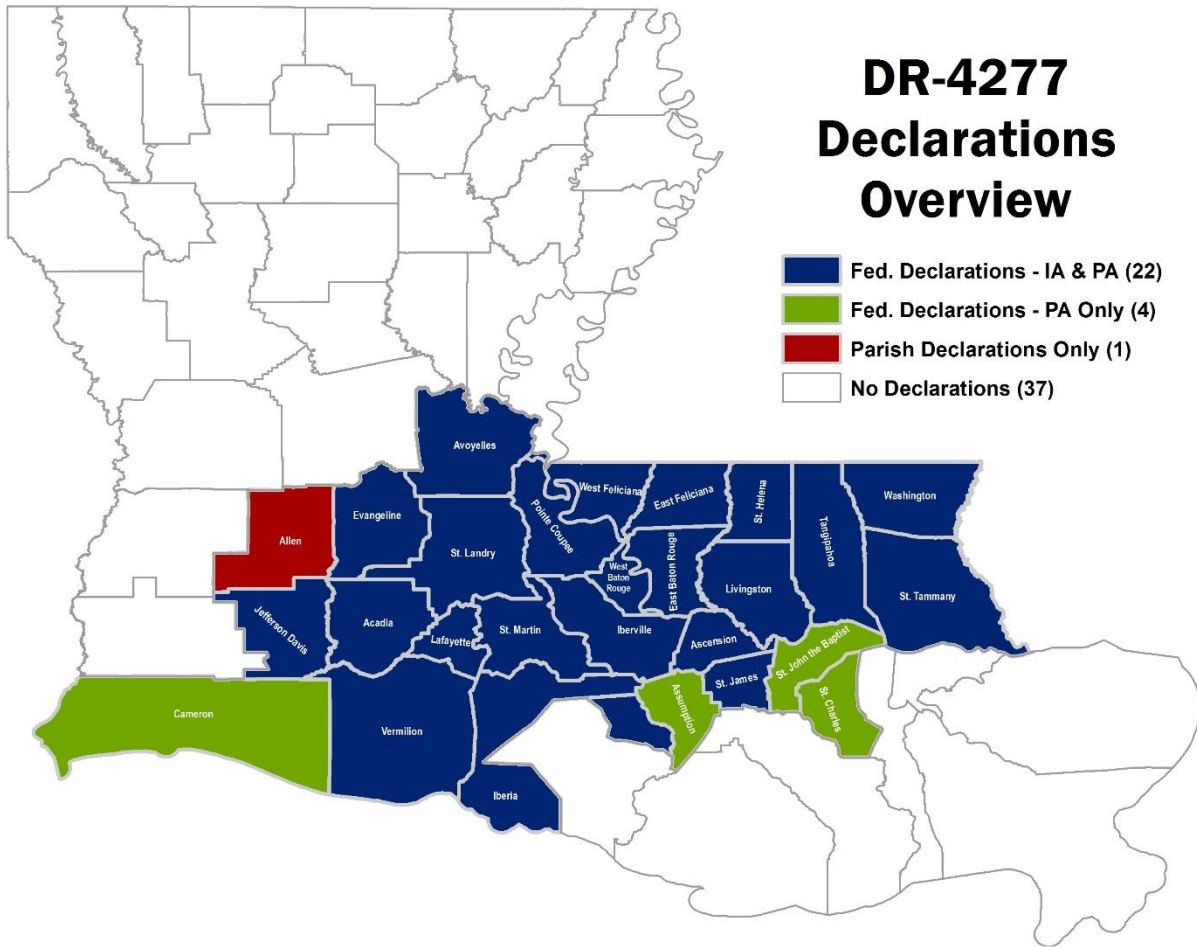
As a result of the 2016 Severe Storms and Flooding, the State of Louisiana received three allocations (Public Law 114-223, 114-254 and 115-31) of Community Development Block Grant Disaster Recovery (CDBG-DR) funding. To fulfill the requirements of this allocation, the state must submit an Action Plan for Disaster Recovery that identifies its unmet recovery and resilience needs to the Department of Housing and Urban Development (HUD). Governor Edwards has designated the state Office of Community Development - Disaster Recovery Unit (OCD-DRU) as the administering agency for these recovery funds. On behalf of the State of Louisiana, OCD-DRU developed the following Action Plan Amendment to update the proposed use of the CDBG-DR funds and eligible activities available to assist the state, declared parishes as well as residents, businesses and communities meet unmet housing, economic revitalization, public service, infrastructure, planning and other needs that arose as a result of these two storm events.

E. Maps

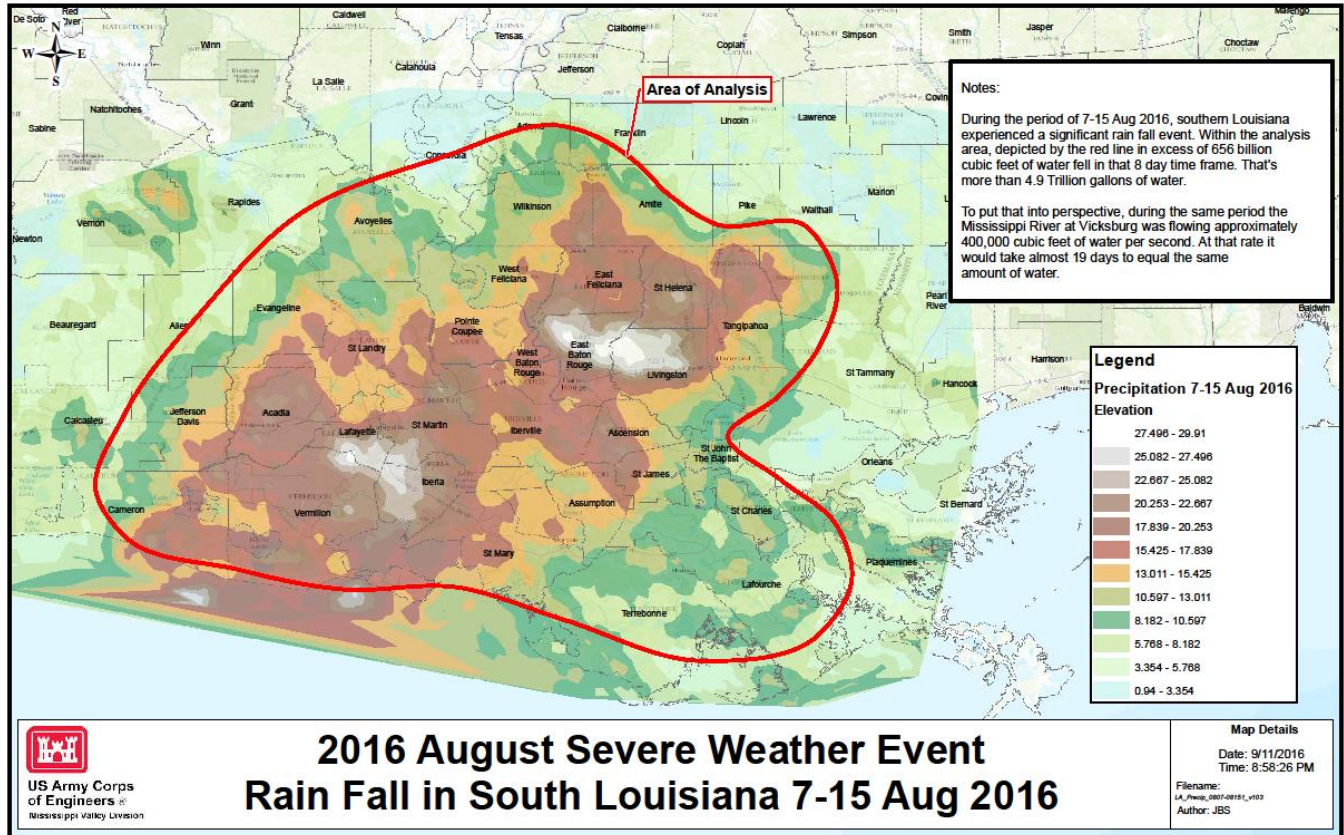
1. FEMA Impacted Parishes and Federal Declarations: DR-4263 (March 2016 floods)



2. FEMA Impacted Parishes and Federal Declarations: DR-4277 (August 2016 floods)



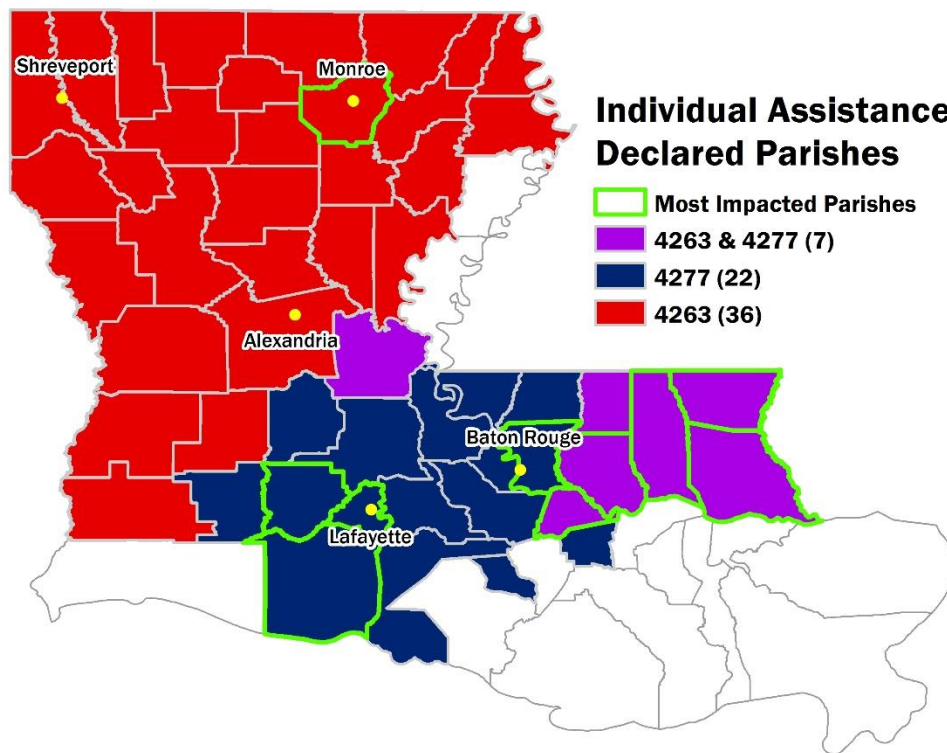
3. Army Corps of Engineers Map – August Deluge Amounts



3. Impact and Unmet Needs Assessment

A. Background

In accordance with HUD guidance, the State of Louisiana completed and has updated the following unmet needs assessment to identify priorities for CDBG-DR funding allocated as a result of two separate significant rain and flooding events, DR-4263 in March and DR-4277 in August. Combined, these disasters affected 56 of the state’s 64 parishes, with 51 parishes declared eligible for FEMA IA. The assessment below utilizes federal and state resources, including data provided by FEMA, HUD and the Small Business Administration (SBA), among other sources, to estimate unmet needs in three main categories of damage: housing, economy and infrastructure. HUD has identified the 10 most impacted parishes from these two events as Acadia, Ascension, East Baton Rouge, Lafayette, Livingston, Ouachita, St. Tammany, Tangipahoa, Vermilion and Washington. This unmet needs assessment focuses on statewide impacts, with specific sections detailing particular needs within the most impacted areas, and where relevant, smaller geographic units.



B. Housing Impact & Needs

1. Demographic Profile of the Affected Areas

More than 72 percent of the state’s population is located within the 51 IA parishes affected by DR-4263 or DR-4277 floods. Of this total, 48 percent of the population residing in the 51 IA parishes is located within one of the 10 parishes identified by HUD as most impacted, including three of the state’s largest metropolitan areas, Baton Rouge, Lafayette and Monroe, as well as two parishes currently experiencing significant population growth, Ascension and Livingston. It is important to note that the population residing within the 10 most impacted parishes comprises 34.84 percent of the state’s total population.

Although the affected region tends to share similar demographic trends with the state as a whole, there are several key areas (African-American population, education level, and poverty indicators) in which the data differ. Unless otherwise noted, all data cited in this section are from the Census Bureau’s 2014 five-year estimates from the American Community Survey (ACS).

With respect to the parishes HUD has designated as most impacted, six were included in the initial allocation of CDBG-DR funding and an additional four were included in the second allocation. A breakdown of the parishes designated in each allocation is in the table below:

HUD-Designated Most Impacted Parishes	
Initial Allocation	Second Allocation
Ascension	Acadia
East Baton Rouge	St. Tammany
Lafayette	Vermilion
Livingston	Washington
Ouachita	
Tangipahoa	

Of the 10 most impacted parishes, six parishes, including Ascension, East Baton Rouge, Lafayette, Livingston, Ouachita and Tangipahoa were more severely impacted than Acadia, St. Tammany, Vermilion and Washington. The initial six most impacted parishes have a slightly larger African-American population compared to the balance of state and the other IA parishes. By percentage, 32.31 percent of the population in the six most impacted parishes is African-American, which is roughly 1 percentage point more than that of the state as a whole (31.91 percent) and almost 2 percentage points more than that of the 51 IA parishes (30.67 percent). By comparison, the African American population of the additional four most impacted parishes is 15.1 percent. At the parish level, East Baton Rouge (45.20 percent) and Ouachita (37 percent) parishes have the largest proportion of African-American residents, while another most impacted parish, Livingston is only 6 percent African-American.

Within the initial six most impacted parishes, 27.74 percent of the population age 25 years or older had attained a bachelor’s degree or higher. This number is roughly 5 percentage points more than both the statewide total (22.55 percent) and the 51 IA parishes (22.13 percent). Educational attainment for the additional four most impacted parishes was also higher than both the state and the 51 IA parishes (25.10 percent). This may be attributable to the presence of five major universities within the most impacted parishes. Louisiana State University (East Baton Rouge), Southern University (East Baton Rouge), the University of Louisiana at Lafayette (Lafayette), the University of Louisiana Monroe (Ouachita) and Southeastern Louisiana University (Tangipahoa) are five strategically important educational institutions as well as significant economic drivers for their regions and the state as a whole.

Of the initial six most impacted parishes, there are significant outliers worth noting in reference to educational attainment. For example, in Tangipahoa Parish 19.45 percent of the population aged 25 or older has a bachelor’s degree or higher, proportionally 14.86 percentage points less than that of East Baton Rouge Parish and 8.29 percentage points less than the six most impacted parishes combined. Of the 10 most impacted parishes, East Baton Rouge had the highest proportion of population age 25 or older with a bachelor’s degree or more at 34.31 percent, followed by St. Tammany Parish at 30.37 percent.

Housing and income demographics also highlight differences between the 51 IA parishes and the state as a whole. For instance, the 51 IA parishes have a median owner-occupied housing unit value and median household income that are significantly lower than that of the state. The median value of owner-occupied housing units in the 51 IA parishes is \$91,225, \$49,175 less than the statewide total (\$140,400). Meanwhile, the most impacted parishes collectively have a higher median owner-occupied housing unit value than the statewide total. The median owner-occupied housing unit value for the initial six most impacted parishes is \$157,450, \$17,050 higher than statewide. Those same parishes also have a larger proportion of renters than both the state and the other IA parishes. At 30.87 percent, the initial six most impacted parishes collectively are home to a renter population that is almost 3 percentage point higher than the other IA parishes (27.73 percent) and more than 1 percentage point higher than the statewide total (29.12 percent). Renter population for the additional four parishes is 21.7 percent.

The 51 IA parishes have a median household income of \$39,347, \$5,644 less than the statewide median household income of \$44,991. In addition to a lower median household income, the 51 IA parishes have a per capita income that is significantly less than that of the state as a whole. The 51 IA parishes have a per capita income of \$21,456, \$3,319 less than the statewide per capita income of \$24,775.

Poverty indicators across the affected area also deviate from statewide totals. In the initial six most impacted parishes, the proportion of people with income below the poverty line is higher than the other IA parishes or statewide totals. 27.22 percent of households in the most impacted area have incomes below the poverty line, 8.21 percentage points more than statewide totals and 7.89 more than the other IA parishes, respectively. Comparatively, 14.8 percent of households in the additional four most impacted parishes had incomes below the poverty line.

Demographic Profile						
2010-2014 American Community Survey 5-Year Estimates						
	Louisiana		51 PDD Parishes		10 Most Impacted Parishes	
Demographics	Estimates	% of State	Estimates	% of 51 PDD	Estimates	% of 10 MI
TOTAL POPULATION:	4,601,049	100.00%	3,317,519	100.00%	1,602,912	100.00%
Under 5 years	311,324	6.77%	227,206	6.85%	109,202	6.81%
65 years and over	593,807	12.91%	430,421	12.97%	191,914	11.97%
White alone	2,748,538	59.74%	2,084,305	62.83%	1,086,731	67.80%
Black or African American alone	1,468,208	31.91%	2,084,305	30.67%	449,596	28.05%
American Indian and Alaska Native alone	25,498	0.55%	13,542	0.41%	4,420	0.28%
Asian alone	74,878	1.63%	41,325	1.25%	26,133	1.63%
Native Hawaiian and Other Pacific Islander alone	1,604	0.03%	1,147	0.03%	391	0.02%
Two or more races	64,641	1.40%	45,508	0.99%	24,929	1.56%
Hispanic or Latino	210,524	4.58%	109,878	3.31%	59,724	3.73%

Population 16 years and over in civilian labor force	2,192,054	47.64%	1,555,399	46.88%	769,514	48.01%
	Louisiana		51 PDD Parishes		10 Most Impacted Parishes	
Housing Demographics	Estimates	% of State	Estimates	% of 51 PDD	Estimates	% of 10 MI
TOTAL HOUSING UNITS:	1,988,460	100.00%	1,410,498	100.00%	665,392	100.00%
Average Household Size	2.61	(X)	2.60	(X)	2.66	(X)
Owner-occupied	1,139,756	57.32%	836,710	59.32%	405,347	60.92%
Renter-occupied	579,120	29.12%	391,076	27.73%	189,930	28.54%
Median Value of owner-occupied housing units (in 2014 dollars)	\$140,400.00	(X)	\$ 91,225.00	(X)	\$143,250	(X)
Median gross rent (in 2014 dollars)	\$ 786.00	(X)	\$ 614.25	(X)	\$ 759.00	(X)
TOTAL HOUSEHOLDS:	1,718,876	100%	1,227,786	71%	595,277	89.5%
Civilian noninstitutionalized population without health insurance	747,454	16.25%	527,873	15.91%	245,780	15.53%
Estimate of noninstitutionalized population with a disability*	674,156	15%	495,017	15%	221,242	9.79%
Language other than English Spoken at Home, Over Age of 5*	369,719	9%	221,293	7%	120,374	8%
2015 Building Permits**	12,222	(X)	10,264	(X)	6,726	(X)
	Louisiana		51 PDD Parishes		10 Most Impacted Parishes	
Income/Economic Demographics	Estimates	% of State	Estimates	% of 51 PDD	Estimates	% of 10 MI
Median household income (in 2014 dollars)	\$ 44,991.00	(X)	\$ 39,347.75	(X)	\$ 47,939.50	(X)
Per capita income (in 2014 dollars)	\$ 24,775.00	(X)	\$ 21,456.25	(X)	\$ 24,405.50	(X)
Income in the past 12 months below poverty level:	874,638	19.01%	641,395	19.33%	273,554	17.46%
	Louisiana		51 PDD Parishes		10 Most Impacted Parishes	

Education Demographics	Estimate	% of State	Estimate	% of 51 PDD	Estimates	% of 10 MI
Population 25 years and over:	2,932,993	100.00%	2,081,554	100.00%	1,026,485	100.00%
Less than high school graduate	486,080	16.57%	333,637	16.03%	140,378	13.68%
High school graduate (includes equivalency)	991,471	33.80%	718,245	34.51%	322,095	31.38%
Some college, associate's degree	793,996	27.07%	568,935	27.33%	284,411	27.71%
Bachelor's degree or higher	661,446	22.55%	460,737	22.13%	268,800	26.19%

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

**U.S. Census Bureau, 2015 Building Permits, Reported Units, <http://censtats.census.gov/bldg/bldgprmt.shtml>

TABLES: B17001, S1701, DP03, DP04, DP05

Social Vulnerability Index (SoVI®)

SoVI® is a tool for assessing pre-existing vulnerabilities to environmental hazards. The index is a comparative metric that facilitates the examination of differences in social vulnerability at a certain level of geography. The index, in this iteration, synthesizes 27 socioeconomic variables, which, with support from research literature, can contribute to a reduction in a community's ability to prepare for, respond to and recover from hazards. The SoVI® built in this assessment is primarily derived from U.S. Census Bureau data. SoVI uses a combined assessment of 2010 U.S. Census data and the Five-Year American Community Survey (2010-2014) and pulls from the mentioned 27 individual data points across geographic boundaries to determine relative social vulnerability across any given geography and is always relative to whatever specific geography being analyzed. These 27 individual data points cut across six component groups: Class and Race, Non-Extractive (less rural) and Race, Age, Ethnicity and Race, Gender, Housing Characteristics (proportion of renters, occupants per unit, female heads of household, etc. For modeling purposes, both 2010 U.S. Census data and the Five-Year Community Survey are current until the 2020 Census is completed and released.

The SoVI® created for the 51 IA parishes affected by DR-4263 or DR-4277 incorporates six general components synthesizing these 27 socioeconomic variables:

- Class and race
- Non-extractive (less rural)
- Age
- Ethnicity
- Gender
- Housing characteristics (persons per unit, renters, unoccupied units, female-headed households)

SoVI® has high utility as a decision-support tool for emergency management. The tool shows where there is uneven capacity for preparedness and response and where resources might be used most effectively to reduce the pre-existing vulnerability. The SoVI® metric turns historical disaster impact measures into actionable information for emergency managers, recovery planners, and decision makers as a whole. It

empirically measures and visually depicts a population's inability and/or ability to adequately prepare for, respond to, and rebound from disaster events.

By coupling SoVI® with other data sources, such as the IA dataset, NFIP data and SBA data, the state is capable of identifying concentrations of greatest need for additional recovery resources. The state has collaborated with its counterparts in South Carolina, who used this methodology to plan long-term recovery efforts following its 2015 flooding events, to strategize how SoVI® can be an apolitical approach for distributing scarce disaster recovery dollars to provide optimal benefit to the places that were worst impacted and least able to recover on their own from this disaster.

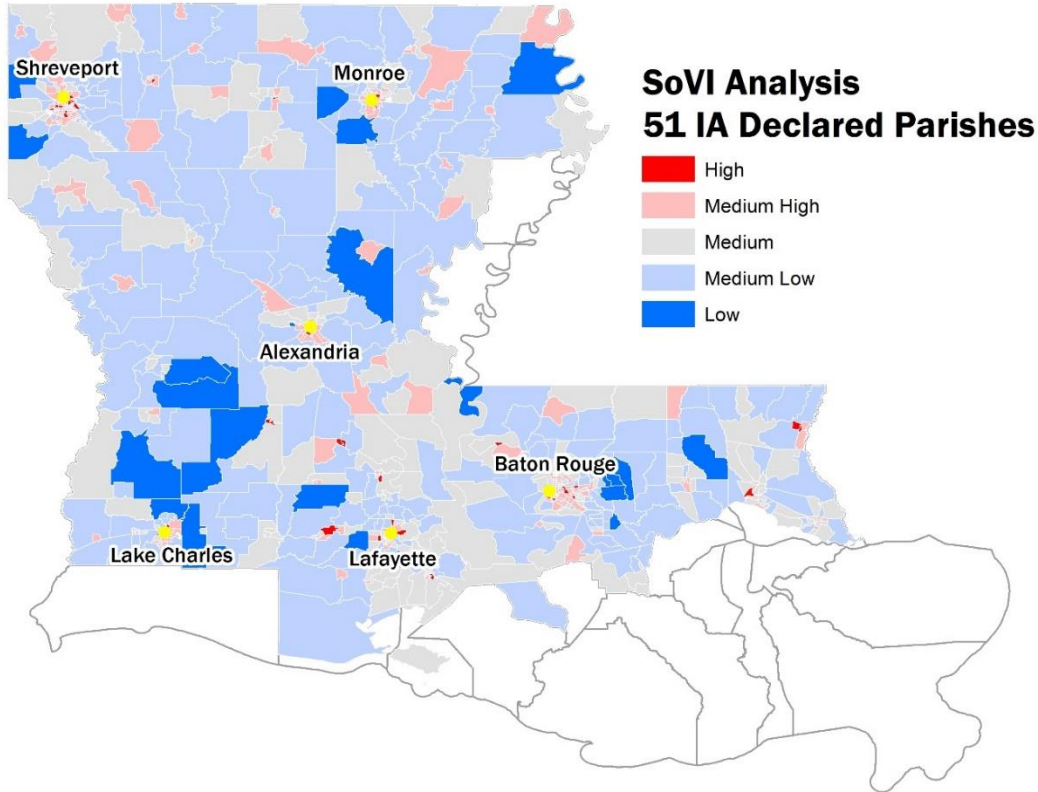
A SoVI® analysis of the 51 IA parishes indicates the areas with the highest levels of pre-existing social vulnerability are in the metropolitan areas of Alexandria, Baton Rouge, Lafayette, Lake Charles, Monroe and Shreveport. For example, there are total of 38 "high" SoVI® census tracts in these six metropolitan areas, representing more than 80 percent of the 47 "high" SoVI® census tracts across the total 51 IA parishes. This is significant due to large concentrations of damage found in a few of these areas, notably Baton Rouge, Lafayette and Monroe. Specifically, there are 18 "high" SoVI® tracts in these three impacted metropolitan areas. The six impacted metropolitan areas also have a high proportion of "medium high" SoVI® tracts. Of the 140 total "medium high" SoVI® tracts in the 51 IA parishes, 119 of those census tracts, or more than 66 percent, are within these six metropolitan areas. 66 of these "medium high" SoVI® tracts are located within Baton Rouge, Lafayette and Monroe.

The state will use the information from the SoVI® analysis as a planning and implementation tool to ensure the most vulnerable populations are engaged in the programs. Understanding the locations of the "medium high" to "high" SoVI® census tracts will equip the state's outreach team with the information needed to further engage local governments, non-profits and other stakeholders representing these areas in order to coordinate efforts and understanding as how to best serve "medium high" to "high" SoVI® census tracts residents. Additionally, the state will be able to use the SoVI® analysis as a tool to ensure robust engagement and participation of "medium high" to "high" SoVI® census tracts through the targeted efforts of the homeowner program manager who will ensure vulnerable populations are provided the support needed to access the program. Another way in which the SoVI® analysis will be deployed as a useful tool for program planning is in the state's assessment and strategy for the development of affordable housing. Using the SoVI® bivariate analysis will allow the state to consider racial, ethnic and low-income concentrations in order to work to provide affordable housing in low-poverty, non-minority and low-risk areas.

SoVI® Summary:

- **Alexandria** – 3 "high" SoVI® tracts (6 percent of the IA parish total) and 13 "medium high" SoVI® tracts (7 percent of the IA parish total).
- **Baton Rouge** – 8 "high" SoVI® tracts (17 percent of the IA parish total) and 38 "medium high" SoVI® tracts (21 percent of the IA parish total).
- **Lafayette** – 5 "high" SoVI® tracts (11 percent of the IA parish total) and 16 "medium high" SoVI® tracts (9 percent of the IA parish total).
- **Lake Charles** – 2 "high" SoVI® tracts (1 percent of the IA parish total) and 14 "medium high" SoVI® tracts (8 percent of the IA parish total).
- **Monroe** – 5 "high" SoVI® tracts (11 percent of the IA parish total) and 12 "medium high" SoVI® tracts (7 percent of the IA parish total).

- **Shreveport** – 15 “high” SoVI® tracts (32 percent of the IA parish total) and 26 “medium high” SoVI® tracts (14 percent of the IA parish total).
- There are a total of 710 census tracts in the 51 IA parishes.
- There are 47 “high” SoVI® tracts in the 51 IA parishes.
- There are 180 “medium high” SoVI® tracts in the 51 IA parishes.



Housing Affordability

The state is specifically concerned about housing affordability and the high proportion of households statewide and in the affected area considered to be “cost burdened.” The standard measurement of rental unaffordability considers any household that spends more than 30 percent of its pre-tax income on housing as having an affordability problem. Housing is considered “affordable” if the rent (including utilities) is no more than 30 percent of its pre-tax income. Households spending more than 30 percent are “cost burdened” or “rent-stressed,” and those spending more than 50 percent are labeled “severely cost burdened” or “severely rent-stressed.”

In a recent report released by the National Low Income Housing Coalition (NLIHC), in no state can a minimum wage worker afford a two-bedroom rental unit at the average fair market rent, working a standard 40-hour work week, without paying more than 30 percent of their income for housing. The minimum wage in Louisiana is \$7.25 per hour; however a household must earn \$15.81 per hour to avoid

paying more than 30 percent of income on housing (and utilities) to afford a 2-bedroom unit at the fair market rent of \$822 per month.

According to ACS data, 46 percent of Louisiana renters and 21 percent of homeowners are cost burdened, while 25 percent of renters and 9 percent of homeowners are severely cost burdened. In total, 501,610 households statewide are cost burdened and 241,725 are severely cost burdened.

Within the 51 IA parishes, a similar percentage of renters experience cost burden (45 percent) or severe cost burden (23 percent) as compared to the state overall. Similarly, a comparable percentage of homeowners are cost burdened (19 percent) or severely cost burdened (8 percent) compared to the state overall. In total, 337,380 households in IA parishes are cost burdened, and 157,187 are severely cost burdened.

By comparison, renters in the 10 ten most impacted parishes experience cost burden (47 percent) and severe cost burden (25 percent) at slightly higher rates than the state or IA areas overall. Homeowners within the most impacted parishes experience similar levels of cost burden (21 percent) and severe cost burden (8 percent) compared to the IA parishes and state overall. In total, 173,139 households in the most impacted parishes are cost burdened, and 81,522 are severely cost burdened.

Cost Burdened Renters and Owners			
	State of Louisiana	Presidentially Declared Disaster Areas	10 Most Impacted Parishes
Cost Burdened Renters	267,146	174,938	88,921
Percent of Renters with Cost Burden	46%	45%	47%
Severe Cost Burden Renters	144,224	91,611	48,308
Percent of Renters with Severe Cost Burden	25%	23%	25%
Cost Burdened Owners	234,464	162,442	84,218
Percent of Homeowners with Cost Burden	21%	19%	21%
Severely Cost Burdened Owners	97,501	65,576	33,214
Percent of Homeowners with Severe Cost Burden	9%	8%	8%

*Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates
Mortgage Status by Selected Monthly Owner Costs as a Percentage of Household Income in the Past 12 Months for Owner Occupied Housing
Gross Rent as a Percentage of Household Income in the Past 12 months*

Note: Cost Burden is defined as renter or owner households spending over 30 percent of household income on rent or mortgage.

2. Statewide Housing Damage and Loss Assessment

To articulate the extent of damage, the state compiled information to document damages across several different population stratifications, including owner-occupied and renter households, households without flood insurance, households located outside of the Special Flood Hazard Area (SFHA), households within the six most impacted parishes, Low and Moderate Income (LMI) households, households with Access and Functional Needs (AFN) and households with applicants aged 62 and older.

For the purposes of this analysis, the state used full applicant-level data collected through FEMA's IA program. DR-4263 IA data were pulled on Nov. 10, 2016 and DR-4277 IA data were pulled on Nov. 3, 2016. The FEMA IA figures have not been updated, as they have not materially changed since November 2016. Unless otherwise noted, all housing summary data were compiled from these two datasets.

Furthermore, unless otherwise specifically noted, the state has defaulted to HUD's definitions of unmet need for owner-occupied and renter households. For rental properties, to meet the statutory requirement of "most impacted," homes are determined to have a high level of damage if they have damage of "major-low" or higher. That is, they have a FEMA personal property damage assessment of \$2,000 or greater or flooding over 1 foot. Furthermore, landlords were presumed to have adequate insurance coverage unless the unit is occupied by a renter with income of \$20,000 or less. Units occupied by a tenant with income less than \$20,000 were used to calculate likely unmet needs for affordable rental housing.

To calculate the level of damage for rental households, the state used the following criteria:

- **Minor-Low:** Less than \$1,000 of FEMA inspected personal property damage
- **Minor-High:** \$1,000 to \$1,999 of FEMA inspected personal property damage
- **Major-Low:** \$2,000 to \$3,499 of FEMA inspected personal property damage or more than 1 foot of flooding on the first floor.
- **Major-High:** \$3,500 to \$7,499 of FEMA inspected personal property damage or 4 to 6 feet of flooding on the first floor.
- **Severe:** Greater than \$7,500 of FEMA inspected personal property damage or determined destroyed and/or 6 or more feet of flooding on the first floor.

To calculate the level of damage for owner-occupied households, the state used the following criteria:

- **Minor-Low:** Less than \$3,000 of FEMA inspected real property damage
- **Minor-High:** \$3,000 to \$7,999 of FEMA inspected real property damage
- **Major-Low:** \$8,000 to \$14,999 of FEMA inspected real property damage and/or more than 1 foot of flooding on the first floor.
- **Major-High:** \$15,000 to \$28,800 of FEMA inspected real property damage and/or 4 to 6 feet of flooding on the first floor.
- **Severe:** Greater than \$28,800 of FEMA inspected real property damage or determined destroyed and/or 6 or more feet of flooding on the first floor.

The average cost for full home repair to code for a specific disaster within each of the damage categories noted above is calculated using the average real property damage repair costs determined by the SBA for its disaster loan program for the subset of homes inspected by both SBA and FEMA for 2011 to 2013 disasters. Because SBA inspects for full repair costs, it presumes to reflect the full cost to repair the home, which is generally more than FEMA estimates on the cost to make the home habitable.

For each household determined to have unmet housing needs, their estimated average unmet housing need less assumed assistance from FEMA, SBA, and Insurance was calculated at \$27,455 for major damage (low); \$45,688 for major damage (high); and \$59,493 for severe damage. Unless otherwise noted, when quoting an estimated total for unmet housing need, the state has relied on these estimates to calculate a specific dollar amount. Data are not currently available from HUD respective to estimated needs at the minor-high and minor-low categories. Populations in these categories are assumed by HUD not to have

unmet needs, but the state reserves the right to serve these populations should it discover otherwise through program intake and implementation.

Owner-Occupied Households Estimated Unmet Need Baseline	
Damage Category	Estimated Needs
Severe	\$ 59,493
Major-High	\$ 45,688
Major-Low	\$ 27,455
Minor-High	\$ -
Minor-Low	\$ -

The state reserves the right to revisit this methodology, once it has conducted its own analysis specific to DR-4263 and DR-4277 comparing damages documented through FEMA’s real property inspections, inspections conducted in response to claims made to the National Flood Insurance Program (NFIP) and inspections conducted for the purposes of the SBA disaster loan program. Additionally, once the state has received a more statistically significant application pool, the state intends to use real-time unmet needs assessments gathered through its own program intake and inspection process to further inform this analysis over time.

Subsequent to approval of the submission of the Initial Action Plan and Action Plan Amendment 1, the state has developed an understanding that the state’s calculation of owner-occupied housing damages and unmet needs differs from HUD’s in a few critical ways. Specifically:

- Only households not covered by National Flood Insurance Program (NFIP) policies are calculated to have unmet needs by HUD. However, the state’s calculation accounts for these populations at major-low, major-high, and severe damage tiers;
- Only those households located in the 10 ‘most impacted parishes’ are considered for the purposes of HUD’s unmet needs calculation and subsequent allocation methodology. These 10 parishes are: Acadia, Ascension, East Baton Rouge, Lafayette, Livingston, Ouachita, St. Tammany, Tangipahoa, Vermillion and Washington. However, the state has included populations who experienced major-low, major-high and severe damage tiers from all affected and disaster-declared parishes.

The state has chosen to deviate from these two interpretations of HUD’s methodology for the following reasons:

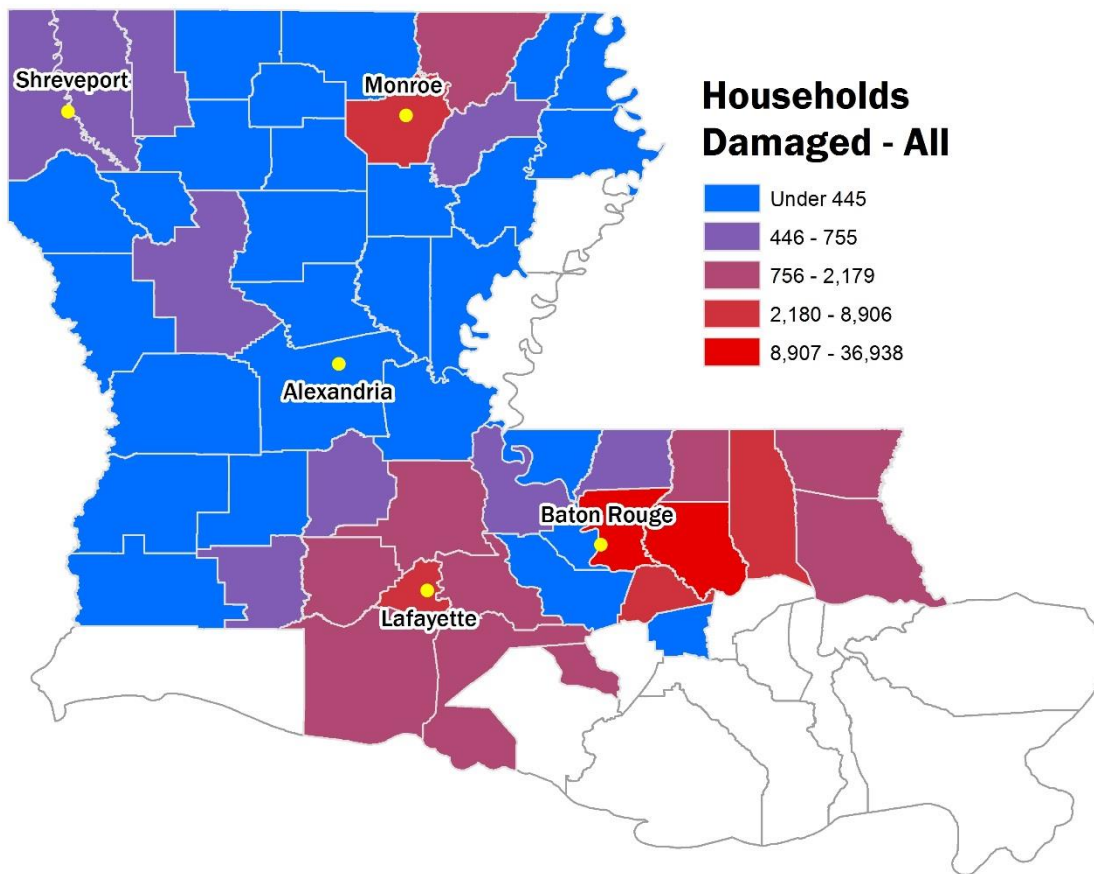
1. Excluding all households covered by an NFIP policy categorically excludes an entire class of homeowners with likely unmet needs. For example, a residence with an NFIP policy valued at \$20,000 which also incurred damages of \$100,000 would by definition have an uninsured unmet need of \$80,000;
2. As per the Federal Register Notice, HUD has calculated average unmet housing need as the damage amount “less assumed assistance from FEMA, SBA, and Insurance;” therefore, the state believes including populations with NFIP policies is consistent with the methodology used to develop the average need statistics published by HUD;
3. Excluding populations from all but the 10 most impacted parishes appears both arbitrary and inconsistent with statewide, holistic recovery priorities. Moreover, this methodology also appears

to be inconsistent with HUD's regulation stipulating grantees expend 80 percent of grant awards within the 10 most impacted parishes. In other words, if there are no unmet needs, as calculated by HUD, outside of these 10 parishes, there is no regulatory mechanism by which the state may establish 'tie-back' and therefore no mechanism by which the state may choose to expend up to 20 percent of its grant award outside of this 10-parish area. Therefore, in order to serve populations outside of the '10 most impacted' to any degree, the state has illustrated known unmet needs in these geographic areas as part of its calculation methodology.

Total Impact (Owner-Occupied and Renter Households)

The information below outlines the total household population with documented damages. For the purposes of this analysis, the state has concluded a household has documented damage if FEMA reported a FEMA FVL of greater than \$0. Across both disasters, 113,312 households were found to have some level of documented damage, including 84,842 owner-occupied and 28,470 renter households. While the majority of instances of housing damage can be attributed to DR-4277 (91,628 of 113,312, or 81 percent), the state is aware this is at least partially attributable to the fact DR-4277 generally affected larger population centers like Lafayette and metropolitan Baton Rouge, while DR-4263 generally affected more rural parishes and communities.

While these data validate HUD's identification of the ten most impacted parishes, the state is also concerned about levels of damage in several parishes just below this most impacted threshold, specifically Iberia, Morehouse, St. Landry and St. Martin parishes. The map below includes all documented instances of housing damage, irrespective of the level of damage.



Households with Damage				
Disaster	Parish	Owners	Renters	Total
4263	Ouachita	3,449	2,684	6,133
	Tangipahoa	2,378	769	3,147
	Washington	1,133	303	1,436
	Morehouse	1,021	290	1,311
	St. Tammany	933	178	1,111
	Caddo	594	120	714
	Bossier	612	78	690
	Natchitoches	613	76	689
	Richland	451	147	598
	Webster	533	50	583
	Livingston	453	72	525
	Union	412	33	445
	West Carroll	351	31	382
	St. Helena	342	25	367
	Vernon	320	34	354
Calcasieu	286	38	324	

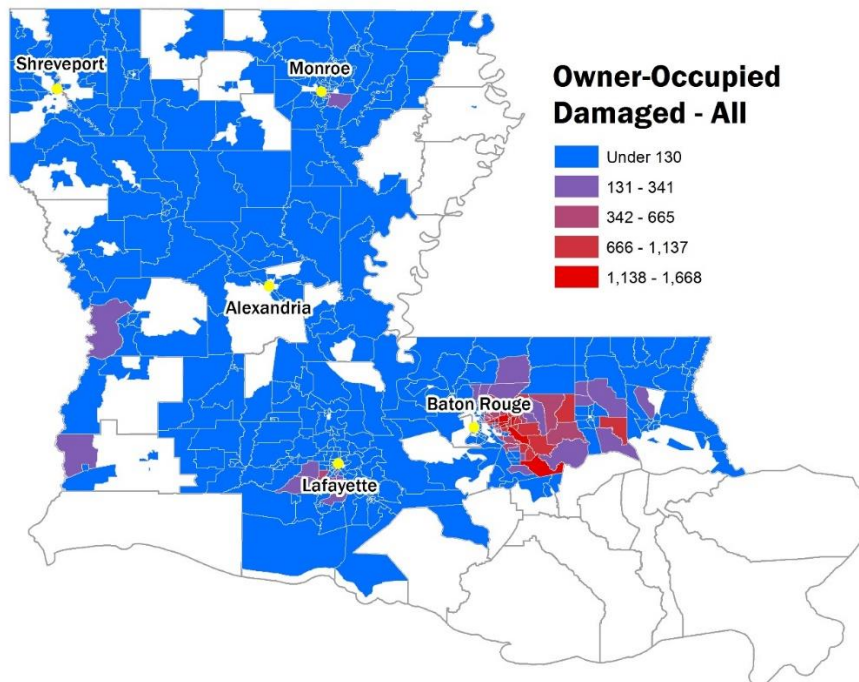
Households with Damage				
Disaster	Parish	Owners	Renters	Total
	Grant	296	27	323
	East Carroll	241	53	294
	Bienville	214	17	231
	Claiborne	203	23	226
	Winn	183	33	216
	Lincoln	156	17	173
	Rapides	151	21	172
	De Soto	145	14	159
	Caldwell	148	9	157
	Beauregard	127	17	144
	Ascension	109	21	130
	Sabine	102	2	104
	Madison	86	16	102
	Allen	77	6	83
	LaSalle	76	7	83
	Jackson	73	4	77
	Catahoula	74	1	75
	Franklin	62	3	65
	Red River	46	3	49
	Avoyelles	12	-	12
	Total	16,462	5,222	21,684
4277	East Baton Rouge	24,255	12,683	36,938
	Livingston	15,972	4,746	20,718
	Ascension	6,395	1,438	7,833
	Tangipahoa	4,655	1,104	5,759
	Lafayette	4,798	852	5,650
	Vermilion	1,819	360	2,179
	Acadia	1,555	445	2,000
	St. Landry	1,600	398	1,998
	Iberia	1,466	400	1,866
	St. Martin	1,339	120	1,459
	St. Helena	922	105	1,027
	East Feliciana	653	102	755
	Evangeline	531	142	673
	Jefferson Davis	507	62	569
	Pointe Coupee	451	100	551
	Iberville	356	39	395
	Avoyelles	262	75	337
	St. Tammany	216	18	234
	Washington	199	28	227

Households with Damage				
Disaster	Parish	Owners	Renters	Total
	West Feliciana	160	11	171
	St. James	159	10	169
	West Baton Rouge	107	10	117
	Calcasieu	2	-	2
	Rapides	1	-	1
	Total	68,380	23,248	91,628
	Grand Total	84,842	28,470	113,312

Impact on Owner-Occupied Households

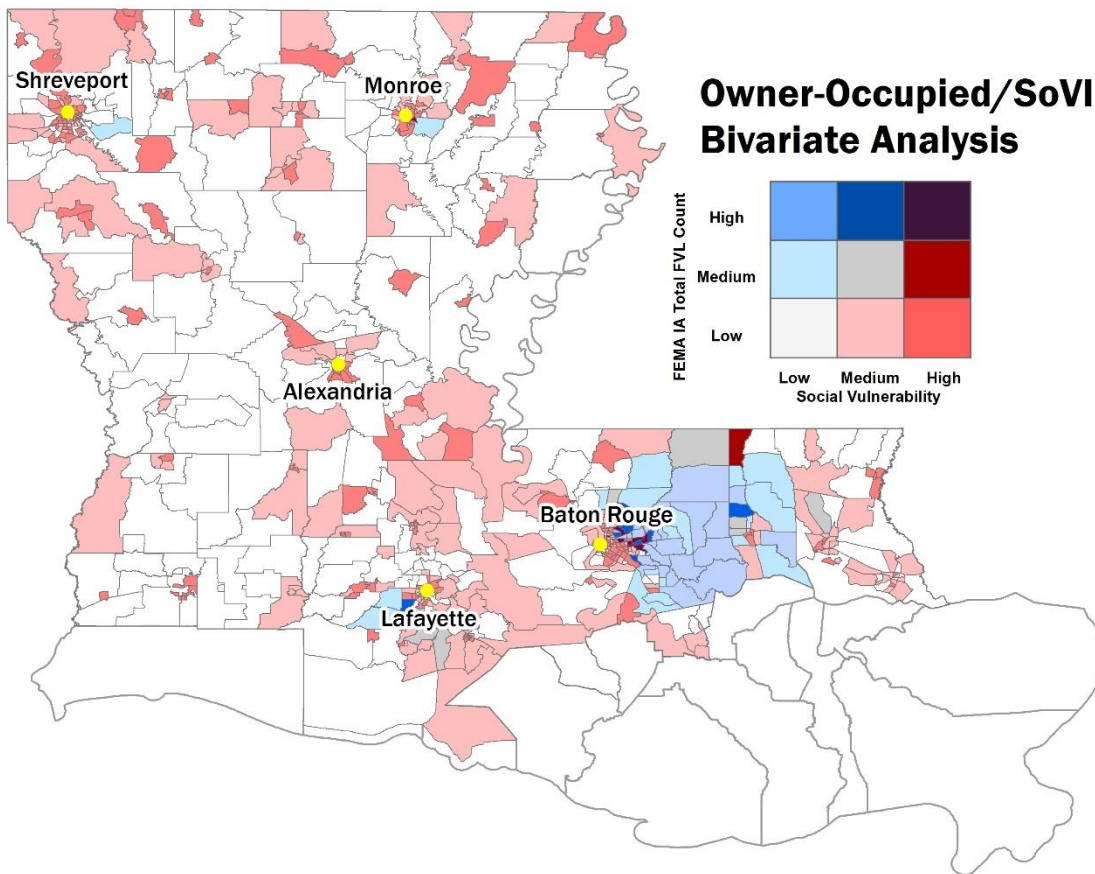
By far, the greatest number of instances of significant owner-occupied housing damage occurred in the Baton Rouge Capital Region, specifically in East Baton Rouge, Livingston, Ascension and Tangipahoa parishes. Other population centers around Monroe (Ouachita Parish) and Lafayette (Lafayette Parish) also experienced significant owner-occupied housing damages. Finally, the state is mindful of two additional pockets of significant damage along the Sabine River, in Calcasieu and Vernon parishes, respectively.

For the purposes of this section, the state includes all documented damages to the owner-occupied household population at all levels of damage in tabular format. For mapping purposes, this analysis only includes those households with “major-low,” “major-high” and “severe” levels of damage at the census tract. This map illustrates those housing units with significant and likely unmet needs.



Owner-Occupied Households with Damage		
Disaster	Damage Category	Households
4263	Severe	675
	Major-High	2,276
	Major-Low	3,979
	Minor-High	1,503
	Minor-Low	8,029
	Total	16,462
4277	Severe	11,249
	Major-High	24,270
	Major-Low	15,182
	Minor-High	3,849
	Minor-Low	13,830
	Total	68,380
	Grand Total	84,842

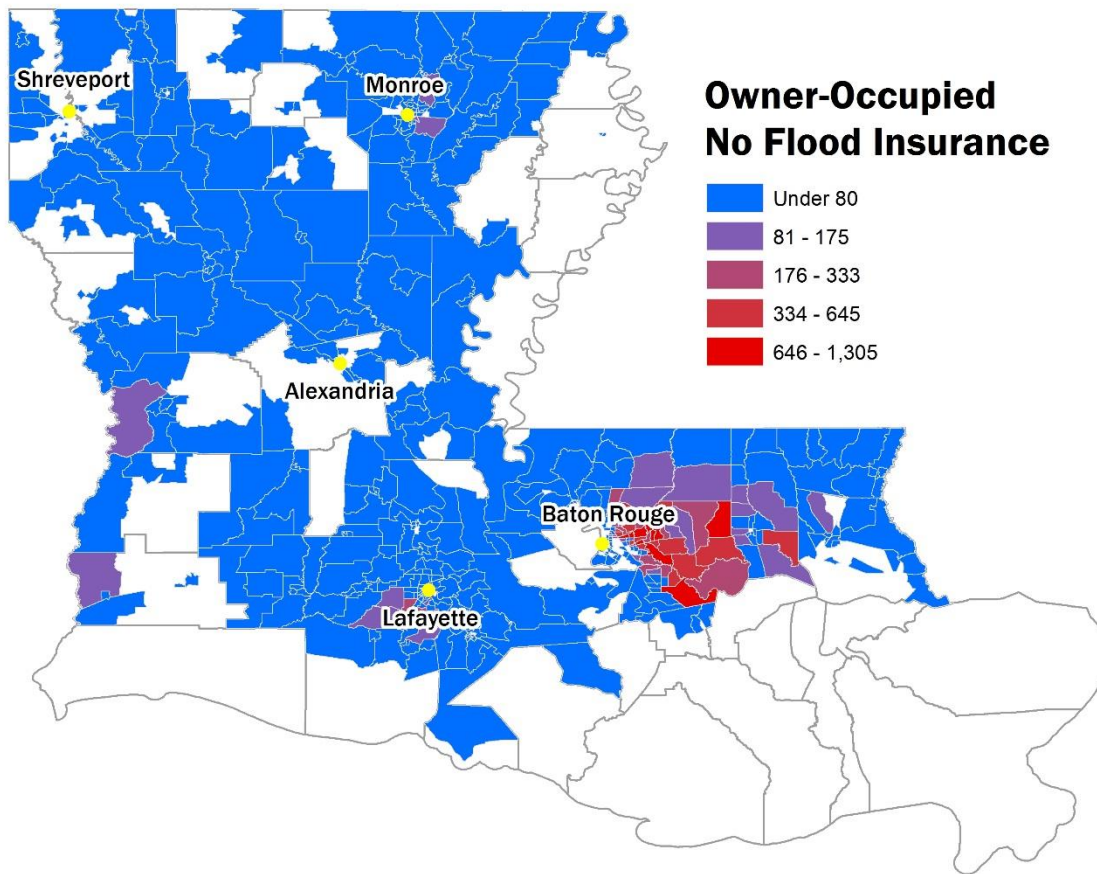
This analysis generally assumes areas with greatest need are going to be those that have both high concentrations of damage as well as a high level of pre-existing social vulnerability. Utilizing this bivariate approach identifies specific corridors of concern. For owner-occupied household populations, a concentration of need is found in corridors throughout the Baton Rouge Capital Region. There are a total of six census tracts in the 51 IA declared parishes classified as having high levels of damage as well as high levels of social vulnerability. All six of these census tracts are located within the Capital Region. Five of the census tracts are located within East Baton Rouge Parish, specifically, and one is located in Livingston Parish. These census tracts are all within a five-mile area and five of the six census tracts are located in a line along the I-12/Florida Boulevard corridor that runs between Baton Rouge and Denham Springs. The state will note these particular areas of interest as it conducts programmatic outreach and intake.



Owner-Occupied Households with Damage (SoVI Designation)		
Disaster	SoVI (5-Class)	Households
4263	High	659
	Medium-High	4,122
	Medium	3,743
	Medium-Low	7,515
	Low	423
	Total	16,462
4277	High	895
	Medium-High	10,335
	Medium	18,994
	Medium-Low	32,424
	Low	5,732
	Total	68,380
	Grand Total	84,842

Of particular concern is the high proportion of owner-occupied households with damage who did not report carrying insurance through the National Flood Insurance Program (NFIP). In total, 72 percent of all impacted owner-occupied households, or 61,069, did not report having insurance. This represents a unique situation for the state, as in previous significant disaster events – hurricanes Katrina, Rita, Gustav, Ike and Isaac - there was a reasonable anticipation some damages may have been attributable to wind or other events that may have been covered by a homeowner’s hazard insurance policy. As these events were flood-exclusive, the state has no such reasonable anticipation any of the losses incurred by this population were met by other insurance policies.

Additionally, it is important to note the high instances of owner-occupied households with significant levels of damage who were uninsured. 36,510 households of the 61,069 uninsured total had damage levels of “major-low,” “major-high” or “severe,” accounting for more than 59 percent of the affected and uninsured owner-occupied population.

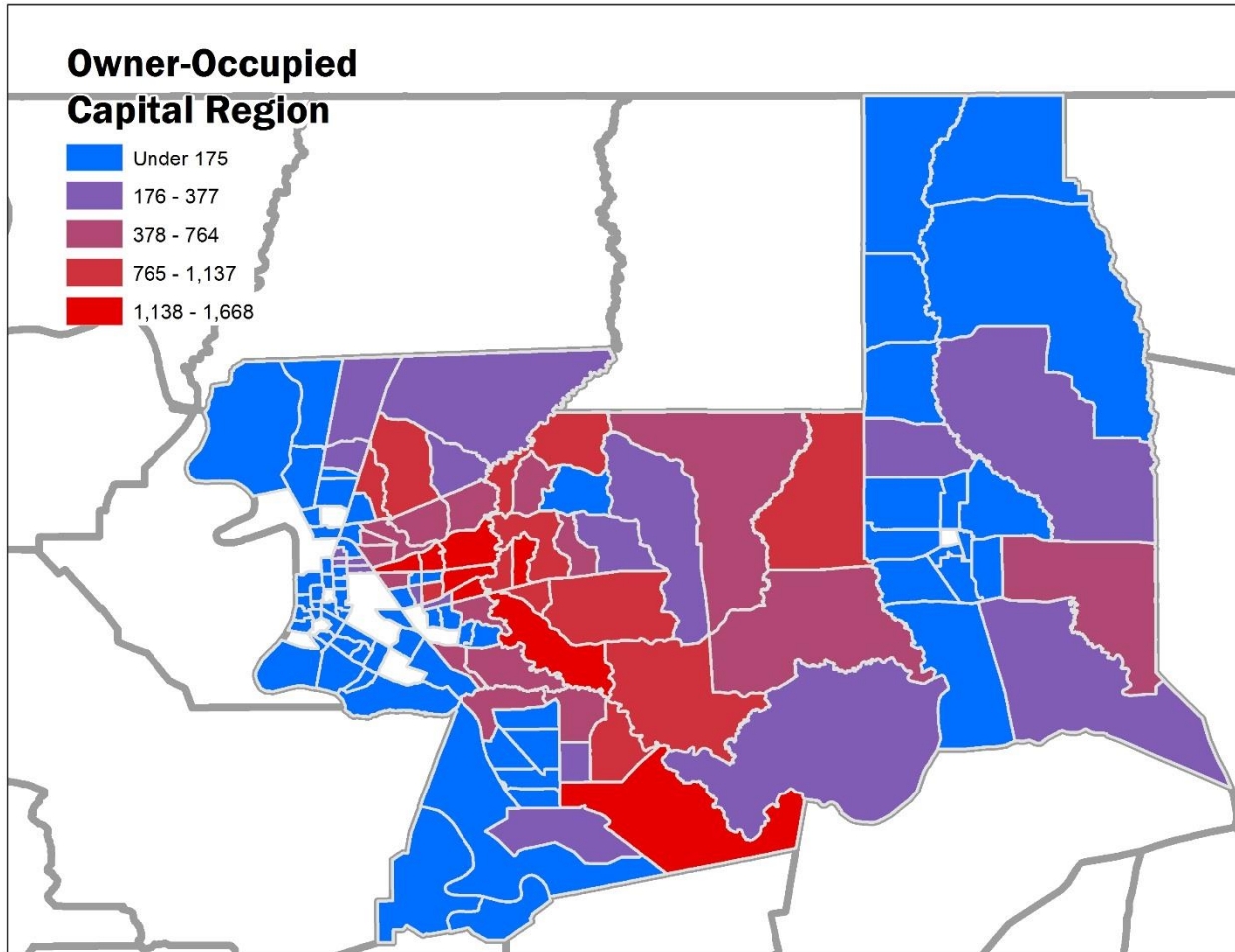


Owner-Occupied Households with No Flood Insurance			
Disaster	Damage Category	Households	Percent of Total Damaged
4263	Severe	481	71%
	Major-High	1,448	64%
	Major-Low	3,079	77%
	Minor-High	1,258	84%
	Minor-Low	7,563	94%

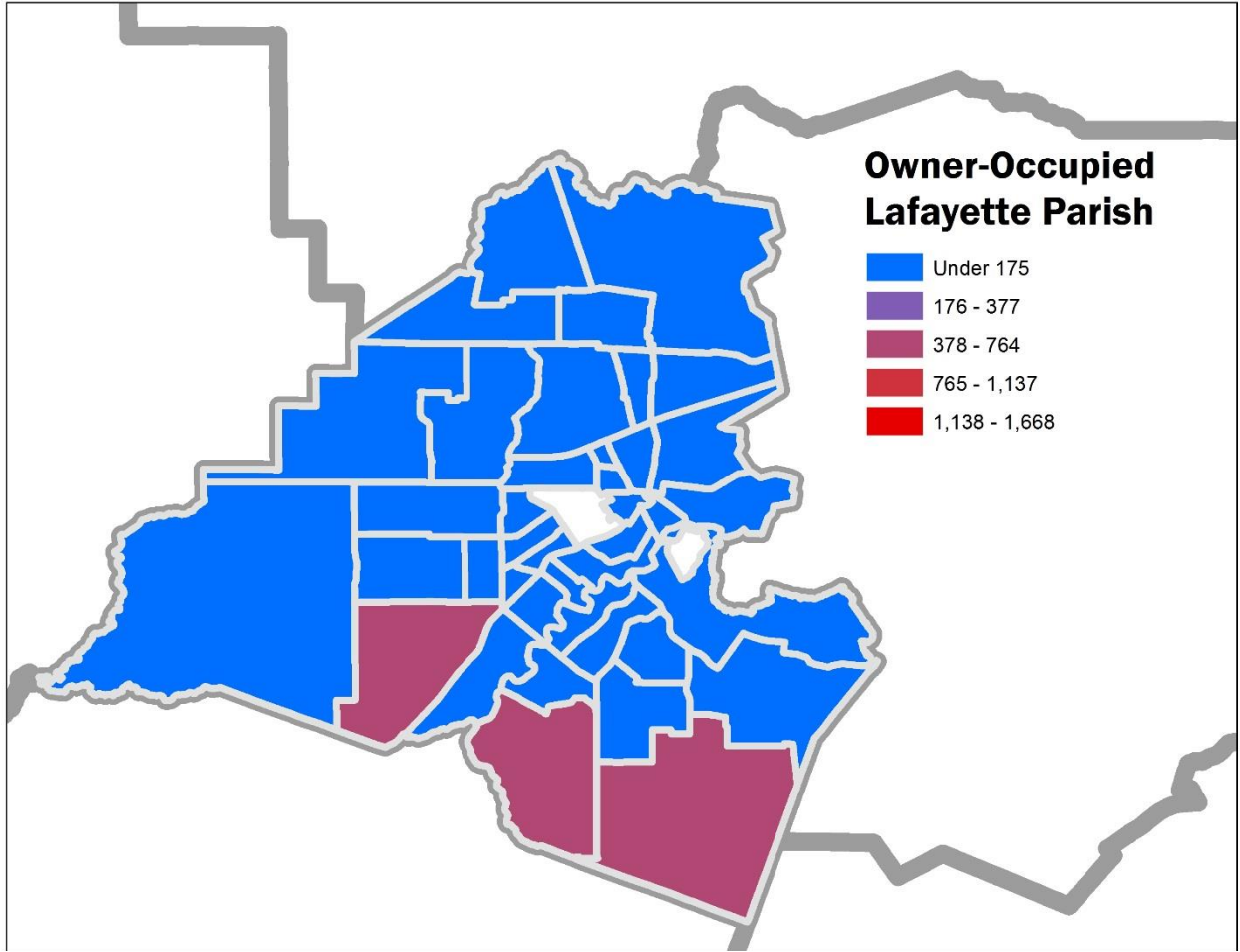
Owner-Occupied Households with No Flood Insurance			
Disaster	Damage Category	Households	Percent of Total Damaged
	Total	13,829	84%
4277	Severe	6,071	54%
	Major-High	14,470	60%
	Major-Low	10,961	72%
	Minor-High	3,130	81%
	Minor-Low	12,608	91%
	Total	47,240	69%
	Grand Total	61,069	72%

To drilldown on affected owner-occupied populations in the ten-parish most impacted area, the state prepared the following detailed maps illustrating instances of owner-occupied household damages at the census tract. As the state conducts housing program intake, it will attempt to coordinate outreach efforts in accordance with locales with high-levels of documented damages.

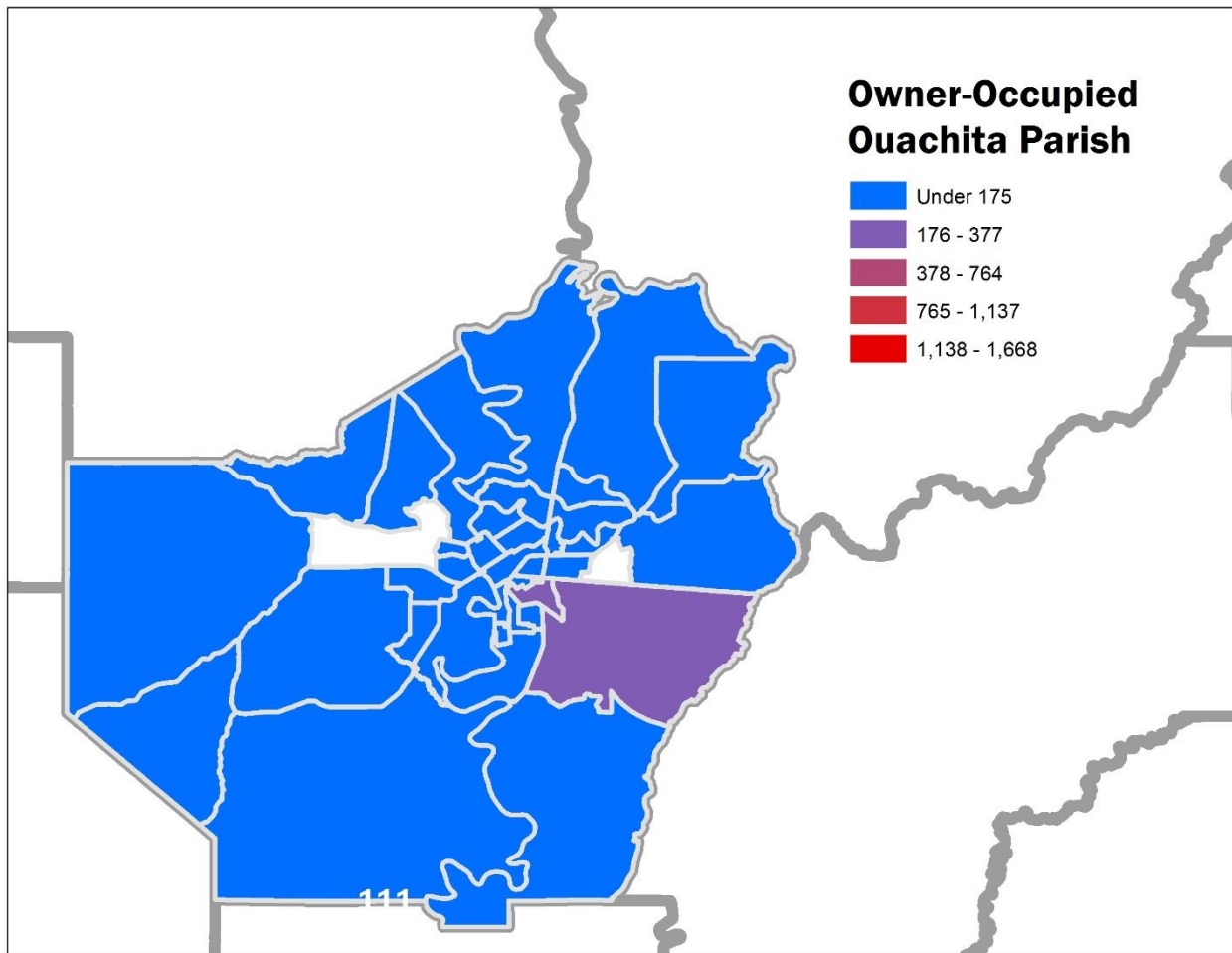
It is important to note 68,319 of the total 84,842 owner-occupied households with damage are located within the ten-parish most impacted area, representing more than 81 percent of the total. Additionally, 51,742 households within that population are likely to have unmet needs, with damage levels at “major-low,” “major-high” or “severe.” This population represents more than 90 percent of the 57,631 affected owner-occupied households likely to have unmet needs.



Represents households with “major-low,” “major-high” and “severe” levels of damage.



Represents households with "major-low," "major-high" and "severe" levels of damage.

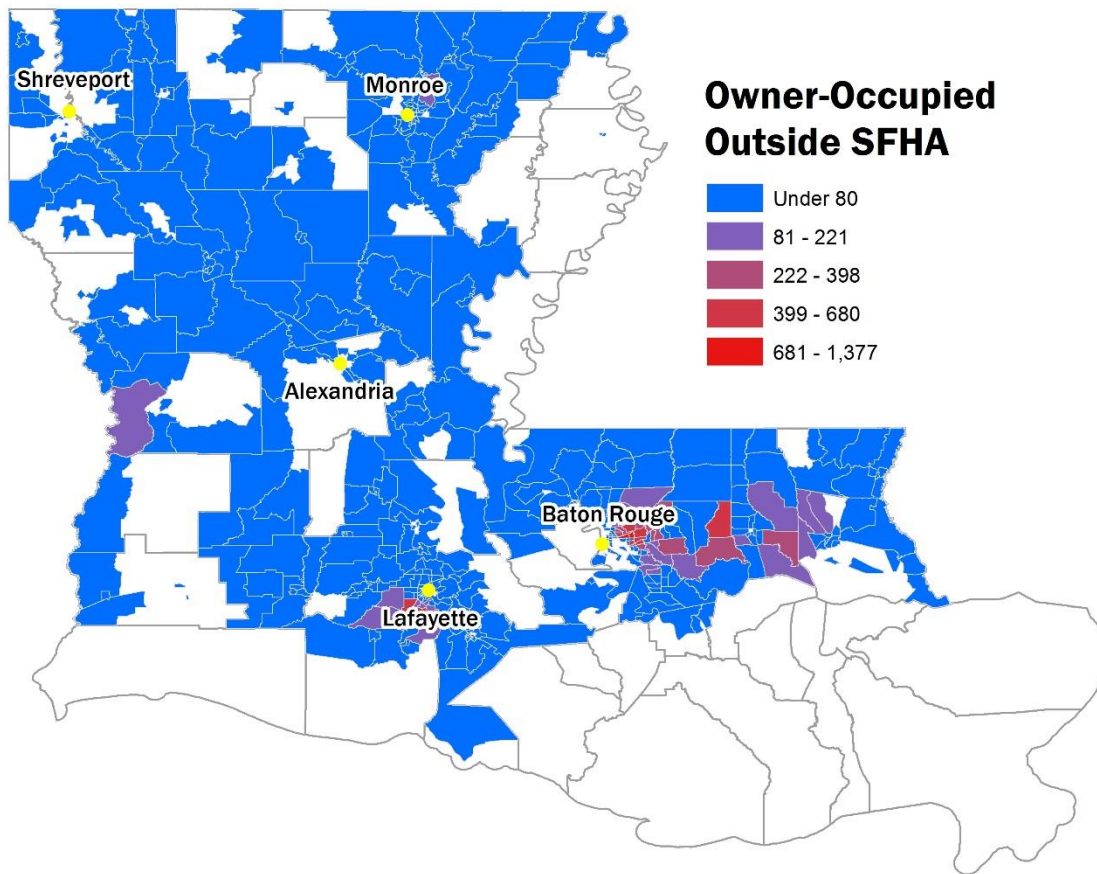


Represents households with “major-low,” “major-high” and “severe” levels of damage.

Owner-Occupied Households in 10 Most Impacted Parishes		
Disaster	Damage Category	Households
4263	Severe	226
	Major-High	1,339
	Major-Low	2,297
	Minor-High	906
	Minor-Low	3,687
	Total	8,455
4277	Severe	11,107
	Major-High	23,657
	Major-Low	13,116
	Minor-High	3,075
	Minor-Low	8,909
	Total	59,864
	Grand Total	68,319

The rainfall events associated with DR-4263 and DR-4277 were each considered to be, in some areas, “one in 1,000 year” events, or events with an annual expected occurrence rate of 0.001 percent. As a result, an unusually high proportion of affected owner-occupied households were located outside of the 100-year floodplain, or the Special Flood Hazard Area (SFHA). Accordingly, these households were not required to carry flood insurance if they had a mortgage. Combined with the high proportion of affected households without flood insurance, the state believes these factors have exacerbated housing unmet needs relative to past disasters.

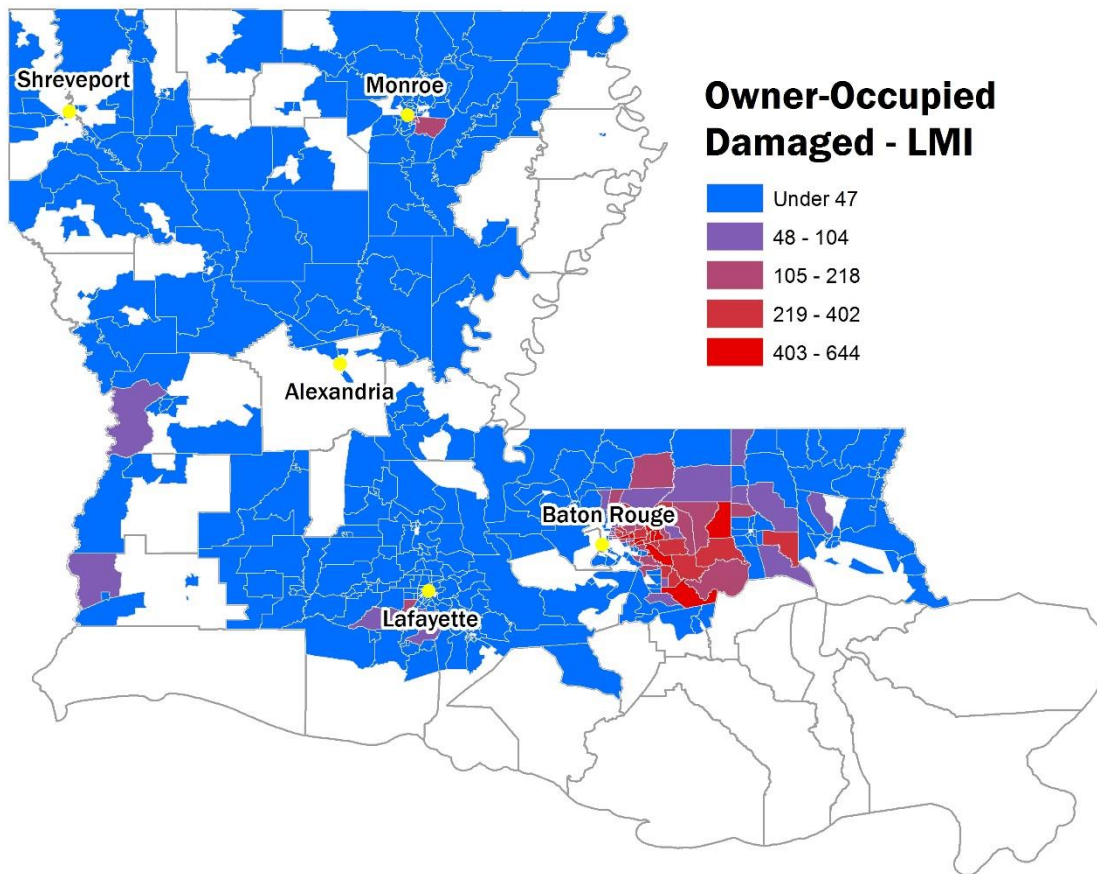
Specifically, 46,016 impacted owner-occupied households were located outside of the SFHA, representing more than 54 percent of the total affected owner-occupied household population. Additionally, 24,615 of these households are likely to have unmet housing needs, with damage levels of “major-low,” “major-high” or “severe.” This represents more than 42 percent of the owner-occupied population likely to have unmet needs.



Owner-Occupied Households Outside SFHA		
Disaster	Damage Category	Households
4263	Severe	292
	Major-High	1,043
	Major-Low	2,116
	Minor-High	1,031

	Minor-Low	6,800
	Total	11,282
4277	Severe	2,896
	Major-High	10,395
	Major-Low	7,873
	Minor-High	2,513
	Minor-Low	11,057
	Total	34,734
	Grand Total	46,016

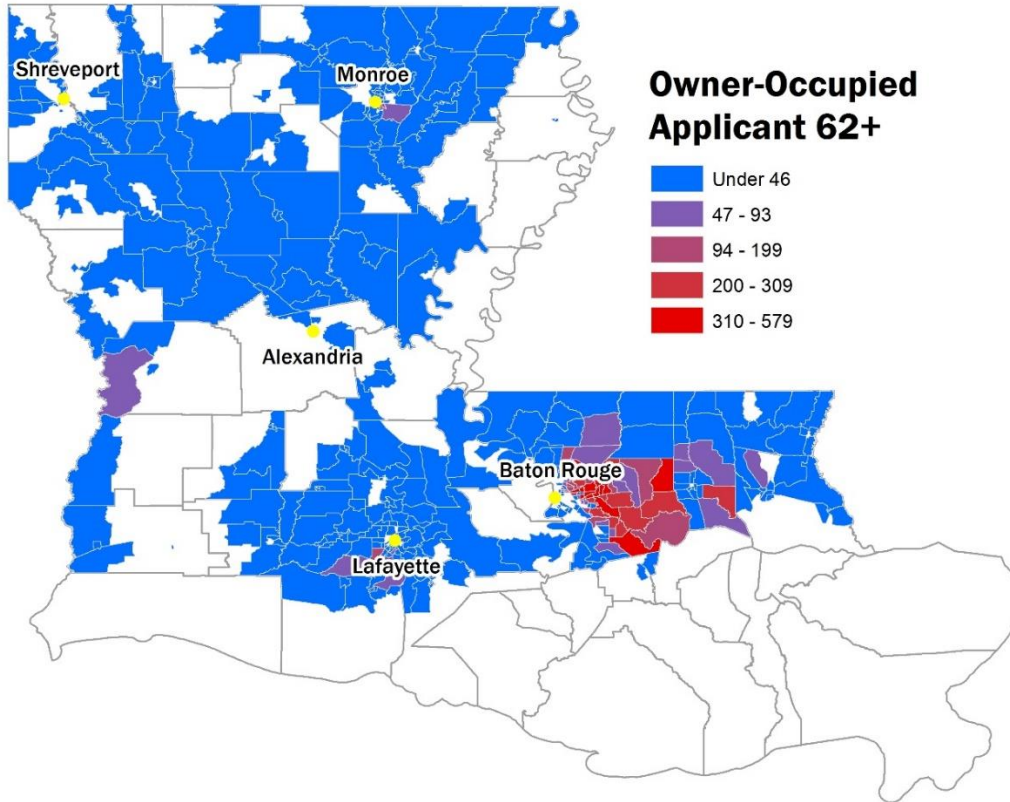
Given HUD requirements associated with this CDBG-DR allocation, the state must expend at least 55 percent of its allocation toward the benefit of LMI populations. 43,643 affected owner-occupied households are LMI, or more than 51 percent of the total affected owner-occupied population. Additionally, only 25,157 of this total are households expected to have remaining unmet needs (based on HUD’s methodology), with damage levels of “major-low,” “major-high” or “severe.” This represents approximately 43 percent of the affected population who is LMI and likely to have remaining unmet needs. As such, the state has designed its homeowner and rental programs in a manner that places a priority on addressing and assisting the unmet needs experienced by LMI and other vulnerable populations. Following standard HUD methodology, the state will capture community and/or individual household data on public improvement projects to document activities that benefit LMI areas. However, the state will continue to monitor the data related to program applications, participation and the actual unmet needs of LMI and non-LMI households and communities and may seek additional relief related to the total LMI expenditure requirement, if necessary.



LMI Owner-Occupied Households		
Disaster	Damage Category	Households
4263	Severe	282
	Major-High	999
	Major-Low	2,293
	Minor-High	909
	Minor-Low	5,934
	Total	10,417
4277	Severe	4,088
	Major-High	9,495
	Major-Low	8,000
	Minor-High	2,116
	Minor-Low	9,527
	Total	33,226
	Grand Total	43,643

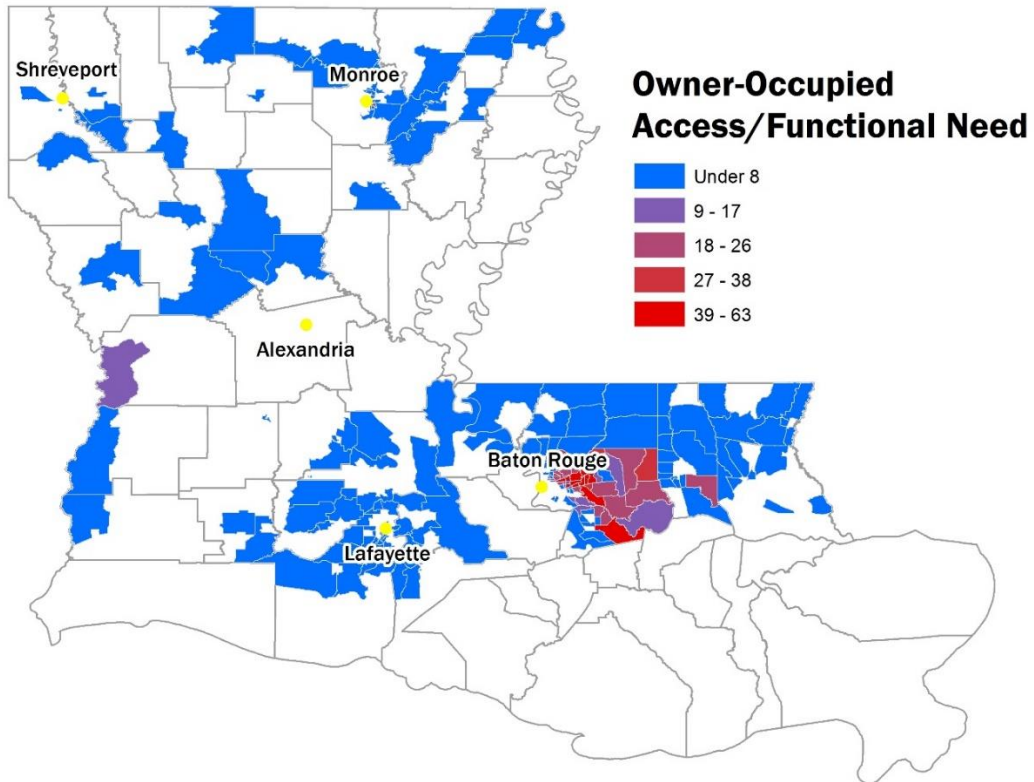
As the state attempts to prioritize the expenditure of CDBG-DR resources that are dwarfed by the total anticipated unmet needs from DR-4263 and DR-4277, one area of prioritization continues to be elderly households as it conducts program intake. There are at least 26,783 households with members aged 62

or older in the impacted owner-occupied population, accounting for the limitation that IA data only include date of birth for the applicant representing the entire household. Using this figure as a baseline, however, at least 31 percent of the affected owner-occupied household population has a member that is 62 or older. Isolating just those households likely to have unmet needs, at least 18,997 have a household member aged 62 or older. This is at least 32 percent of the owner-occupied household population likely to have unmet needs.



Owner-Occupied Households with Applicant Aged 62+		
Disaster	Damage Category	Households
4263	Severe	262
	Major-High	927
	Major-Low	1,363
	Minor-High	478
	Minor-Low	2,491
	Total	5,521
4277	Severe	4,069
	Major-High	8,132
	Major-Low	4,244
	Minor-High	1,139
	Minor-Low	3,678
	Total	21,262
	Grand Total	26,783

In addition to those households with a member aged 62 or older, the state will also continue to prioritize those households with persons with disabilities, as identified initially by those households that indicated they had access and/or functional needs through their IA applications. According to the FEMA data, there are 2,590 owner-occupied households with documented access and/or functional needs, representing more than 3 percent of the total impacted owner-occupied household population. 1,900 of these households have levels of damage indicating they likely have remaining unmet needs, accounting for more than 3 percent of the total owner-occupied household population likely to have unmet needs.



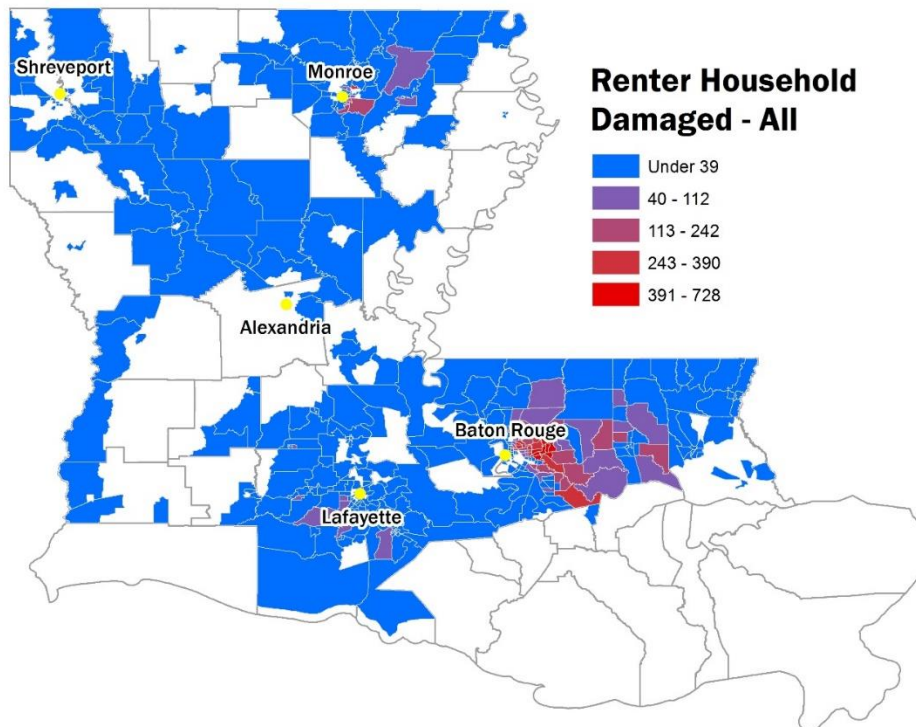
Owner-Occupied Households with Access/Functional Needs		
Disaster	Damage Category	Households
4263	Severe	28
	Major-High	77
	Major-Low	108
	Minor-High	33
	Minor-Low	176
	Total	
4277	Severe	474
	Major-High	835
	Major-Low	378
	Minor-High	95
	Minor-Low	386

	Total	2,168
	Grand Total	2,590

Impact on Renter Households

The greatest number of instances of renter household damages occurred in Ouachita (DR-4263), East Baton Rouge and Livingston (both DR-4277) parishes. Other parishes with significant impacts to renter populations include Ascension and Tangipahoa parishes.

For the purposes of this section, the state has included all documented damages to the renter household population at all levels of damage in tabular format. For mapping purposes, this analysis only includes those households with “major-low,” “major-high” and “severe” levels of damage.

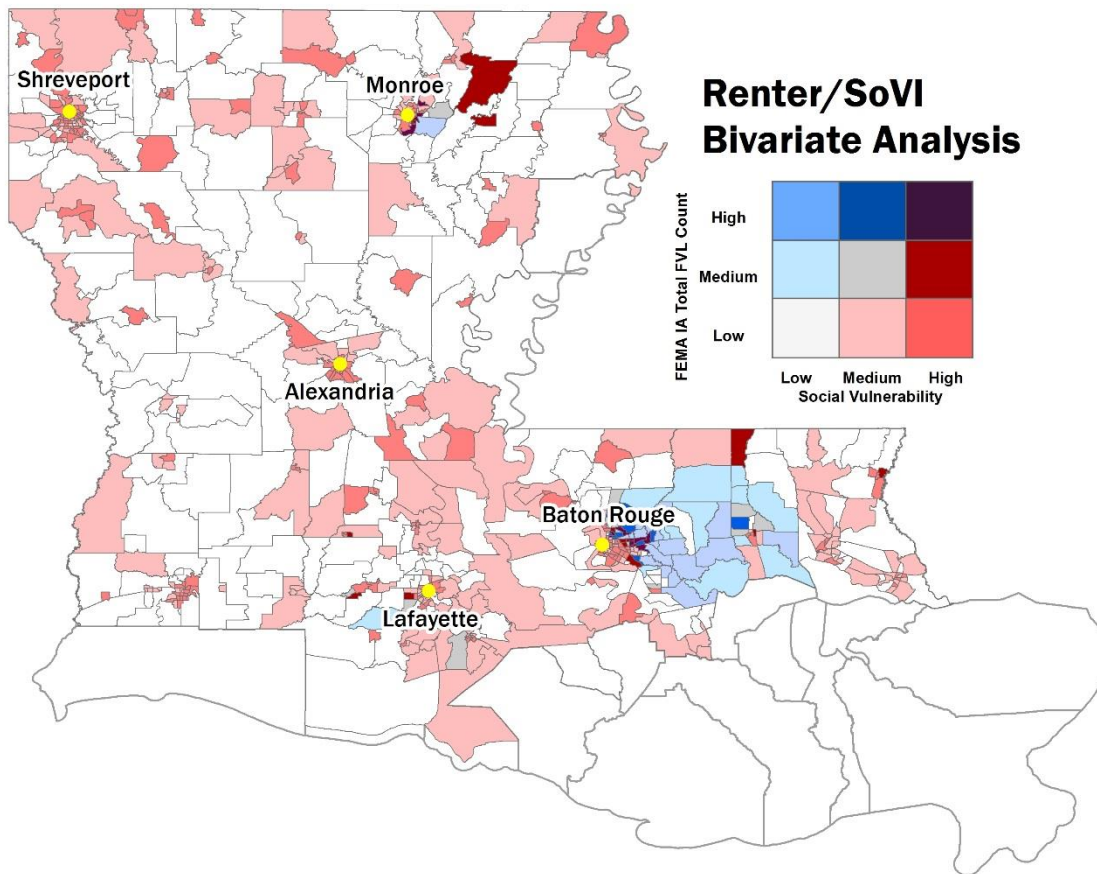


Renter Households with Damage		
Disaster	Damage Category	Households
4263	Severe	279
	Major-High	1,204
	Major-Low	1,309
	Minor-High	876
	Minor-Low	1,554
	Total	5,222
4277	Severe	3,838
	Major-High	8,097
	Major-Low	6,182
	Minor-High	1,818

	Minor-Low	3,313
	Total	23,248
	Grand Total	28,470

This analysis generally assumes areas with greatest need are going to be those that have both high concentrations of damage as well as a high level of pre-existing social vulnerability. Utilizing a bivariate approach for rental household populations and SoVI census tracts, the Baton Rouge Capital Region and the Monroe metropolitan area have large concentrations of damage as well as areas with notably high levels of social vulnerability. In the Capital Region, there are a total of nine census tracts (8 in East Baton Rouge and 1 in Livingston) classified as having high levels of both damage and social vulnerability. Most of these census tracts are located within a five-mile area in a line along the I-12/Florida Boulevard corridor that runs between Baton Rouge and Denham Springs; however, there are two census tracts meeting these characteristics in northern Baton Rouge. Both are located south of the Baton Rouge Metropolitan Airport, one of which is in a neighborhood west of Howell Park and the other is located west of Airline Highway between the Airline Highway and I-110 and the Airline Highway and Prescott Road intersections.

In the Monroe metropolitan area, there are five total census tracts classified as having both high concentrations of rental household damage as well as high levels of social vulnerability. Three of these census tracts are within a three-mile area. These tracts run north and south along Highway 165 from south of the University of Louisiana Monroe at the intersection of Martin Luther King Jr. Drive (Highway 165) and DeSiard Street down to Richwood. The other two census tracts are outliers, but still within six miles of each other. One of the outliers is located between Glenwood Regional Medical Center and the Ouachita River. For reference, West Monroe High School is roughly the center point of this census tract. The second outlier is located north of the University of Louisiana Monroe. It is bounded by Sterlington Road (Highway 165) to the west, Chauvin Bayou to the south, and the winding Bayou DeSiard to the north, northeast, and east. The state will note these particular areas of interest as it conducts programmatic outreach and intake.

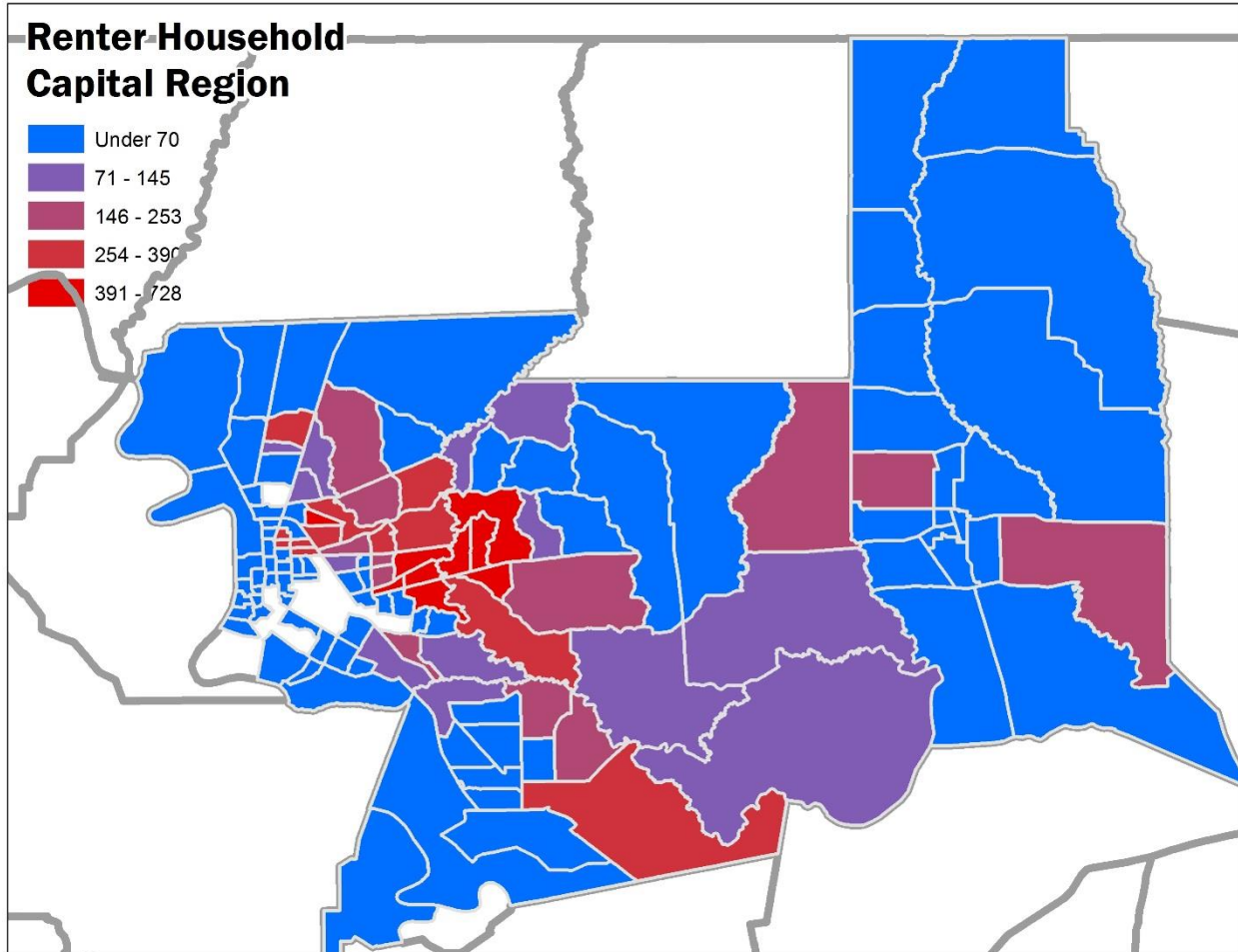


Renter Households with Damage (SoVI Designation)		
Disaster	SoVI (5-Class)	Households
4263	High	555
	Medium-High	2,343
	Medium	1,076
	Medium-Low	1,193
	Low	55
	Total	5,222
4277	High	659
	Medium-High	6,543
	Medium	6,973
	Medium-Low	8,066
	Low	1,009
	Total	23,250
Grand Total	28,472	

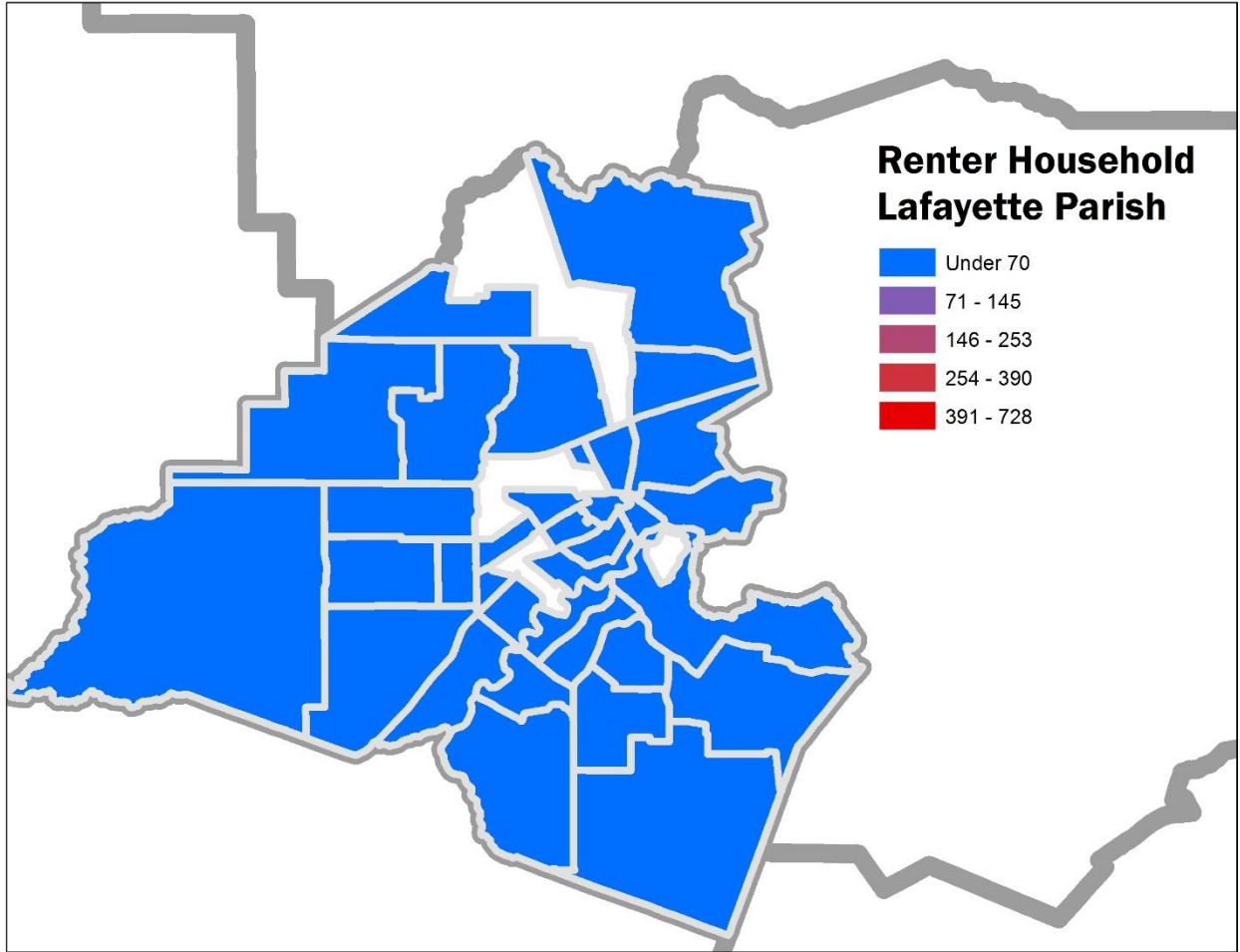
To drilldown on affected renter populations in the 10-parish most impacted area, the state has prepared the following detailed maps illustrating instances of renter household damages at the census tract level.

As the state conducts housing program intake, it will attempt to coordinate outreach efforts in accordance with locales with high-levels of documented damages.

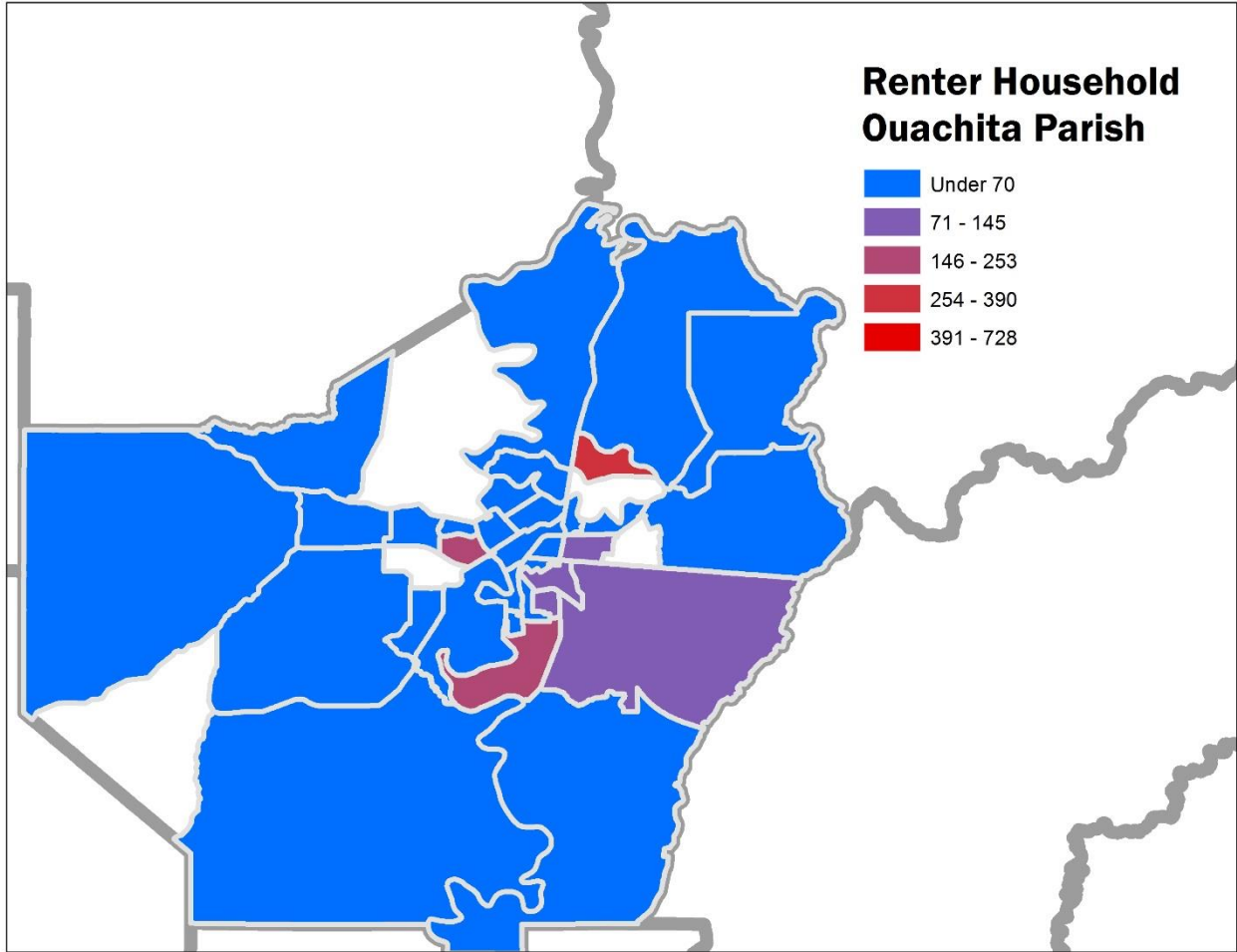
It is important to note 25,701 of the total 28,470 renter households with damage are located within the 10-parish most impacted area, representing more than 90 percent of the total.



Represents households with "major-low," "major-high" and "severe" levels of damage.



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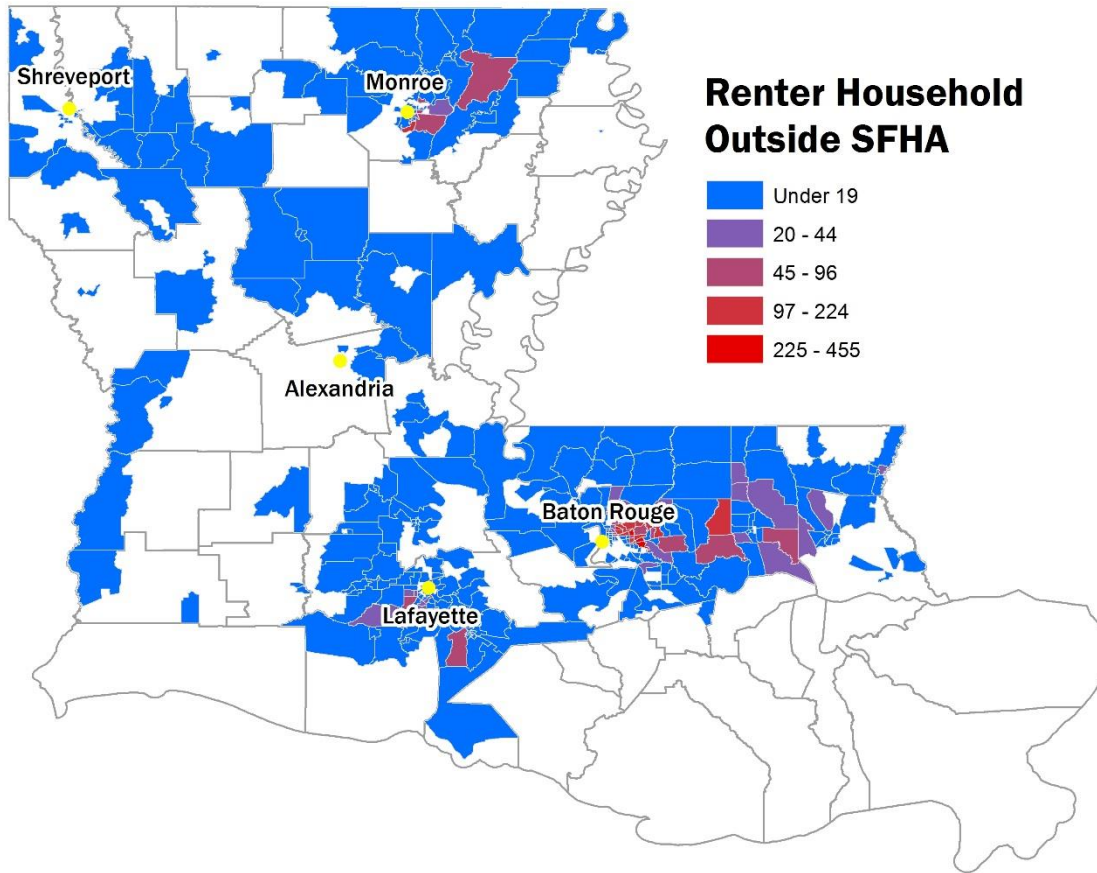


Represents households with "major-low," "major-high" and "severe" levels of damage.

Renter Households in 10 Most Impacted Parishes		
Disaster	Damage Category	Households
4263	Severe	214
	Major-High	968
	Major-Low	1,061
	Minor-High	697
	Minor-Low	1,087
	Total	4,027
4277	Severe	3,778
	Major-High	7,895
	Major-Low	5,801
	Minor-High	1,508
	Minor-Low	2,692
	Total	21,674
	Grand Total	25,701

Like the owner-occupied household population, an unusually high proportion of affected renter households were located outside of a Special Flood Hazard Area (SFHA). As such, while this may not inherently indicate exacerbated need for the renter population itself, it may indicate an enhanced need for landlords who may not have carried flood insurance. Furthermore, as has been discussed previously, there was a lack of affordable housing stock prior to the 2016 flooding events. The impacts described below have further exacerbated the need for an increase in affordable housing options across the state.

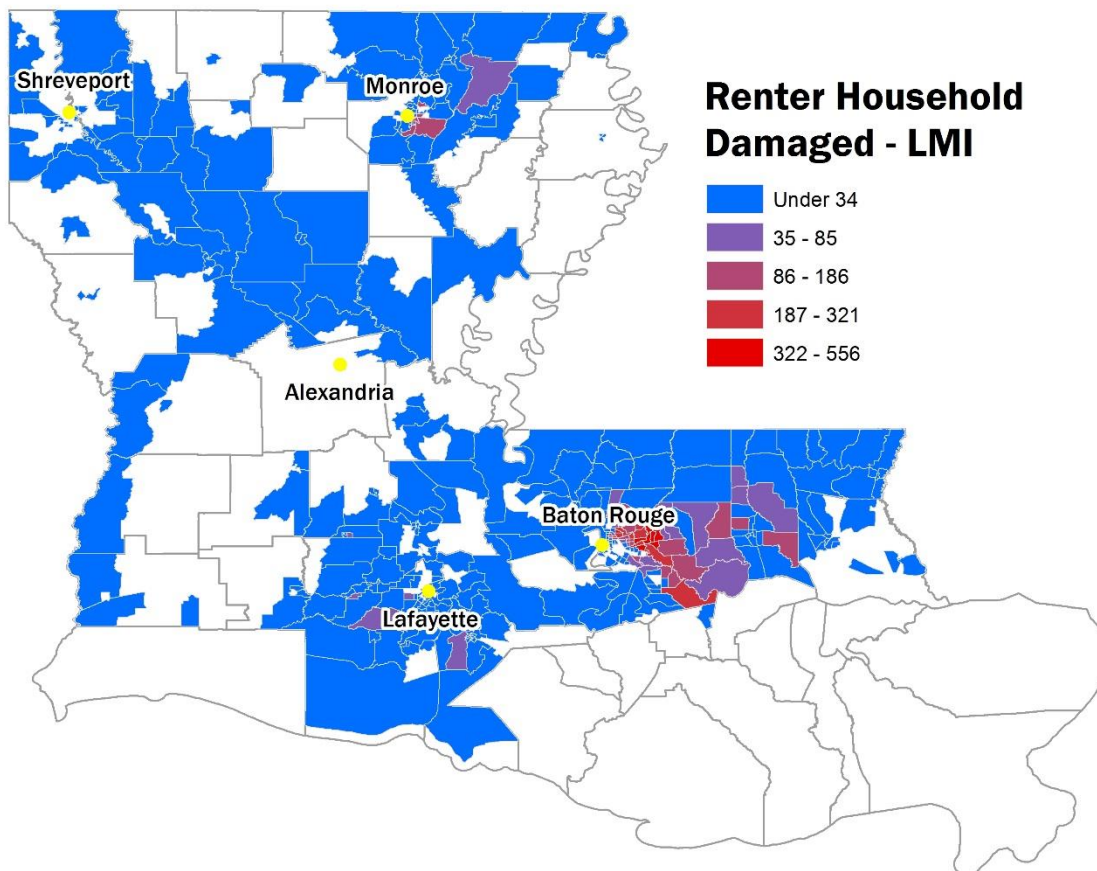
Specifically, 12,921 impacted renter households were located outside of the SFHA, representing more than 45 percent of the total affected renter household population.



Renter Households Outside SFHA		
Disaster	Damage Category	Households
4263	Severe	119
	Major-High	532
	Major-Low	619
	Minor-High	541
	Minor-Low	1,160
	Total	2,971
4277	Severe	940
	Major-High	2,802

Renter Households Outside SFHA		
Disaster	Damage Category	Households
	Major-Low	2,728
	Minor-High	1,148
	Minor-Low	2,332
	Total	9,950
	Grand Total	12,921

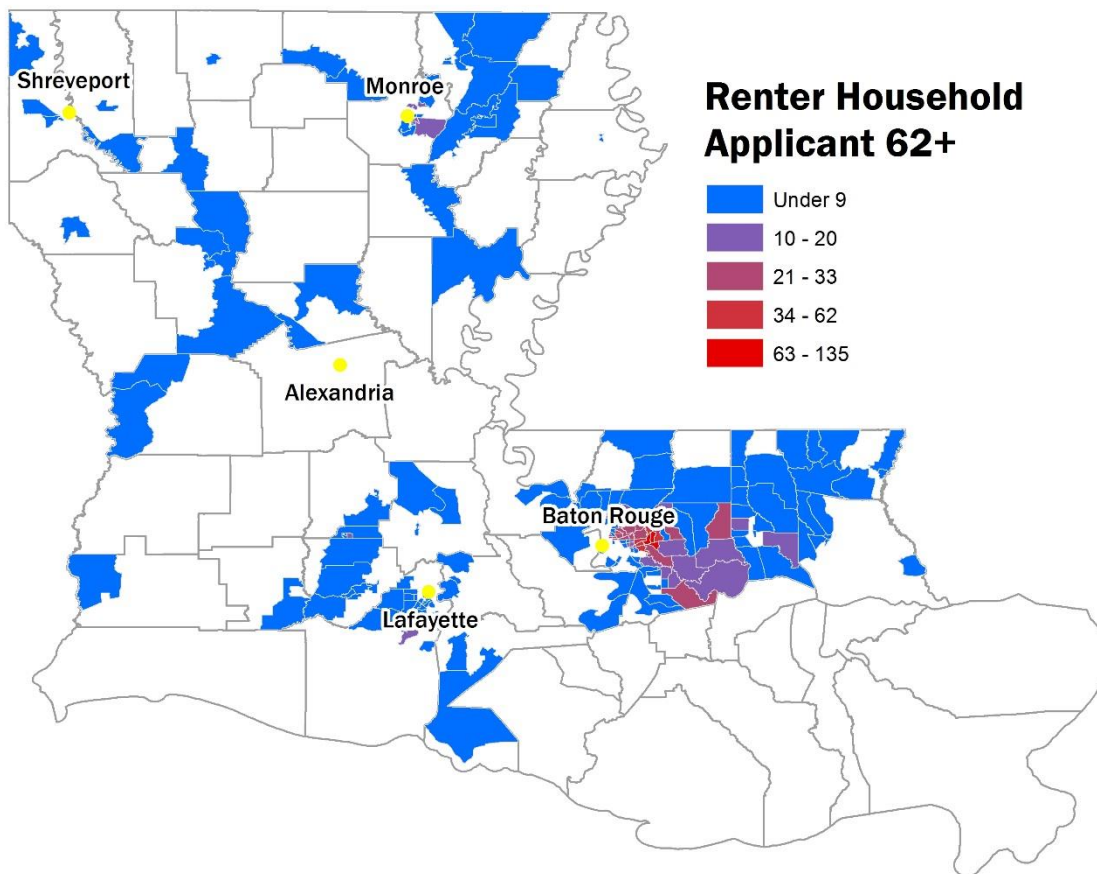
Per HUD requirements associated with this CDBG-DR allocation, the state must expend at least 70 percent of its allocation toward the benefit of LMI populations. 21,806 affected renter households are LMI, or more than 76 percent of the total affected renter population.



LMI Renter Households		
Disaster	Damage Category	Households
4263	Severe	205
	Major-High	916
	Major-Low	1,037
	Minor-High	737
	Minor-Low	1,350

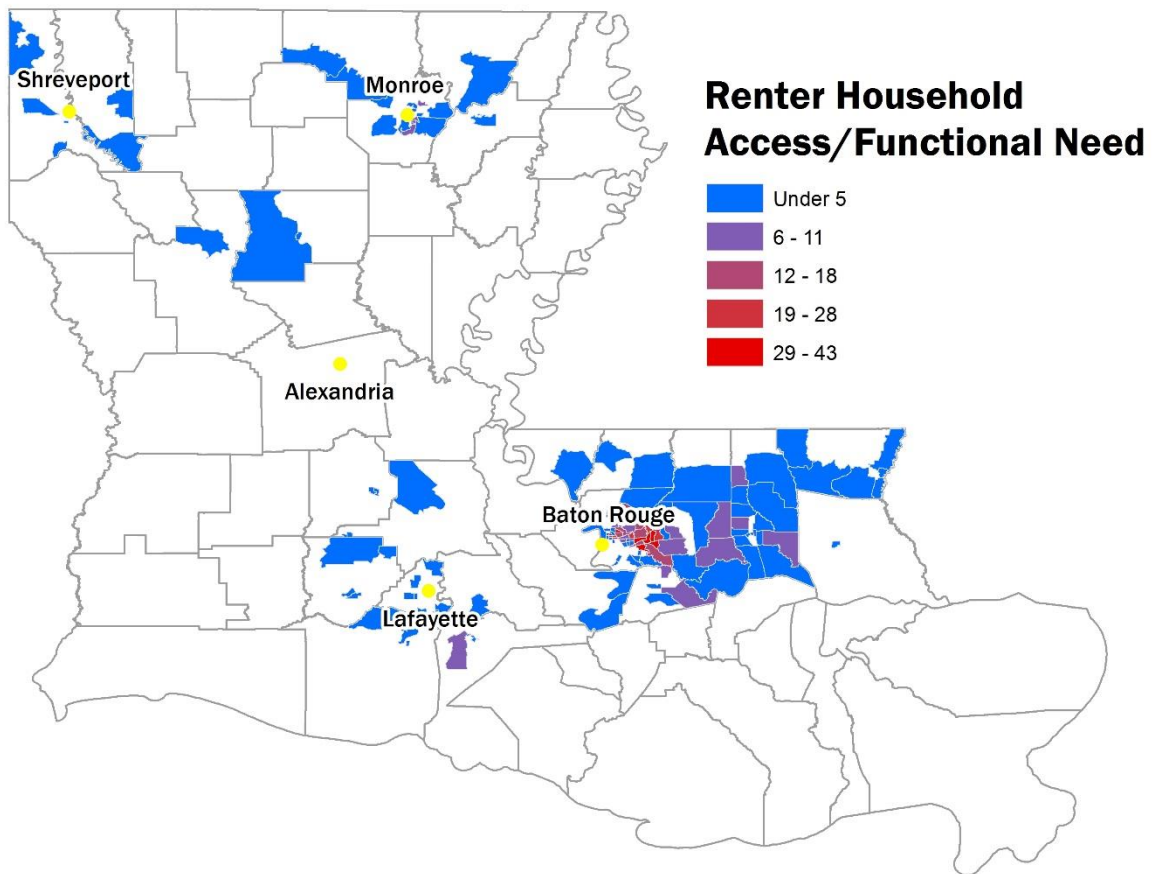
LMI Renter Households		
Disaster	Damage Category	Households
	Total	4,245
4277	Severe	2,850
	Major-High	5,822
	Major-Low	4,717
	Minor-High	1,441
	Minor-Low	2,731
	Total	17,561
	Grand Total	21,806

As the state prioritizes the expenditure of CDBG-DR resources that are dwarfed by the total anticipated unmet needs from DR-4263 and DR-4277, it may prioritize elderly households as it conducts program intake. There are at least 2,642 households with applicants aged 62 or older in the impacted renter population, accounting for the limitation that IA data only include date of birth for the applicant representing the entire household. Using this figure as a baseline, however, at least 9 percent of the affected renter household population has a member that is 62 or older.



Renter Households with Applicant Aged 62+		
Disaster	Damage Category	Households
4263	Severe	15
	Major-High	121
	Major-Low	130
	Minor-High	76
	Minor-Low	117
	Total	459
4277	Severe	265
	Major-High	951
	Major-Low	575
	Minor-High	146
	Minor-Low	246
	Total	2,183
	Grand Total	2,642

In addition to those elderly households, the state may also prioritize those populations with access and/or functional needs to prioritize how it will assist the affected population. There are 1,268 renter households with documented access and/or functional needs, representing more than 4 percent of the total impacted renter household population.



Renter Households with Access/Functional Needs		
Disaster	Damage Category	Households
4263	Severe	12
	Major-High	54
	Major-Low	57
	Minor-High	38
	Minor-Low	55
	Total	216
4277	Severe	197
	Major-High	407
	Major-Low	233
	Minor-High	70
	Minor-Low	145
	Total	1,052
Grand Total	1,268	

Impact on Public Housing Authorities

The Louisiana Housing Corporation (LHC), in conjunction with HUD’s New Orleans Field office, has remained in constant contact with Public Housing Authorities (PHAs) throughout the impacted area. In total, 13 of the state’s 102 PHAs reported some disaster impact, impacting 132 households and displacing 95 households. Additionally, 16 Housing Choice Voucher (HCV) properties were affected, impacting 864 households and displacing 850 households.

Public Housing Assessment (Statewide)			
	Public Housing	Housing Choice Vouchers	Total
Total Properties/PHAs	102	91	193
Units	19,988	54,357	74,345
Properties/PHAs Impacted	13	16	29
Households Impacted	132	864	996
Households Displaced	95	850	945

HUD’s New Orleans Field office provided an update relative to PHA damages and unmet needs on Jan. 17, 2017 (see table below). The state is committed to continued coordination with PHAs, particularly with respect to assessing the unmet repair and rebuilding needs not otherwise covered by insurance or FEMA. In addition, the state is committed to working with PHAs to develop and implement measures that will make their units more resilient in the wake of future storms. With an understanding that many of the individuals who reside in subsidized housing represent the most vulnerable residents of our state, it is of the utmost importance to ensure that impacted PHAs are provided the tools and resources they need to rebuild effectively and sustainably.

HA Name	Insurance Award	FEMA Award	CFP Reallocated Funds	Operating Funds Available	COCC Damages	Public Housing Damages	PH Relocation Costs	Additional Funds Needed	Months to Complete Mod
Eunice	\$0	\$0	\$162,263	\$750,000	\$0	\$2,297,500	\$34,000	\$1,419,237	24
New Iberia	\$0	\$0	\$0	\$0	\$0	\$213,380	\$0	\$213,380	
Rayne	\$0	\$0	\$0	\$75,000	\$0	\$75,000	\$2,000	\$2,000	5
Crowley	\$73,864	\$0	\$0	\$0	\$0	\$71,800	\$0	\$0	4
Ville Platte	\$0	\$77,000	\$0	\$0	\$0	\$56,000	\$1,619	\$0	3
Welsh	\$0	\$0	\$0	\$0	\$0	\$20	\$0	\$20	0
Lake Arthur	\$33,610	\$0	\$0	\$0	\$0	\$44,937	\$0	\$11,327	
Donaldsonville	\$0	\$0	\$26,858	\$0	\$0	\$203,000	\$0	\$176,142	60
Erath	\$455,027	\$0	\$0	\$0	\$0	\$406,903	\$0	\$0	5
Opelousas	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Denham Springs	\$2,900,000	\$0	\$0	\$0	\$265,000	\$4,770,000	\$0	\$2,135,000	15
Jennings	\$0	\$0	\$8,000	\$0	\$0	\$98,000	\$0	\$90,000	
Duson	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Totals	\$3,462,501	\$77,000	\$197,121	\$825,000	\$265,000	\$8,236,540	\$37,619	\$4,047,106	

Seven multifamily public housing developments reported damage attributable to DR-4263 or DR-4277. These facilities hold 619 total units, of which 300 were damaged. Two facilities, Livingston Manor and Charleston Oaks, suffered damage to all of their units, while a third development, Tangi Village, suffered damage to all but four units. Tangi Village, in particular, is notable as it was impacted by both disaster

events (DR-4263 and DR-4277). Also notable, Cypress Gardens tested positive for mold, and will need to be remediated. With the exception of Cypress Gardens, all units are expected to be back online by Q2 2017.

Multifamily Assessment (Statewide)			
	Total Units	Total Damaged	Percent Damaged
Bacmonila Gardens	150	35	23%
Tangi Village	96	92	96%
Livingston Manor	45	45	100%
St. Edwards Subdivision	98	38	39%
Charleston Oaks	30	30	100%
Cypress Gardens	100	4	4%
Shady Oaks	100	56	56%
Total	619	300	48%

The multi-family developments noted above are utilizing a number of funding sources to repair damaged units, including flood insurance, USDA Rural Development loans, and HOME (via LHC). LHC is working directly with the property management firms to determine where funding gaps exist and how to fill those gaps.

Impact on Homeless Populations

The Point-in-time count is an annual count of sheltered and unsheltered homeless persons on a single night conducted by Continuums of Care (CoC) across the United States. Louisiana has nine Continuums of Care, which are regional planning bodies that coordinate housing and services for homeless families and individuals. The list below provides the name of each CoC in the state, along with parishes and major cities included within each CoC (<http://www.dhh.louisiana.gov/assets/docs/OAAS/publications/regional-continuum-of-care-list.pdf>).

- **Lafayette/Acadiana CoC** - City of Lafayette, Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, St. Mary, Vermillion
- **Shreveport/Bossier/Northwest Louisiana CoC** - City of Shreveport, Bossier City, Bienville, Bossier, Caddo, Claiborne, DeSoto, Natchitoches, Red River, Sabine, Webster
- **New Orleans/Jefferson Parish CoC** - City of New Orleans, Orleans, Jefferson, St. John, St. Charles, St. James, Metairie
- **Baton Rouge CoC** - East Baton Rouge, Ascension, West Baton Rouge, East and West Feliciana, Iberville, Pointe Coupee
- **Monroe/Northeast Louisiana CoC** - City of Monroe, Caldwell, East and West Carroll, Franklin, Jackson, Lincoln, Madison, Morehouse, Ouachita, Richland, Tensas, Union
- **Alexandria/Central Louisiana CoC** - City of Alexandria, Avoyelles, Catahoula, Concordia, Grant, LaSalle, Rapides, Vernon, Winn
- **Houma-Terrebonne, Thibodaux CoC** - Lafourche, Terrebonne, Assumption
- **Louisiana Balance of State CoC** – Beauregard, Allen, Calcasieu, Jefferson Davis, Cameron, City of Lake Charles, Plaquemines, St. Bernard, Natchitoches, and Sabine

According to the June 2017, Point-in-Time count, a total of 3,268 people were counted as homeless, with 1,326 counted in emergency shelters, 967 in transitional housing and 975 unsheltered.

To understand the homeless population prior to flooding within IA parishes and the 10 most impacted parishes, this analysis counts CoCs that contain at least one IA or most impacted parish. Eight CoC's contain IA parishes, with a total of 1,470 people counted as homeless (496 in emergency shelters, 596 in transitional housing, and 378 unsheltered). Four CoCs contain the 10 most impacted parishes, with a total of 1,380 people counted as homeless (449 counted in emergency shelter, 596 in transitional housing, and 335 unsheltered). 45 percent of people counted as experiencing homelessness on Jan. 25, 2016 were within IA parishes, and 42 percent of the state's total people experiencing homelessness were within most impacted parishes.

2017 Point in Time Count			
Type of Shelter	State of Louisiana	Continuums of Care Containing IA Parishes	Continuums of Care Containing 10 Most Impacted Parishes
Emergency Sheltered	1,326	496	449
Transitional Housing	967	596	596
Unsheltered	975	378	335
Total Homeless Persons	3,268	1,470	1,380

Source: Department of Housing and Urban Development, CoC Housing Inventory Count Reports, 2016
<https://www.hudexchange.info/programs/coc/coc-housing-inventory-count-reports/>

To respond to DR-4263 and DR-4277, the LHC deployed staff of the Louisiana Housing Authority (LHA) into disaster shelters to assist with closing those shelters without leaving affected populations homeless. In response to the need of those who were pre-disaster homeless and precariously housed before the flooding events, LHC/LHA set up two different programs that can be expanded to meet the needs of other households that may find themselves in similar situations.

- **HOME TBRA** – LHC allocated \$500,000 of HOME funds to provide Tenant-Based Rental Assistance (TBRA). To be eligible for assistance, households must be elderly or disabled, 30 percent Area Median Income (AMI) or below and lack the financial resources to obtain the necessary housing. There are currently 63 households issued a voucher. In order to provide these households with a year of rental assistance and case management services, an additional \$481,436 in unmet need remains. There are 56 households currently on the waiting list for HOME TBRA. \$2,209,116 is the total budget to assist all 119 households with a year of rental assistance and case management services, or \$1,709,116 in unmet need. However, HOME TBRA allows up to two years of rental assistance, requiring a total budget of \$4,418,232, an unmet need gap of \$3,918,232.
- **Rapid Re-Housing** – LHC allocated \$320,000 of Emergency Solution Grant (ESG) funds to provide a Rapid Re-Housing (RRH) program for pre-disaster homeless and precariously housed flood survivors. All households must have income at or below 30 percent AMI. There are currently 55 households issued a voucher for rental assistance and 19 households on a waiting list. LHC will assist the 48 households with RRH for five months with the \$320,000 allocation. Due to the lack of long-term affordable rental units in the affected region, five months is an insufficient amount of time to provide assistance. LHC anticipates adding an additional \$200,000 from its FY2016 allocation to the RRH program. Even with the addition of these funds, there is still an unmet gap of \$1,332,000 to assist all 74 households for a 12-month period.

Daily phone calls and emails from flood impacted households that are now experiencing homelessness continue to occur. The households that have reached out to Disaster Case Management program are actively added to the waiting list. Other organizations assisting in flood recovery are also getting emails and phone calls. As of the end of May 2017, FEMA terminated assistance for TSA and there were 73 families still registered in hotels paid for with TSA assistance. The state has identified 37 of those households as being eligible for ongoing temporary lodging assistance based on their participation in the Disaster Case Management program and progress on their long-term housing plan. The state will continue working with these households to identify long-term housing solutions for these families; many of these families may be eligible for assistance under the CDBG-DR funded Rapid Rehousing or Permanent Supportive Housing programs. The remaining 36 households were either non-responsive to the outreach and options provided by the multi-agency Disaster Case Management effort or had a housing solution in place prior to the FEMA deadline. Households that are currently staying with family and friends are another population that are at risk of homelessness as are households that are living in flooded and moldy homes. As the living situations for these households become untenable, they will require alternate living arrangements and will be in need of rental assistance.

The state understands that the full impact of the storms on the pre-disaster homeless and precariously housed population will not be known for some time. Through the resources provided below, LHA is able to provide interim assistance as the long-term housing solutions are finalized. The state is committed to ensure that the needs of this population are met through the programs identified in Action Plan Amendment 1 and this action plan amendment.

Additionally, there have been impacts to service providers. The Salvation Army in Baton Rouge, one of the Capital Region's largest emergency shelters, flooded during DR-4277, taking on up to 7.5 feet of water. All clients and staff were relocated. As a result, currently 24 emergency shelter beds and 50 transitional housing units are offline. As the weather turns colder, more flood impacted households that are living in untenable environments, like cars and tents, are expected to seek warmer places to stay, exacerbating the need for safe housing options. With the Salvation Army rendered inoperable and unable to expand for freeze night capacity, the state is concerned substantial populations at risk of homelessness will remain unserved. The state has been working with East Baton Rouge Parish and the Salvation Army to potentially fund the unmet needs of the cost of repairs, currently estimated at \$1.25 million, through the Disaster Relief Fund, pending the project's approval by FEMA.

Focusing further on Baton Rouge, the City has surveyed some of the major homeless support agencies to determine their client's needs post-flooding. The Volunteers of America (VOA) and the Bishop Ott St. Vincent de Paul both strong demand for housing and homeless services.

St. Vincent de Paul (SVdP) reports that with the support of the Red Cross from 9/14/2016 – 12/13/2016, SVdP Bishop Ott Men's Shelters opened 37 extra beds for homeless men from the regular capacity of 51 to 87. SVdP served an average of 25 additional men served each night, an increase of over 50%. SVdP continued offering the extra shelter beds through December 2016 providing 2,290 extra, flood, shelter nights for men from September 14th through December 31st, 2016. During the closing of the Red Cross Shelter at Celtic Center, SVdP housed a family of eleven along with shelter for approximately 30 single men. During the flood and initial recovery months, SVdP provided over 4,000 meals at flood recovery sites and neighborhoods to over 2,700 hundred people.

SVdP Homeless Services served 1,590 homeless men, women and children in 2016. Staff reported that, of the number of new unique persons entering the shelter post-flood in 2016, between 20 – 50 percent of the extra beds are filled with first-time homeless clients. While SVdP expanded its capacity to serve

post flood, homeless men, the SVdP shelter for women and children was restricted by space from expanding to meet the post flood needs of this vulnerable population. As a result, SVdP referred to other resources, those women and children needing shelter. The Sweet Dreams shelter operated at over 100% capacity from the flood through December 31, 2016.

On March 27, 2017, SVdP broke ground on its Sweet Dreams Shelter Expansion. This expansion of nine family rooms serving approximately 36 additional homeless family members is funded through private grant and individual donations. SVdP needs funding to manage these expanded shelter beds, increase the number of case managers and support services needed to help the vulnerable homeless in accessing housing and navigating the complex post-flood housing programs and resources. This expansion shelter is scheduled to open before the end of the year.

While the City has made great progress in reducing the number of homeless persons over the past 10 years, the flood has brought those numbers back to where they were in 2015. Additional shelter beds and extended shelter stays are required because of the impact of the flood on pre-flood, precariously housed residents, the shortage of housing, the increase in rental costs, and the reduction and termination of FEMA, HUD, and Red Cross emergency services. All agencies reported the need for funding to increase shelter beds, increase the number of case managers and support services needed to help the vulnerable homeless in accessing housing and navigating the complex post-flood housing programs and resources. During the East Baton Rouge Metro Council meeting in December 2016, the Council approved the allocation of approximately \$1 million of its CDBG-DR funding to provide funding to homeless agencies to support the homeless. As of the date of this document, decisions regarding the specific uses of the allocated funding have not yet been made. The state is currently working closely with East Baton Rouge Parish to develop the final homelessness support program and will provide additional details as they become available.

The state is committed to providing temporary housing solutions and, wherever possible, permanent housing to households that are homeless or at-risk of homelessness. Recognizing that, while a temporary housing solution may meet an immediate need, the ultimate goal is to find permanent housing solutions for individuals and families that are currently homeless or at-risk of homelessness. FEMA made the determination to end TSA support, effective May 31, 2017. In response, the state identified temporary emergency resources from the Louisiana Housing Corporation to transitionally fund temporary lodging expenses for the families still participating actively with TSA and the Disaster Case Management program. As of the beginning of June 2017, 32 families remained in TSA. Through Action Plan Amendment 2, the state expanded the Rapid Rehousing program to continue to provide temporary lodging assistance until the remaining TSA families transition to long-term housing solutions, either through the longer-term Rapid Rehousing program assistance, Permanent Supportive Housing program or the Restore Louisiana Homeowner Program.

3. Unmet Housing Needs

In discussing a full scope of unmet housing needs, it is imperative to understand other resources that have and will be expended, and where those resources have been and will be geographically deployed. To this effect, as of June 6, 2017, SBA has approved \$702,524,500 in real estate structural loans.

Real Estate Structural Loans Approved by SBA (as of 6/06/17)

Disaster	Parish	Approved Structural Loan Amount	Number of Approved Loans
4263	Allen	\$135,300	3
	Ascension	\$18,000	2
	Avoyelles	\$64,300	2
	Beauregard	\$495,700	14
	Bienville	\$368,600	14
	Bossier	\$2,296,000	89
	Caddo	\$1,711,900	70
	Calcasieu	\$2,305,400	51
	Caldwell	\$696,400	21
	Catahoula	\$22,200	3
	Claiborne	\$480,200	10
	De Soto	\$297,200	8
	East Carroll	\$68,300	2
	Franklin	\$43,000	3
	Grant	\$700,100	25
	Jackson	\$72,300	2
	La Salle	\$328,300	8
	Lincoln	\$129,800	6
	Livingston	\$864,300	29
	Madison	\$5,600	1
	Morehouse	\$2,314,300	73
	Natchitoches	\$2,402,400	58
	Ouachita	\$21,979,300	568
	Rapides	\$519,600	12
	Red River	\$34,800	2
	Richland	\$685,100	26
	Sabine	\$215,700	8
	St. Helena	\$0	0
	St. Tammany	\$5,175,300	144
	Tangipahoa	\$3,760,100	134
	Union	\$1,831,400	48
Vernon	\$2,525,200	42	
Washington	\$2,876,100	87	
Webster	\$3,175,400	78	
West Carroll	\$404,400	19	
Winn	\$945,200	16	
	Total	\$59,947,200	1,678
4277	Acadia	\$3,623,100	110
	Ascension	\$75,575,000	1,525

	Avoyelles	\$291,400	10
	Calcasieu	\$0	0
	Cameron	\$0	0
	East Baton Rouge	\$291,551,000	5,990
	East Feliciana	\$1,679,500	42
	Evangeline	\$1,015,600	30
	Iberia	\$1,881,100	67
	Iberville	\$1,003,200	30
	Jefferson Davis	\$921,200	27
	Lafayette	\$34,558,700	787
	Livingston	\$196,958,600	3,726
	Pointe Coupee	\$684,400	24
	Rapides	\$0	0
	St. Helena	\$1,264,400	44
	St. James	\$231,700	9
	St. Landry	\$2,667,500	70
	St. Martin	\$3,988,000	104
	St. Mary	\$0	0
	St. Tammany	\$249,200	11
	Tangipahoa	\$16,321,100	385
	Vermilion	\$7,329,400	184
	Washington	\$241,700	10
	West Baton Rouge	\$107,600	3
	West Feliciana	\$433,900	14
	Total	\$642,577,300	13,202
	Grand Total	\$702,524,500	14,880

Additionally, FEMA has provided housing assistance to eligible households through the IA program. As of Nov. 22, 2016, FEMA had approved \$651,261,396 in housing assistance through the IA program.

IA Housing Assistance Approved (as of 11/22/16)	
Disaster	Total Approved
DR-4263	\$ 72,992,887
DR-4277	\$ 578,268,509
Total	\$ 651,261,396

As previously presented, to calculate anticipated unmet needs for the owner-occupied household population, this analysis defers to HUD’s methodology described in the Federal Register Notice (FRN) for these two disaster events. Under this methodology, for each household determined to have unmet housing needs, their estimated average unmet housing need less assumed assistance from FEMA, SBA, and Insurance was calculated at \$27,455 for major damage (low); \$45,688 for major damage (high); and \$59,493 for severe damage. Therefore, as this methodology already contemplates unmet needs

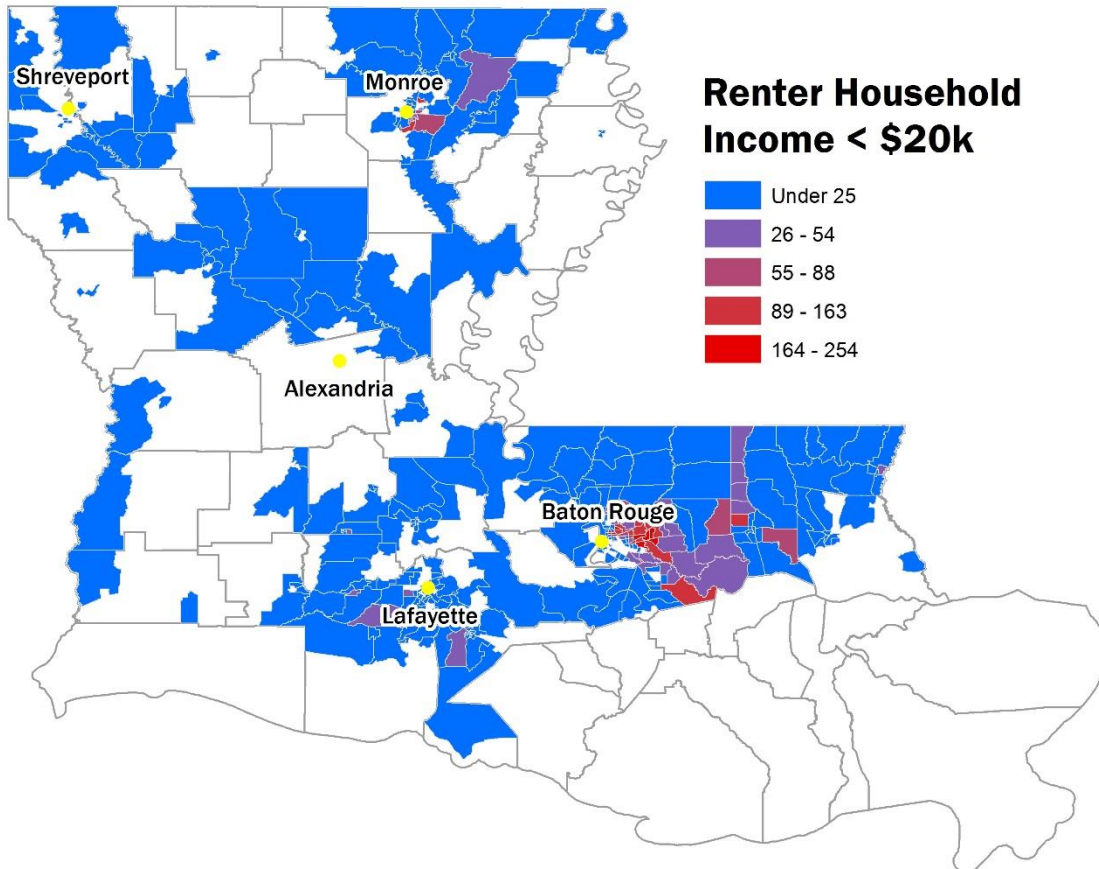
accounting for other forms of assistance, this analysis does not incorporate resources deployed by FEMA, SBA or NFIP. Data are not currently available respective to estimated needs at the minor-high and minor-low categories. While the state is currently relying on the best available data from federal agencies for this information, ultimately the assessment of the homeowner unmet needs will be updated once the program has conducted application intake and a statistically significant data set is available to determine average unmet needs faced by different homeowner populations. The program survey launched in April 2017 and the pilot application phase launched in May 2017.

Owner-Occupied Households Unmet Need Calculation			
Disaster	Damage Category	Households	Estimated Needs
4263	Severe	675	\$ 40,157,775
	Major-High	2,276	\$ 103,985,888
	Major-Low	3,979	\$ 109,243,445
	Minor-High	1,503	\$ -
	Minor-Low	8,029	\$ -
	Total	16,462	\$ 253,387,108
4277	Severe	11,249	\$ 669,236,757
	Major-High	24,270	\$ 1,108,847,760
	Major-Low	15,182	\$ 416,821,810
	Minor-High	3,849	\$ -
	Minor-Low	13,830	\$ -
	Total	68,380	\$ 2,194,906,327
	Grand Total	84,842	\$ 2,448,293,435

Additionally, the FRN methodology contemplates unmet needs for rental housing units occupied by households with incomes less than \$20,000. As outlined in the map and table below, there are 13,721 such households impacted by DR-4263 or DR-4277, with high concentrations of these populations located in the Monroe and Baton Rouge metropolitan areas. However, the FRN methodology does not contemplate a specific dollar amount for these unmet rental needs. Therefore, in the Initial Action Plan, the state used the best available data from the Disaster Housing Task Force, a task force that includes representatives from the Louisiana Housing Corporation, HUD, FEMA and other state, federal and local partners. According to this task force, the average unmet need to repair a rental unit is \$17,000.

The state has updated its analysis to include an average cost of unmet need per rental unit to include data received from the SBA on businesses listed under NAICS code 531110 (lessors of residential buildings and dwellers). Using aggregated and average information on SBA verified real estate loss for rental properties (\$24,255), multiplying that average loss by the number of rental housing units with a FEMA verified loss (28,470), the total loss and need for rental repair is estimated to be \$690,539,850. When the state subtracts the total actual amount of funding approved by SBA for real estate assistance to residential landlords (\$59,405,400), there is an estimated unmet need of \$631,134,450, or an average of \$22,168 per unit. This estimate does not include a deduction for assumed proceeds from NFIP or private flood insurance. Using updated data on SBA loan closings, the state has updated the estimated unmet needs of rental repair units from \$18,570 per unit to \$22,168. Using this revised average unmet need to repair a rental unit (\$22,168) and multiplying it by the population identified and contemplated through the FRN (13,721), the total unmet rental repair need for the March and August 2016 flooding events is estimated to be \$304,167,128.

In May 2017, the state opened the application period for landlords and developers of residential rental properties to apply for repair or reconstruction assistance for their flood damaged properties. At the time of the creation of this action plan amendment, the application period was still open and the state is not able to present statistically significant information on the unmet needs identified from the application process.



Renter Households Income <\$20k		
Disaster	Damage Category	Households
4263	Severe	128
	Major-High	619
	Major-Low	737
	Minor-High	566
	Minor-Low	1,074
	Total	3,124
4277	Severe	1,397
	Major-High	3,238
	Major-Low	2,999
	Minor-High	975
	Minor-Low	1,988
	Total	10,597

Renter Households Income <\$20k		
Disaster	Damage Category	Households
	Grand Total	13,721

This analysis estimates a rental and owner housing unmet need of \$2,752,460,563. Given the unique attributes of these two disasters (low rates of affected populations with flood insurance, high rates of affected populations located outside the SFHA), it is reasonable to view this unmet need estimation as a floor, rather than a ceiling. Additionally, over time, and as more detailed information becomes available, the state will continue to work with various stakeholder groups, affected populations and HUD itself to further refine this estimate.

Housing Unmet Needs Summary		
Category	Amount	Relative Percentage of Unmet Housing Need
Owner-occupied	\$ 2,448,293,435	88.8%
Renter	\$ 304,167,128	11.0%
Homeless Assistance and Prevention	\$ 5,250,232	0.2%
Total	\$ 2,757,710,795	100%

C. Economic Impact & Needs

1. Statewide Economic Damage & Loss Assessment

Immediately following the August event, the Louisiana Department of Economic Development (LED) partnered with Louisiana State University (LSU) to conduct an assessment of economic damages resulting from the DR-4277 flooding event. Key details are:

- At the peak of the August event, 19,900 Louisiana businesses or roughly 20 percent of all Louisiana businesses were disrupted by the flooding event. FEMA has since referred approximately 22,000 businesses to SBA for recovery assistance.
- A disruption of 278,500 workers or 14 percent of the Louisiana workforce occurred at the peak of the flooding event.
- An economic loss estimated at roughly \$300 million in labor productivity and \$836 million in terms of value added during the period immediately surrounding the flood.
- Approximately 6,000 businesses experienced flooding.
- The LSU Ag Center estimates Louisiana agricultural losses of over \$110 million.

Throughout the event, severe weather, flooding and resources redirected to response efforts led to business interruption losses across the region. To characterize those losses, LED and LSU estimated the percent of businesses closed each day based on the extent of flooding drawn from the Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP) and FEMA flood maps as well as the duration of the flooding based on flood level exceedances from USGS streamgages along rivers and bayous across the impacted area. However, closures extended beyond those businesses directly impacted by flooding due to road closures and the severe weather that disrupted travel for both employees and

customers. To assess these broader disruptions, LED and LSU reviewed situation reports from the GOHSEP, school closures and government closures.

These estimated industry closures were then adjusted by industry sector to account for the fact that some sectors were closed entirely while other sectors (e.g. large manufacturing facilities) generally continued to operate at normal, or close to normal capacity. To characterize these business interruption losses, LED and LSU estimated the number of businesses and employees impacted each day as well as the lost worker productivity, measured in terms of wages. While a number of these employees receive pay even if they were not working, the worker’s productivity is lost to the employer – thus creating losses to the region.

Of the most impacted parishes, East Baton Rouge and Livingston had the greatest impacts. Livingston, specifically, was acutely impacted with peak impacts in that parish occurring later in the event, as floodwaters continued to rise and also receded more slowly in some areas. Livingston was also most acutely impacted with a large majority of businesses disrupted to some degree, and more than half of businesses potentially flooded. The severity of flooding creates a greater risk of long-term closure, which can lead to business failure and long-term negative impacts to the region’s economy.

Peak Disruption by Parish (DR-4277)		
Parish	Businesses	Employees
East Baton Rouge	8,000	143,700
Lafayette	3,100	40,000
Livingston	1,800	18,700
Tangipahoa	1,500	17,000
Ascension	1,200	17,100
St. Tammany	900	8,000
Iberia	600	8,200
St. Landry	600	6,300
Acadia	400	3,900
Vermilion	400	3,700
St. Martin	400	3,100
Jefferson Davis	300	2,200
Evangeline	200	1,500
Iberville	100	2,000
Avoyelles	100	1,200
East Feliciana	100	800
Pointe Coupee	100	400
Washington	<100	300
St. Helena	<100	200
West Feliciana	<100	200
Total	19,900	278,500

Business & Wage Losses

As flooding impacted different areas at different times, the peak number of businesses and employees impacted by DR-4277 is larger than was seen at any specific point in time. In total, approximately 19,900 businesses in Louisiana experienced temporary closures, or significant operational reductions. These businesses employ approximately 278,500 workers. While many employers may have continued paying employees during closures, some hourly workers may have experienced reduced pay. LED and LSU

estimated that 45,000 to 75,000 of these employees work at businesses that experienced flooding and periods without pay, or with reduced pay. At this time, the State does not have access to comparable loss data for DR-4263.

Lost Productivity and Value Added (DR-4277)		
Parish	Lost Labor Productivity	Lost Value-Added
East Baton Rouge	\$ 213,000,000	\$ 540,200,000
Livingston	\$ 27,000,000	\$ 97,800,000
Ascension	\$ 24,900,000	\$ 68,500,000
Tangipahoa	\$ 17,400,000	\$ 62,200,000
Lafayette	\$ 8,600,000	\$ 31,100,000
St. Tammany	\$ 2,900,000	\$ 8,400,000
Iberia	\$ 1,800,000	\$ 8,000,000
Iberville	\$ 1,100,000	\$ 2,900,000
St. Landry	\$ 1,000,000	\$ 3,300,000
Vermilion	\$ 700,000	\$ 2,700,000
Acadia	\$ 600,000	\$ 2,400,000
St. Martin	\$ 500,000	\$ 2,500,000
Avoyelles	\$ 400,000	\$ 1,600,000
Jefferson Davis	\$ 300,000	\$ 1,700,000
East Feliciana	\$ 300,000	\$ 900,000
Evangeline	\$ 200,000	\$ 900,000
Pointe Coupee	\$ 100,000	\$ 500,000
Washington	\$ 100,000	\$ 400,000
St. Helena	\$ 100,000	\$ 200,000
West Feliciana	\$ 100,000	\$ 200,000
Total	\$ 300,900,000	\$ 836,400,000

Total regional impacts attributable to lost labor productivity and lost value-added were compiled for the first three weeks of the event, providing a rough picture of the gross negative impacts of disruptions to the area. Lost labor productivity is estimated to be \$300 million and lost value-added is estimated to be \$836 million. During the three-week period measured, this represented approximately 6 percent of all economic activity in the state.

To estimate damage to businesses, LED and LSU relied on GOHSEP flood maps and FEMA flood maps, as well as flood maps published by parishes in the flooded area. Researchers then overlaid infoUSA point level data on business locations for the impacted parishes to estimate the extent of business flooding in each parish. The total number of businesses estimated to have flooded is 6,100 across the 20 parish area. It is worth noting that 60 percent of businesses in Livingston parish are estimated to have experienced some flooding and 19 percent of those in Ascension as well as 15 percent of those in East Baton Rouge, the parish with by far the largest overall number of businesses in the impacted area.

Data from the Bureau of Economic Analysis were used to estimate the value of business structures and equipment based on the size of employer and industry. LED and LSU estimated damage to business structures totaled \$595.6 million and damage to fixed equipment will add another \$262.8 million to business losses.

Many businesses experiencing flooding lost substantial inventories, which were estimated based on the sales of impacted businesses and data from the Bureau of Economic Analysis that relate average inventories to sales for businesses in manufacturing, wholesale trade and retail trade. LED and LSU estimated a total of \$1.4 billion in inventory damaged by DR-4277 flooding. This figure represents an average of over \$200,000 in inventory for each flooded business. While many impacted businesses were likely smaller businesses that would have significantly lower inventories, a relatively small number of large wholesalers and retailers with substantial inventories can heavily skew the average relative to the typical loss. For example, the Dixie RV Superstore, a recreational vehicle dealership in Hammond estimated as much as \$30 million in damage attributable to a large portion of their vehicular inventory being flooded. Similarly, stores like the Walmart and Home Depot in Denham Springs flooded and would have lost inventory values much higher than what is typical across the 6,000 businesses that flooded.

Agricultural Losses

In response to DR-4263 and DR-4277, Kurt M. Guidry of the LSU AgCenter conducted impact estimates on Louisiana’s agriculture sector. Following DR-4263, 24 parishes reported agribusiness impacts totaling an estimated loss of \$80 million. The March 2016 flood event occurred at the beginning of the year’s planting season, impacting pasture and livestock infrastructure, causing livestock deaths and requiring extensive replanting of crops. Extensive rainfall after the event further exacerbated crop problems, delaying replanting past normal planting windows and reducing crop yields.

The LSU AgCenter and Farm Service Agency surveyed damages specific to DR-4263. The table below provides details on the acreage impacted by crop. Overall, almost 90,000 acres of crops were impacted by the flooding event.

DR-4263 Crops Impacted	
Crop	Acres Impacted
Corn	7,545
Cotton	7,960
Soybeans	18,000
Pasture	52,200
Rice	2,000
Sorghum	2,000
Total	89,705

Following DR-4277, the LSU AgCenter estimated impacts to the agricultural sector to exceed \$110 million. This estimate is conservative, as it only included selected commodities including rice, soybeans, sugarcane, sweet potatoes, fruits and vegetables, corn, sorghum, cotton and lost grazing days for livestock. The economic estimates used acreage, historic yields and pricing data to predict yield loss resulting from DR-4277.

Estimated Agricultural Losses		
Crop	DR-4263	DR-4277
Corn	\$43,454,125	\$10,901,631
Soybeans	\$25,182,504	\$46,754,976
Cotton	\$117,077	\$3,695,816
Sorghum	\$251,771	\$417,931
Rice	\$7,240,111	\$33,624,629
Sweet Potatoes	\$401,200	\$4,465,247

Estimated Agricultural Losses		
Crop	DR-4263	DR-4277
Wheat	\$3,638,397	N/A
Sugarcane	N/A	\$3,203,320
Grazing	N/A	\$1,973,528
Fruits/Vegetables	N/A	\$5,206,991
Total	\$80,285,185	\$110,244,069

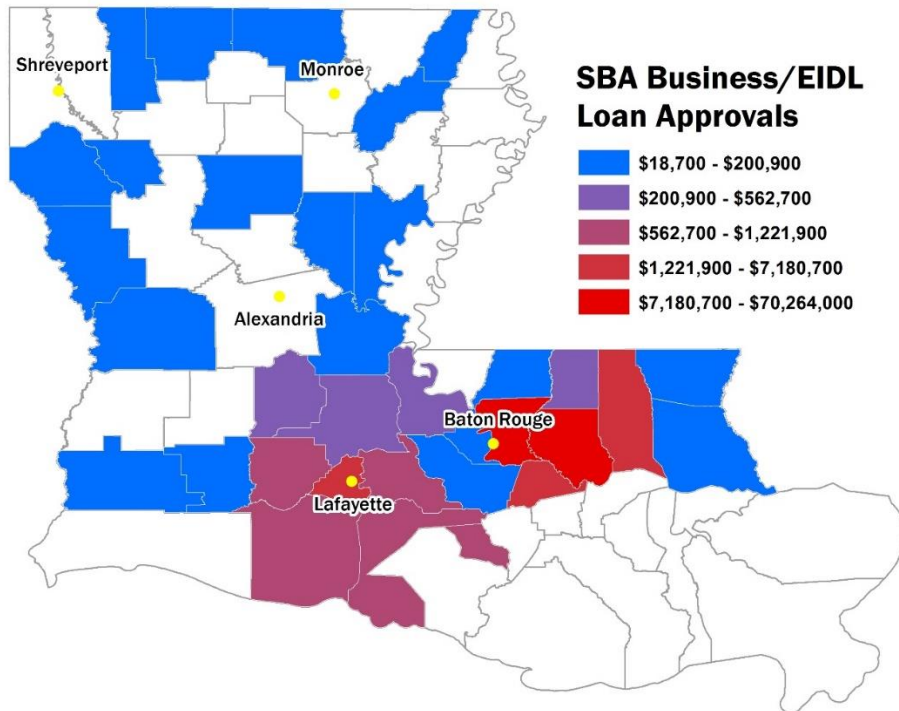
OCD-DRU is working with the LSU AgCenter and its partners to gain a clearer understanding of impacts and unmet needs across Louisiana’s agriculture sector. To that end, information is being collected relative to crop loss insurance policies, the Non-insured Crop Disaster Assistance Program (NAP) and any payments made to livestock, aquaculture, bee keepers and others under permanent disaster assistance programs. A coordination of efforts and sharing of information amongst USDA’ Risk Management Agency, the Farm Service Agency, and LSU AgCenter will enable OCD-DRU to assess the impacts of DR-4263 and DR-4277 and accurately target recovery funds to address the greatest needs.

Combined Losses

Economic Loss Summary	
Category	Loss Estimate
Agriculture (DR-4277)	110,200,000
Agriculture (DR-4263)	\$ 80,285,185
Business Structures	\$ 595,600,000
Business Equipment	\$ 262,800,000
Business Inventories	\$1,425,500,000
Business Interruption Loss	\$ 836,400,000
Total	\$3,310,829,254

2. Unmet Economic Needs

As with housing, in discussing a full scope of unmet economic needs, it is imperative to understand other resources that have and will be expended, and where those resources have been and will be geographically deployed. To this effect, as of May 26, 2017, SBA had approved \$176,333,300 in Business and Economic Injury Disaster Loans (EIDL) to affected populations from DR-4263 and DR-4277. Highest concentrations of these approvals have been in the Baton Rouge Capital Region and in the metropolitan Lafayette region. In addition, OCD-DRU is working to gather data relative to private insurance claims in order to more accurately identify the remaining unmet needs of the business community.



SBA Business / EIDL Loans (as of 05/26/2017)			
Disaster	Parish	Approved Loan Amount	Number of Approved Loans
4263	Ascension	\$39,700	2
	Beauregard	\$39,000	1
	Bienville	\$25,000	1
	Bossier	\$268,100	7
	Caddo	\$537,100	11
	Caldwell	\$79,400	3
	Catahoula	\$14,300	1
	Grant	\$727,100	2
	Lincoln	\$91,000	3
	Livingston	\$25,400	1
	Morehouse	\$1,240,600	13
	Natchitoches	\$462,000	8
	Ouachita	\$8,022,500	84
	Rapides	\$100,700	3
	Red River	\$115,300	1
	Richland	\$101,400	3
	St. Tammany	\$1,903,100	13
	Tangipahoa	\$656,300	14
	Union	\$242,800	6

	Vernon	\$201,300	4
	Washington	\$429,900	13
	Webster	\$552,900	6
	West Carroll	\$54,000	2
	Winn	\$424,800	3
	Total	\$16,353,700	205
4277	Acadia	\$959,800	22
	Ascension	\$7,921,100	113
	Avoyelles	\$18,700	1
	Calcasieu	\$37,000	2
	East Baton Rouge	\$86,665,800	829
	East Feliciana	\$284,300	6
	Evangeline	\$276,300	5
	Iberia	\$920,900	17
	Iberville	\$76,000	2
	Jefferson Davis	\$501,100	6
	La Salle	\$24,200	1
	Lafayette	\$6,806,800	103
	Livingston	\$45,511,900	390
	Pointe Coupee	\$751,300	9
	St. Helena	\$393,800	5
	St. Landry	\$613,300	10
	St. Martin	\$2,185,000	17
	Tangipahoa	\$5,174,400	56
	Vermilion	\$745,100	16
	Washington	\$34,300	2
	West Baton Rouge	\$78,500	2
	Total	\$159,979,600	1614
	Grand Total	\$176,333,300	1819

Accounting for resources disbursed through SBA loans, this analysis estimates an unmet economic need of \$3,134,495,954. Note, this analysis contemplates that a portion of these needs may have been mitigated by resources disbursed through NFIP. These resources are discussed in the subsequent section outlining the state’s total unmet need calculation.

Economic Unmet Need Summary	
Category	Amount
Agricultural Losses	\$ 190,529,254
Business Losses	\$ 3,120,300,000
SBA Loans	\$ (176,333,300)
Total	\$ 3,134,495,954

D. Infrastructure Impact & Needs

1. Statewide Infrastructure Damage & Loss Assessment

Infrastructure Systems affected by DR-4263 and DR-4277 included damage and disruptions to levees, roadways and bridges (especially rural roadways), culverts, utilities, wastewater treatment systems, drinking water treatment and collection systems. Across Louisiana, flood basins were overwhelmed by record-breaking or near record-breaking rainfall. In some of the coastal parishes, the runoff of rain was compounded by southern winds that elevated tidal basins and thus inhibited drainage runoff.

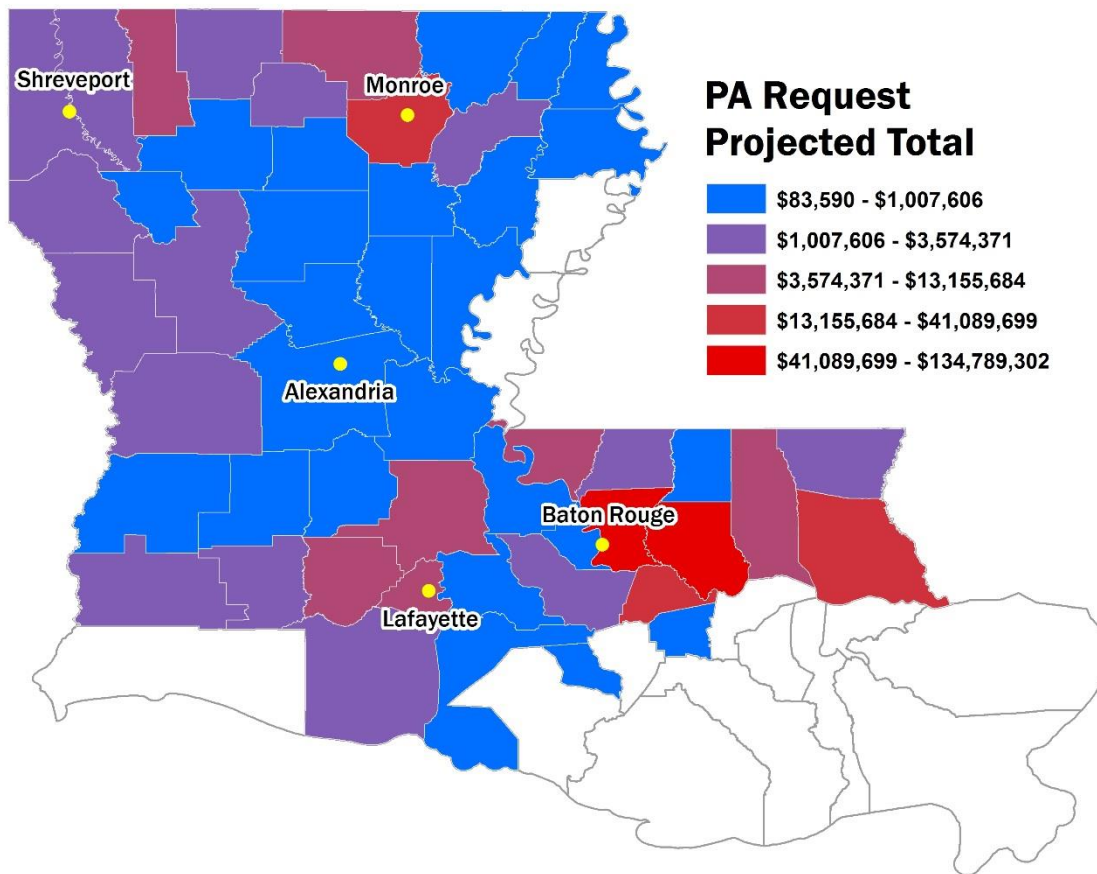
Damages to roadways and bridges inflicted the most significant damages. Impacts to Interstates 10, 49, and 20 rendered vehicle traffic into and out of Louisiana impossible for multiple days during the height of each flooding event. During and in the aftermath of DR-4263, the Red River was rendered unnavigable for several days. Multiple railways across the state were unable to safely pass cargo due to elevated flood waters. In addition, data showed indications of stress and wear on many urban drainage systems.

2. Unmet Infrastructure and FEMA Match Needs

FEMA Public Assistance

The FEMA Public Assistance (PA) Program is designed to provide immediate assistance to the impacted jurisdictions for emergency work and permanent work on infrastructure and community facilities. For DR-4263, the state's obligation has been established as not less than 25 percent of eligible project costs. For DR-4277, the state's obligation has been established as not less than 10 percent of eligible project costs.

As of June 5, 2017, \$78,583,829 has been identified in PA need for DR-4263 and \$388,711,981 has been identified for DR-4277. GOHSEP estimates these totals to rise to \$123,866,667 for DR-4263 and reduce to \$703,333,333 for DR-4277. Based on these data, the current unmet need for obligated projects is estimated to be \$19,645,957 for DR-4263 and \$38,871,198 for DR-4277. Long term, based on GOHSEP's projections, the state estimates this unmet need to grow to \$30,966,667 for DR-4263 and \$70,333,333 for DR-4277, respectively, for a grand total of \$101,300,000. The PA match unmet needs provided by GOHSEP and calculated by OCD-DRU are estimates at this time, based on current best available data and an understanding of the match needs. However, the state will work with GOHSEP, local governments, non-profit organizations and other entities eligible for FEMA PA to gather additional information related to needs as projects are reviewed and approved through the Project Worksheet process. The state will be able to update and identify the actual unmet needs related to the FEMA PA match once the CDBG-DR-funded FEMA PA Match program is underway and the state receives information directly from the applicants to that program.



PA Intake & Projections (as of 06/05/2017)				
Disaster	Category	Total PWs	Federal Share	State Share
4263 (25% State Share)	A	59	\$5,888,561	\$1,962,854
	B	253	\$26,017,153	\$8,672,384
	C	285	\$16,204,545	\$5,401,515
	D	14	\$1,108,466	\$369,489
	E	123	\$4,223,287	\$1,407,762
	F	72	\$2,740,659	\$913,553
	G	46	\$2,755,201	\$918,400
Current 4263 Total		852	\$58,937,872	\$19,645,957
Projected 4263 Total		926	\$92,900,000	\$30,966,667
4277 (10% State Share)	A	41	\$83,190,485	\$9,243,387
	B	361	\$245,016,105	\$27,224,012
	C	72	\$2,557,783	\$284,198
	D	8	\$710,685	\$78,965
	E	219	\$15,182,206	\$1,686,912
	F	50	\$2,931,452	\$325,717

	G	17	\$252,067	\$28,007
Current 4263 Total		768	\$349,840,783	\$38,871,198
Projected 4277 Total		1,268	\$633,000,000	\$70,333,333
Current Grand Total		1,620	\$408,778,654	\$45,419,850
Current Projected Grand Total		2,194	\$725,900,000	\$101,300,000

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) will be a critical part of the long-term recovery process in both rebuilding and protecting housing stock and vital infrastructure. These grant funds are calculated at 15 percent of the total FEMA Individual Assistance and Public Assistance allocations attributable to DR-4263 and DR-4277. As of Nov. 15, 2016, the state had received an award letter from FEMA indicating a \$26,117,655 grant in response to DR-4263. Additionally, the state estimates it will receive an additional \$252 million HMGP grant in response to DR-4277. The figures for HMGP have not significantly changed since November 2016.

Unlike PA, the state’s obligation for both DR-4263 and DR-4277 has been established as not less than 25 percent of eligible project costs. Therefore, the state’s unmet need estimate is \$8,705,885 for DR-4263 and \$84 million for DR-4277, with a combined total in excess of \$92.7 million.

HMGP Award & State Share		
Disaster	Federal Share	State Share
DR-4263	\$ 26,117,655	\$ 8,705,885
DR-4277	\$ 252,000,000	\$ 84,000,000
Total	\$ 278,117,655	\$ 92,705,885

Temporary Shelter Assistance Program

The Temporary Shelter Assistance Program (TSA) was critical to the immediate needs response to vulnerable families with a continued shelter need following the closure of large, group shelters. TSA is funded under Section 403 of the Stafford Act, and as such for DR-4263, the state’s obligation has been established as not less than 25 percent of eligible project costs. For DR-4277, the state’s obligation has been established as not less than 10 percent of eligible project costs. As of May 2017, and the closure of TSA under DR-4277, FEMA’s contribution was \$37,972,230, leaving the state with a 10% cost share of \$4,219,137. Additionally, FEMA’s contribution toward TSA under DR-4263 was \$1,200,618, leaving the state with a 25% cost share of \$400,206. The total state cost share for both storms is \$4,619,343.

TSA Award & State Share		
Disaster	Federal Share	State Share
DR-4263	\$1,200,618	\$400,206
DR-4277	\$ 37,972,230	\$ 4,219,137
Total	\$39,172,848	\$4,619,343

Therefore, this analysis contemplates a total unmet infrastructure unmet need gap of \$198,625,228.

Infrastructure and FEMA Match Unmet Need Summary	
Category	Amount
PA Cost Share	\$ 101,300,000
HMGP Cost Share	\$ 92,705,885
TSA Cost Share	\$ 4,619,343
Total	\$ 198,625,228

3. Resilience Gaps

Broadly, the state recognizes DR-4263 and DR-4277 have exposed a wide array of resilience gaps within the communities affected by these two events. Specifically, these gaps include needs for planning and implementation of strategically-focused projects and programs at all scales, from individual investments at the household level to large-scale structural investments designed to impact entire watersheds. These will include basin-wide planning and modeling initiatives in all impacted areas to provide the best information necessary to make wise DR investment decisions delivering optimal benefits. The ultimate purpose of the investments is to reduce floodplain risk exposure throughout the entire impacted region, reducing the necessity of structure elevations while protecting the substantial long-term recovery investments to be made with private and public funds over the next several years as a result of DR-4263 and DR-4277.

Such an approach envisions need for both structural and nonstructural interventions. Structural investments may include large-scale diversions, retention/detention ponds and canals, channel modifications and other large and small-scale structural approaches. Nonstructural strategies may include an elevation program for those households substantially damaged within the floodplain, flood-proofing, voluntary buy-outs of high risk properties, modified building codes, land-use planning and management, targeted infrastructure investments, technical and staffing support, small-scale retention and detention techniques for homes and businesses and public outreach and education efforts. Nonstructural approaches are expected to reduce risk by reducing the need for elevations and by creating a greater buffer between assets and floodplains.

Predicting what types of programs and projects will be funded and at what level is premature prior to modeling for current and future risk within the state's affected watersheds and floodplains. Once these efforts have been undertaken, and the state is able to apply specific measures within risk models to determine optimal return on investment with respect to future damages and resilience, the state will propose a full slate of resilience-oriented investments paired with demonstrable measures of effectiveness.

It is important to note that the state is already applying planning funds to the process of better understanding the impacted basins in anticipation of funding to implement these strategies.

Generally, the state has identified five general types of resilience-building activities for potential CDBG-DR investment:

Structural Investments to Address Regional Watershed Protection

Currently, there are three major diversion projects under consideration across southern Louisiana. Two diversion projects, which will be located at the southern reaches of the Mississippi River, have recently

received \$250M in funding as a result of the Deepwater Horizon settlement with British Petroleum. The Mississippi diversions are intended to divert sediment and create new land. There is also a project plan in place to divert floodwaters from the Comite River in East Baton Rouge Parish to the Mississippi River. According to best data available to the state, the Comite River diversion project, if it had been implemented prior to the August flooding event, potentially could have substantially reduced the disaster's impacts in the Baton Rouge metropolitan area.

In addition to diversions, reservoir creation and channel modification projects have been used to help reduce flood levels in the floodplain. Such projects have been identified within the most-affected areas, and like the Comite River diversion, could have substantially mitigated the disaster's impact had they been implemented prior to the August event.

Resilience Add-Ons to Planned Public Infrastructure Projects

The state will strive for all public buildings erected with CDBG-DR funds to be certified LEED to ensure lower water and power bills as well as healthy indoor air quality for residents. In addition, the state will encourage the incorporation of a combined heat and power (CHP) system, which will be designed to continue providing a reduced level of electricity and cooling to the building in the event of a grid/power outage, in the construction of houses or complexes. By incorporating smart-grid designs, the state would seek to lower its overall energy risk profile, mindful of the frequency in which it experiences outages attributable to significant disaster events.

Stormwater Retention by Household

At 62.45 inches of rain per year, Louisiana experiences some of the highest annual rainfall in the country, as evidenced by DR-4263 and DR-4277. Stormwater runoff during heavy rain events causes flooding that affects the well-being, property, and livelihood of every inhabitant. Outdated stormwater and pumping systems, designed to alleviate flooding, are often overwhelmed during heavy rains. Not only are these systems costly, outdated, and inadequate for the high levels of rain, but they have become recognized as one of the main causes of subsidence.

One approach to addressing the abovementioned issues is implementing stormwater management projects and programs at the individual household level. Individual household measures can help keep rainwater out of drainage systems, reducing overall system requirements.

Like natural systems, stormwater management projects and programs can contribute to diverting, holding, and moving excess stormwater. If one household were to purchase and regularly use a rain barrel every day, that household would likely not be able to fully address all of their stormwater needs. However, if all households were to implement stormwater management measures to help slow the flow of water to the drainage system, the demands on the management system are dramatically decreased.

According to sources at the Urban Conservancy (UC), a nonprofit in New Orleans that helps individual households address their stormwater management needs, this systematic approach can be done in steps. Step number one, according to the UC, is the elimination of excess paving. Large amounts of impermeable concrete keeps water from flowing back into the natural system and quickly pushes large amounts of water to the drainage system where it can overload the system, causing flooding. Where hard surfaces are necessary, like for parking, installation of permeable pavement can reduce flow to drainage systems. Permeable paving uses interlocking, recycled materials to create a grid in place of the old impermeable surfaces, and instead of filling that grid with concrete, they instead fill it with different types of permeable gravel. This gravel allows for the flow of rainwater back into the natural system. In other words, permeable paving functions practically like concrete, while allowing infiltration of the rain that falls on it.

The third step recommended by the UC is to divert roof run-off into features such as rain barrels, retention ponds and rain gardens where the water is held and then released or used at a later date.

In anticipation of a large-scale suite of programs designed to effectuate rehabilitation of single-family homes and businesses impacted by the two flooding events, it would be prudent to embed these resilience-building, flood-mitigating principles into the deployment of such a homeowner rehabilitation effort.

Community Stormwater Retention

The recommendations made at the individual level, community level projects to address stormwater retention and management must be addressed systematically. If one household were to implement all of the abovementioned recommendations their household would only be managing stormwater at a small, lot sized scale. If a community as a whole can begin implementing these projects on an intersection-by-intersection, or the neighborhood-by-neighborhood scale, such activities can have a real, demonstrable impact on the community's flood risk profile.

Another way to promote resilient communities through community level projects can be found in the **NDRC application** for the **City of New Orleans**. In the application, the City of New Orleans made several recommendations for community level resilience measures. Below is a list:

- **Blue-Green Parklands** – Construct a series of large-scale Blue-Green Parklands on underutilized sites for significant water storage, ecological benefit and recreational opportunities.
- **Blue-Green Corridors** – Install blue or green infrastructure where underutilized sites are located.
- **Neighborhood Networks** – Develop a network of green infrastructure interventions in a concentrated scale.
- **Canals** – Transform existing drainage canals into public waterfronts.

Additional recommendations may include:

- Remove excess paving and impermeable surfaces and replace with permeable surfaces at locations that are burdened with large amounts of concrete/asphalt such as: Churches, supermarkets, retail stores, schools, businesses, and community centers.
- Similar to the City of New Orleans' Blue-Green Parklands and Corridors, take empty lots and/or blighted properties, and turn them into green space, blue space, and public amenities.
- Other areas concrete would be used such as sidewalks, basketball or tennis courts, picnic sights etc., use permeable surfacing.
- Leverage existing programs, such as the Urban Conservancy's Building Active Stewardship in New Orleans (BASIN) program or Green Light New Orleans' rain barrel and green light bulb replacement installation programs, to name a few.

Planning and Flood-Risk Modeling

Planning with LA SAFE

Through this recovery efforts, the state would also seek to leverage its own activities through its National Disaster Resilience award. Already funded by HUD, the LA SAFE Framework focuses on three typologies – Reshaping, Retrofitting, and Resettlement – using a forward-thinking, risk-based approach to guide the state's future land use and development patterns. Areas projected to experience in excess of 14 feet of flooding in a 100-year storm event 50 years from now are areas in which the state generally recommends

community resettlement projects, like the one it has commenced for the Isle de Jean Charles community in Terrebonne Parish. Areas projected to experience between 3 feet and 14 feet of flooding in a 100-year storm event 50 years from now are those in which the state plans to facilitate holistic and strategic adaptations around the social, cultural and economic assets which it cannot abandon. Areas projected to experience less than 3 feet of flooding in a 100-year storm event 50 years from now are those in which the state plans to incentivize future economic and population growth. We know we cannot eliminate Louisiana's flood-risk profile, but we must preserve – and when possible expand – economic and community development opportunities in moderately vulnerable areas, while incentivizing population and economic growth in those areas minimally at risk.

Coastal Protection and Restoration Authority (CPRA) & CLARA

The 2012 Coastal Master Plan, which is being updated for 2017, was based on state-of-the-art science and analysis, and its modeling process provides a holistic understanding of our coastal environment today while anticipating changes expected over the next 50 years. The Coastal Louisiana Risk Assessment (CLARA) model is a quantitative simulation model of storm surge flood risk developed by the RAND Corporation. In the Coastal Zone, this is the model upon which LA SAFE relies. However, the state must take a more holistic, watershed-based approach to flood-risk modeling, especially in light of these two rain events in March and August.

Riverine Flood Modeling – USGS

The CLARA model outlined above does a good job of projecting risk for coastal Louisiana; however, this modeling system does not consider the risk of riverine flooding from rainfall, which is what occurred in Louisiana in March and August. The United States Geological Survey (USGS), through their Flood Inundation Mapping (FIM) Program, provides one option to help the state better understand its riverine flood risk in the future. Others include The Water Institute of the Gulf, and the Corps of Engineers, all of which are under consideration at this time. All investments in protective and resilient infrastructure will be made based on the results of extensive modeling and cost benefit analysis.

Summary of Unmet Resilience Need Gaps

Based on the categories of resilience need gaps articulated above, the State anticipates a total unmet need of \$600,000,000. This total has been derived based on the following:

- **Structural Investments (\$75,000,000):** This estimate is based on an assumption such structural investments would be paired with other sources of funding, including but not exclusive to those articulated in the State's 2017 Coastal Master Plan.
- **Resilience Add-Ons to Planned Infrastructure (\$132,915,926):** As outlined in the section documenting unmet infrastructure needs, the State anticipates a total investment of \$1,329,159,261 through FEMA's PA and HMGP programs in conjunction with DR-4263 and DR-4277 recovery efforts. Based on similar initiatives in past disaster recovery environments, the State believes these resilience-building add-ons would increase total project costs by 10%.
- **Household Stormwater Retention (\$122,414,672):** As outlined in the section documenting unmet housing needs, the State anticipates a total unmet need of \$2,448,293,435 for affected owner-occupied units. The State believes retention adaptations would increase these project costs by 5%.

- **Community Stormwater Retention (\$239,669,402):** This estimate is based on the State’s historical precedence in implementing neighborhood-level water management projects, specifically those following hurricanes Katrina, Rita, Gustav and Ike.
- **Planning & Flood-Risk Modeling (\$30,000,000):** This estimate is comparable with scale of the State’s Comprehensive Resiliency Pilot Program, implemented following hurricanes Gustav and Ike. Given the comparable nature of the large geographic areas impacted by both Gustav and Ike and DR-4263 and DR-4277, the State believes these needs are roughly comparable to one another in terms of programmatic scale.

These gaps have been summarized as follows:

Resilience Unmet Need Gaps	
Category	Amount
Structural Investments	\$ 75,000,000
Resilience Add-Ons to Planned Infrastructure	\$ 132,915,926
Household Stormwater Retention	\$ 122,414,672
Community Stormwater Retention	\$ 239,669,402
Planning & Flood-Risk Modeling	\$ 30,000,000
Total	\$ 600,000,000

E. Public Service Unmet Needs

Through the implementation of the National Disaster Recovery Framework (NDRF), the state, along with FEMA and GOHSEP, have held Community Planning and Capacity Building meetings state wide in accordance with Recovery Support Function 1 (RSF 1). The RSF 1 meetings occurred with Ascension Parish, the Town of Sorrento, the City of Gonzales, the City of Denham Springs, Livingston Parish, and St. Tammany Parish. As a result of these meetings, the leadership and key staff of all impacted communities have identified needs in all service areas handled by a government entity, such as the flooding of fire, police stations and other government buildings, which provide key public services to citizens as well as large-scale infrastructure projects that will need to be implemented in order to recover.

Funding is a severe handicap, especially compounded by the fact that sales tax and other revenue streams to local government have declined, or are expected to decline, once the initial buying of cars, building materials, etc., subsides. Therefore, the approved budgets for the upcoming fiscal year are having to be revisited and modified, which includes the deferral of planned projects and a potential decrease in staffing for fire and police and other services to meet the immediate recovery needs of the parishes. For example, in Livingston Parish alone, the parish lost a minimum of 10 fire trucks, 33 police vehicles, 61 school buses and 20 other parish-related vehicles which will need to be replaced, impacting the funding for other projects.

Due to the limited funding available to address the full breadth of recovery needs, the state is not prioritizing funding to address the public service needs described above. However, in anticipation of additional funding being made available, OCD-DRU will be implementing a program by which it will provide funding to cover the non-federal share of FEMA Public Assistance projects. Funds will be provided as payment to state or local entities for eligible activities within approved Project Worksheets. The match

funding will lessen the financial burden placed on the entities and assist them to continue normal operations and address recovery needs.

In addition to those public services traditionally provided by units of local government, through experience with disaster events in the past, the state understands that following a storm event, there is an increased need for mental health services, legal counseling and title services, housing counseling, job search and connection services as well as training for those residents who may have lost their source of employment as a result of the disaster events.

The FEMA-funded Disaster Case Management (DCM) program implemented by the Louisiana Department of Health is a process whereby a qualified case manager serves as a single point of contact for individuals or families who were impacted by the floods. This person helps households return to a state of independence. The case manager can help families identify their unmet needs and then make referrals to the appropriate agencies. This includes access to health care including mental health services, housing, home repairs, transportation and other essential services. It is estimated that over 1,500 families will receive assistance through the Disaster Case Management program.

In addition, the Southeast Louisiana Legal Services is providing free legal assistance to low income homeowners facing title challenges. These services will help assisted homeowners participate in the state’s homeowner program.

However, the state also understands from past experience that, while some of these public services needs may be addressed in the immediate aftermath of the flood event, additional unmet needs for these types of services will become apparent as the short-term funding for services ends and the lingering and long-term impacts from the floods begin to take their toll on individuals and families. The state will continue to assess the need for public services, as it conducts program intake and continues outreach to local governments, non-profit and faith-based organizations and other community stakeholders. At this time, due to the limited funding available to address the full breadth of long term community service needs, the state is limiting access to CDBG-DR funded public services to the most vulnerable through the Rapid Rehousing and Permanent Supportive Housing Support Services programs.

F. Summary of Unmet Needs & Additional Considerations

In summary, and outlined in the sections above, through this analysis, the state has noted the following sources of recovery expenditure through the FEMA IA program and through various SBA loan programs.

IA Housing Assistance Approved (as of 11/22/16)	
Disaster	Total Approved
DR-4263	\$ 72,992,887
DR-4277	\$ 578,268,509
Total	\$ 651,261,396

Summary of SBA Loans Approved (as of 5/26/17)				
Disaster	All Loans	Home Loans	Business Loans	EIDL
DR-4263	\$ 76,300,900	\$ 59,947,200	\$ 13,354,600	\$ 2,999,100
DR-4277	\$ 802,556,900	\$ 642,577,300	\$ 125,980,600	\$ 33,999,000

Grand Total	\$ 878,857,800	\$ 702,524,500	\$ 139,335,200	\$ 36,998,100
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As of June 6, 2017, there were 28,868 policy claims made through NFIP for DR-4263 and DR-4277 and \$2,022,366,302 approved or disbursed through the program for structural coverage of residential single family homes. As of June 6, 2017, a total of \$173,354,255 has been paid for 3,885 NFIP claims for DR-4263 and a total of \$1,849,012,046 has been paid for 24,983 NFIP claims for DR-4277. There is a 60-day delay from when a claim is processed and when it is reflected in NFIP data, so the data from June 6, 2017 data only reflect NFIP claims from 60 days prior.

It should additionally be noted this total represents an initial sample of what will ultimately be claimed and disbursed through NFIP. As of Dec. 3, 2016, FEMA had granted Gov. John Bel Edwards request to extend the filing deadline by which those affected by DR-4277 must submit a proof of loss claim. With the extension, applicants will have 180 days from the date of the loss to provide the completed paperwork to the insurer.

NFIP Payouts for Residential Single Family (Structural Only) (as of 6/06/17)			
Disaster	Parish	Number of Claims	Structural
DR-4263	Acadia	1	\$882
	Allen	7	\$286,940
	Ascension	33	\$723,822
	Avoyelles	7	\$171,735
	Beauregard	9	\$510,369
	Bienville	9	\$222,852
	Bossier	228	\$9,695,064
	Caddo	172	\$7,939,335
	Calcasieu	29	\$1,625,380
	Caldwell	53	\$1,325,831
	Catahoula	64	\$1,514,542
	Claiborne	21	\$949,064
	Concordia	3	\$89,271
	De Soto	6	\$279,393
	East Baton Rouge	38	\$1,022,073
	East Carroll	6	\$256,116
	Franklin	4	\$70,878
	Grant	40	\$1,318,961
	Iberville	1	\$928
	Jackson	1	\$9,667
	Jefferson	11	\$60,437
	La Salle	10	\$526,755
	Lafayette	1	\$33,308
	Lafourche	1	\$2,906
	Lincoln	8	\$195,053
	Livingston	135	\$3,131,901
	Morehouse	53	\$2,875,554
	Natchitoches	92	\$4,180,618
	Orleans	6	\$34,633

	Ouachita	1,279	\$59,970,477
	Plaquemines	1	\$4,395
	Pointe Coupee	3	\$7,354
	Rapides	35	\$1,331,549
	Red River	2	\$66,312
	Richland	70	\$2,960,512
	Sabine	8	\$203,155
	Saint Landry	1	\$9,686
	Saint Martin	1	\$24,200
	Saint Tammany	604	\$33,785,006
	Tangipahoa	434	\$16,769,977
	Union	120	\$5,418,482
	Vernon	52	\$2,712,244
	Washington	133	\$5,688,081
	Webster	60	\$3,531,380
	West Carroll	21	\$992,626
	Winn	12	\$824,552
	Total	3,885	\$173,354,255
DR-4277	Acadia	497	\$17,747,978
	Allen	2	\$55,305
	Ascension	3,362	\$246,729,291
	Assumption	1	\$22,934
	Avoyelles	23	\$473,740
	Caddo	3	\$51,885
	Calcasieu	16	\$434,811
	Caldwell	1	\$75,702
	Cameron	1	\$28,071
	Catahoula	1	\$5,017
	Claiborne	1	\$4,198
	East Baton Rouge	9,568	\$777,503,004
	East Feliciana	35	\$1,894,455
	Evangeline	45	\$1,635,202
	Iberia	278	\$10,542,066
	Iberville	59	\$3,119,486
	Jefferson	6	\$48,805
	Jefferson Davis	60	\$2,481,475
	Lafayette	2,146	\$139,454,773
	Lafourche	1	\$469
	Lincoln	1	\$5,011
	Livingston	6,391	\$529,480,229
	Orleans	3	\$82,198
	Ouachita	4	\$204,874
	Pointe Coupee	113	\$3,317,255
	Rapides	1	\$152
	St. Charles	6	\$37,831

	St. Helena	6	\$414,855
	St. James	29	\$516,664
	St. Landry	217	\$7,097,429
	St. Martin	181	\$7,269,687
	St. Tammany	112	\$3,595,559
	St. John The	2	\$24,754
	Tangipahoa	1,010	\$54,133,488
	Terrebonne	1	\$8,150
	Vermilion	754	\$38,854,175
	Washington	13	\$228,081
	West Baton	19	\$485,303
	West Feliciana	14	\$947,684
	Total	24,983	\$1,849,012,046
	Grand Total	28,868	\$2,022,366,302

Summary of Unmet Needs	
Category	Amount
Housing	\$ 1,338,064,781
Economic	\$ 3,072,495,954
Infrastructure	\$ 89,005,885
Resilience	\$ 600,000,000
Total	\$ 5,099,566,620

G. Anticipated Unmet Needs Gap

During the Oct. 10, 2016 Congressional Session, state government officials, including Gov. John Bel Edwards, traveled to Washington D.C. and worked collaboratively with Louisiana’s Congressional Delegation to secure long-term disaster recovery resources in response to DR-4263 and DR-4277. Working with limited disaster loss unmet need information, Louisiana’s delegation proposed a relief package of nearly \$3.8 billion. This package focused primarily on housing needs, as the state has prioritized housing as its most urgent and pressing recovery concern following the two flooding events. Through this Action Plan, the state now presents revised unmet need estimates based on current best available data. Over time, the state reserves the right to continue to update these estimates as additional assessments are made and more complete data become available. The state will use information collected through application intake and ongoing community outreach, coupled with updated data received on a weekly and monthly basis from SBA, FEMA and NFIP to update its unmet housing, economic, public infrastructure, public services and planning needs assessments. As the unmet needs assessment is updated, the state will review its programs to ensure they are best designed to meet the recovery needs of the state and its residents and businesses.

Accounting for the updated unmet needs assessment and the initial appropriation of \$437,800,000 , the second appropriation of \$1,219,172,000 and the third appropriation of \$51,435,000 for long-term recovery purposes, the state has calculated a remaining unmet need gap of \$5,052,750,943 .

Summary of Total Unmet Needs			
Category	Losses/Gaps	Known Investments	Remaining Unmet Need
Owner-Occupied Housing	\$2,448,293,435		\$2,448,293,435
Homeowner Rehabilitation and Reconstruction (CDBG-DR)		(\$1,331,163,919)	(\$1,331,163,919)
Rental Housing	\$304,167,128		\$304,167,128
Neighborhood Landlord Rental Program (CDBG-DR)		(\$49,163,422)	(\$49,163,422)
Multi-family Gap Program (CDBG-DR)		(\$45,000,000)	(\$45,000,000)
Piggyback Program (CDBG-DR)		(\$19,000,000)	(\$19,000,000)
Public Housing	\$8,539,159	(\$4,492,053)	\$4,047,106
Homeless Assistance	\$5,250,232		\$5,250,232
Rapid Rehousing (CDBG-DR)		(\$16,000,000)	(\$16,000,000)
PSH Support Services (CDBG-DR)		(\$5,000,000)	(\$5,000,000)
Agriculture Losses (DR-4277)	\$110,244,069		\$110,244,069
Agriculture Losses (DR-4263)	\$80,285,185		\$80,285,185
Business Structures	\$595,600,000		\$595,600,000
Business Equipment	\$262,800,000		\$262,800,000
Business Inventories	\$1,425,500,000		\$1,425,500,000
Business Interruption Loss	\$836,400,000		\$836,400,000
SBA Business/EIDL Loans		(\$176,333,300)	(\$176,333,300)
Small Business Program (CDBG-DR)		(\$51,200,000)	(\$51,200,000)
Small Business Technical Assistance Program (CDBG-DR)		(\$800,000)	(\$800,000)
Louisiana Farm Recovery Program		(\$10,000,000)	(\$10,000,000)
PA State Share	\$101,300,000		\$101,300,000
HMGP State Share	\$92,705,885		\$92,705,885
TSA State Share	\$4,619,343		\$4,619,343
FEMA Match Share Program (CDBG-DR)		(\$105,000,000)	(\$105,000,000)
Infrastructure Enhancement	\$600,000,000		\$600,000,000
Watershed Modeling (CDBG-DR)		(\$9,800,799)	(\$9,800,799)
Totals	\$6,875,704,436	(\$1,822,953,493)	\$5,052,750,943

*CDBG-DR investments are inclusive of program delivery costs.

4. Method of Distribution and Connection to Unmet Needs

A. Method of Distribution Process

Programs will be implemented by the State of Louisiana, through grantees and/or subrecipients, as specified within each of the programs below. The programs described in this Action Plan Amendment are not entitlement programs and are subject to available funding.

B. Connection to Unmet Needs

Based on the unmet needs assessment and input from impacted communities and citizens throughout Louisiana, the state continues to prioritize programs that will assist in meeting the short- and long-term recovery needs of its residents and communities. While the impact of the 2016 Severe Storms and Flooding was much greater than the resources available through these three HUD allocations, these programs will begin to address the unmet needs in homeowners' primary residences, renter needs and damaged rental housing stock, economic recovery and revitalization, damages to public infrastructure and infrastructure solutions to long-term housing recovery.

As required by the Federal Register, 81 FR 83254, November 28, 2016, 82 FR 5591, January 18, 2017 and 82 FR 36812, the state will spend 80 percent of the overall grant on activities undertaken in the HUD-identified "most impacted and distressed" area. The HUD-identified "most impacted and distressed" area for the 2016 Severe Storms and Flooding consists of Acadia, Ascension, East Baton Rouge, Lafayette, Livingston, Ouachita, St. Tammany, Tangipahoa, Vermilion, and Washington parishes. However, the state may determine to make the remaining funds available for eligible program activities in all disaster-impacted parishes.

Up to five percent of the overall grant will be used for administration of the grant. Also, as required by the Federal Register Notices, the state will spend no less than 55 percent of funds allocated on activities that benefit low to moderate income (LMI) households, or request a waiver of that requirement.

The 2016 Severe Storms and Flooding caused significant levels of damage to owner-occupied and rental housing within impacted parishes. Based on the state's review of the most recent data obtained from FEMA and SBA, the unmet need for housing repair and replacement is more than \$2.7 billion. At this time, the state is in the preliminary stages of the application process of the homeowner and rental programs and therefore the information from the application process is incomplete. Until the data set from the homeowner, renter and landlord applications is more statistically significant, the state will continue to rely on the estimated unmet need resulting from an assessment of FEMA and SBA data. The need for safe, decent, and affordable housing continues to be the state's top priority, which is why the state has allocated a proportion not equivalent to the unmet needs described above. Over 86 percent of the programmatic funding from the total allocation of CDBG-DR funds goes to housing programs. Proposed housing activities are intended to assist homeowners in reconstructing, rehabilitating, and elevating homes as well as provide access to affordable rental housing for persons displaced by the storm.

In addition to implementing homeowner and rental programs, the state will continue to implement programs that benefit small businesses and state and local entities faced with covering a non-federal match requirement for FEMA Public Assistance projects.

Due to the limited funds received in the first three allocations, the state continues to prioritize vulnerable populations throughout each of the programs proposed in this amendment.

The state's economic recovery and revitalization programs will continue to focus on small businesses and farmers, which are consistently more vulnerable to the impacts of disasters.

With respect to public infrastructure, OCD-DRU will continue to implement a program by which it will provide funding to cover the non-federal share of FEMA Public Assistance projects. In addition, in order to understand the long-term recovery risks of impacted communities and the vulnerabilities of rebuilding flood-damaged neighborhoods, the state is proposing in this action plan amendment to allocate resources toward watershed modeling and planning in the impacted parishes.

C. Allocation of Funds

State of Louisiana CDBG-DR Total Allocation				
	First Two Allocations	Third Allocation	Total Allocation	Percentage
Total Allocation	\$1,656,972,000	\$51,435,000	\$1,708,407,000	100%
Restore Louisiana Housing Programs	\$1,423,693,120	\$41,634,201	\$1,465,327,321	
• Homeowner Program	\$1,293,693,120	\$37,470,799	\$1,331,163,919	78%
• Rental Housing Programs	\$ 130,000,000	\$4,163,402	\$134,163,402	8%
Restore Louisiana Economic Recovery and Revitalization Programs	\$62,000,000	\$0	\$62,000,000	4%
Infrastructure Program (FEMA Match)	\$105,000,000	\$0	\$105,000,000	6%
Watershed Modeling and Planning		\$9,800,799	\$9,800,799	1%
Administration and Other Planning Expenses	\$ 66,278,880	\$0	\$66,278,880	4%

5. Proposed Use of Funds

A. State Implemented Programs

All programs outlined below will be implemented by the State of Louisiana, through grantees or subrecipients, as described within each of the programs in Action Plan Amendment 1 or herein. All eligible activities listed below are as provided by statute, as may have been amended by the Federal Register Notice or hereafter affected by waivers from HUD.

1. Housing

The state's housing programs will continue to focus on assisting homeowners to reconstruct, rehabilitate, reimburse and elevate their homes, as well as providing assistance for eligible buyout or relocation costs. The state has also prioritized providing affordable rental housing for persons displaced by the storm through the rehabilitation and creation of rental housing stock and by providing rental assistance and support services to the most vulnerable persons displaced by the storm.

Allocation for Housing Activities		Relative Percentage
Total Allocation for Housing Activities:	\$1,465,327,321	100%
Homeowner Program	\$1,331,163,919	90.84%
Rental Housing and Homelessness Prevention Programs	\$ 134,163,402	9.16%

Restore Louisiana Homeowner Rehabilitation, Reconstruction and Reimbursement Program

Summary: The state will enter into agreements with homeowners that result in the repair, reconstruction, elevation, acquisition and/or buyout of flood-damaged residential owner-occupied structures. Homeowners may also be eligible for assistance to purchase or complete new construction of homes outside the 100 Special Flood Hazard Area. Given the time elapsed from the March and August flooding events, homeowners are in varied states of progress in their rebuilding process depending on the extent of damage and resources available. In response, the state will implement the Restore Louisiana Rehabilitation, Reconstruction and Reimbursement Program to cover eligible costs for the repair or

replacement of damage to real property; replacement of disaster-impacted residential appliances; and limited environmental health hazard mitigation costs related to the repair of disaster-impacted property. Interim housing assistance may also be provided to vulnerable homeowners. In addition, the program may allow for the buyout, acquisition, new construction, down payment assistance, investment in public infrastructure, homeownership assistance and/or related temporary relocation expenses for families living in high-risk areas.

Eligible Activity	Rehabilitation, Reconstruction, Buyouts, Acquisitions, New Construction, Public Facilities, Interim Housing Assistance, Expansion of Homeownership (42 U.S.C. 5305(a)(4)); HCDA Sections 105 (a)(1-4), 105(a)(7-8), 105(a)24). Housing Incentive, as identified in Federal Register Docket No. FR-5989-N-01. Also eligible are elevation expenses related to rehabilitation and reconstruction activities and reimbursement of eligible rehabilitation and reconstruction activities.
National Objective	Urgent Need or benefit to low to moderate income persons

Geographic Eligibility: Disaster-declared parishes impacted by the 2016 Severe Storms and Flooding

Allocation for Activities:

Program Area	First Allocation	Second Allocation	Third Allocation	Total	% of Total
Homeowner Rehabilitation and Reconstruction	\$385,510,000	\$908,183,120	\$37,470,799	\$1,331,163,919	78%

Administering Entity: State of Louisiana

Proposed Use of Funds: Homeowners will continue to have four potential program solutions from which to choose based on their progress in the rebuilding process and their capacity to complete the rebuilding process, as described in Action Plan Amendment 1.

Eligible Applicants: Homeowners will be eligible for the program if they meet the following criteria:

- Owner occupant at time of disaster event
- Damaged address was the applicant’s primary residence at the time of disaster event
- Located in one of 51 disaster declared parishes
- Suffered major or severe damages (1+ feet of flooding or \$8,000 FEMA Verified Loss) as a result of the 2016 Severe Storms and Flooding events
- Eligible structure as determined by program, including but not exclusive to, one or two family home structures, mobile/manufactured, and modular homes

Additional funding allocated from Congress’s third appropriation of CDBG-DR assistance will provide assistance for eligible activities for populations identified in Action Plan Amendment 1 and herein. In addition, applicants who meet the criteria listed in Phase I and who also had structural flood insurance at the time of the flood are eligible to receive assistance for eligible unmet needs. Upon further assessment of the unmet needs of program applicants and the availability of funding, the state may expand program

eligibility to include additional homeowners who had structural flood insurance at the time of the disaster, and who still have a gap in their recovery needs. If the state amends the program policies and procedures to fund additional homeowners, the state may prioritize assistance to homeowners with structural flood insurance based on household income status or other phased criteria.

Solution 4: Voluntary Buyouts, Acquisitions and/or Resettlement: As detailed in Action Plan Amendment 1, based on further analysis of unmet needs, the state may execute voluntary buyouts or acquisitions in limited situations where the state determines it is more cost effective or in the public interest to buyout or acquire a property from a homeowner. For families living in high-risk, repetitive loss areas, the program may provide for the unmet needs associated with the buyout, acquisition, new construction, down-payment assistance, investment in public infrastructure, homeownership assistance and/or related temporary relocation expenses necessary to relocate either individually or as a community to safer areas outside the Special Flood Hazard Area. While resettlement in and of itself is not an eligible activity, the state may engage in multiple eligible activities in order to help families resettle.

Providing assistance for public infrastructure may be necessary to relocate families outside of the SFHA, if it is determined that it is necessary and reasonable to relocate residents as a community to a new community. For example, some residents who live in high-risk, repetitive loss areas live in rural communities where there is a shortage of housing; in such cases, the state may work with residents and funding from other federal buyout programs to help eligible residents move to a newly developed resettlement community. In such cases, the development of a new community may include CDBG-DR investment in the acquisition and public infrastructure necessary for the development of the housing activities in the new community.

The maximum amount of assistance available for investment in families eligible under this solution, as well as the format of the agreement (i.e. grant or loan) will be determined on a case-by-case basis, considering such factors as fair market value of the damaged property, outstanding mortgages, the costs of relocating to a safer property and the purchase or new construction cost of relocating and remaining in the families' communities. The state can provide for these additional unmet needs where other programs are funding the buyout or acquisition costs.

Restore Louisiana Rental Housing Programs

Summary: The State of Louisiana has established a portfolio of rental programs to address the immediate and long-term housing needs of low-to-moderate income families in the flood impacted areas. Due to the shortage of affordable housing stock, and to meet the unmet needs of renters in the community, it is imperative to provide solutions that address the immediate housing needs of displaced and vulnerable renters, but the state has designed programs and plans to provide the majority of funding allocated for rental programs on long-term recovery solutions that replace and create affordable housing stock. Each program will address rental availability, affordability and quality standards.

Due to the limited amount of funding available, the state will underwrite applicants for feasibility, cost efficiencies and ability to meet the goals of the programs. Applicants will be prioritized based on meeting program eligibility requirements.

Geographic Eligibility: Disaster-declared parishes impacted by the 2016 Severe Storms and Flooding

Allocation for Activities:

Program Area	First Allocation	Second Allocation	Third Allocation	Total	% of Total
Rental Repair and In-fill, Multifamily Gap, Piggyback, Rapid Rehousing and PSH Support Services	\$19,000,000	\$111,000,000	\$4,163,402	\$134,163,402	8%

Administrating Entity: State of Louisiana

Neighborhood Landlord Rental Program (Formerly In-fill and Rehabilitation Rental Program)

Summary: This program will continue to rehabilitate or create new affordable housing units through the creation of a fully or partially forgivable loan program for properties containing seven or fewer units.

Eligible Activity	Rehabilitation, new construction, loan financing (HCDA Sections 105 (a)(4)); 105(a)(8-9); 105(a)(15)).
National Objective	Benefit to low to moderate income persons
APA 1 Program Budget	\$45,000,000
Additional Funds	\$4,163,402
Updated Program Budget	\$49,163,402

The proposed uses of funds, eligible applicants, method of distribution, criteria for selection and maximum award are unchanged from Action Plan Amendment 1.

Affordability Requirements:

Definition of Affordable Rents: The definition of affordable rents is being modified from Action Plan Amendment 1 to the following:

Affordable rents are defined as the total monthly housing cost of rent and utilities for an eligible LMI family which is not more than one-twelfth of 30% of the applicable AMI limitation for the area, adjusted for family and bedroom size. The unit and bedroom size is based on an imputed occupancy of 1.5 persons per bedroom and 1 person for efficiency units.

Multifamily Rental Gap Program

Summary: This program will continue to provide assistance to owners of large developments (multi-family structures of 20 or more units) for the repairs and other eligible costs necessary for the repair and sustainability of affordable rental units. Due to the demand from owners and Public Housing Authorities, the state has allocated additional funding toward this program. The additional funding will be disbursed consistently with the proposed use of funds, method of distribution and the eligible applicants described in Action Plan Amendment 1.

Eligible Activity	Rehabilitation, loan financing (HCDA Sec. 105 (a)(4); 105(a)(9); 105(a)(14-15))
National Objective	Benefit to low to moderate income persons
Program Budget	\$45,000,000

The proposed uses of funds, eligible applicants, method of distribution, criteria for selection and maximum award are unchanged from Action Plan Amendment 1.

Affordability Requirements:

Definition of Affordable Rents: The definition of affordable rents is being modified from Action Plan Amendment 1 to the following:

Affordable rents are defined as the total monthly housing cost of rent and utilities for an eligible LMI family which is not more than one-twelfth of 30% of the applicable AMI limitation for the area, adjusted for family and bedroom size. The unit and bedroom size is based on an imputed occupancy of 1.5 persons per bedroom and 1 person for efficiency units.

Piggyback Program

Summary: The state will develop a ‘piggyback’ program that will seek to leverage CDBG-DR with low income housing tax credits (LIHTCs) or other sources to address the longer-term housing recovery needs in the impacted communities. The program may be implemented once the state has completed its assessment of the demand and cost efficiencies of the other rental housing stock programs.

Eligible Activity	Acquisition, clearance, rehabilitation, reconstruction, and new construction, elevation, loan financing HCDA Sections 105 (a)(1),(4) and (14)
National Objective	Benefit to low to moderate income persons
Program Budget	\$19,000,000

Rapid Rehousing Program

Summary: The state will continue to implement the Rapid Rehousing program, as described in Action Plan Amendments 1 and modified in Action Plan Amendment 2.

Eligible Activity	HCDA Sec. 105 (a)(4), 105(a)(8)
National Objective	Benefit to low to moderate income persons
Program Budget	\$16,000,000

Permanent Supportive Housing Services Program

Summary: The state will continue to implement the Permanent Supportive Housing Services Program as described in Action Plan Amendment 1.

Eligible Activity	HCDA. Sec.105(a)(4), 105(a)(8), 105(a)(11)
National Objective	Benefit to low to moderate income persons
Program Budget	\$5,000,000

2. Economic Revitalization

Restore Louisiana Economic Revitalization Programs

Summary: The economic revitalization programs described in Action Plan Amendment 1 are unchanged through this action plan amendment.

Allocation for Activities:

Program Area	First Allocation	Second Allocation	Third Allocation	Total	% of Total
Small Business Loan and Grant Program, Small Business Technical Assistance Program and Louisiana Farm Recovery Grant Program	\$11,400,000	\$50,600,000	\$0	\$62,000,000	4%

3. Infrastructure

Summary: The flooding events of 2016 exposed vulnerabilities in the state’s infrastructure system. The State of Louisiana identified over \$207 million in infrastructure needs, including over \$105 million in non-federal share match for FEMA PA Projects throughout the state and additional non-federal share match needs for other eligible FEMA programs, such as TSA and Hazard Mitigation. Investments in infrastructure repair and rebuilding are necessary to secure the state’s investment in housing repairs throughout impacted communities. These investments will bolster confidence in communities continuing to rebuild, as well as leverage the federal investment made in temporary housing needs and long-term housing repair. Without assistance to meet the state and local match requirements, the public services, infrastructure and resources typically provided by state and local governments will be severely at-risk, as the state and local governments will be required to either a) forgo assistance from FEMA PA and Hazard Mitigation or b) divert funding needed for other community needs toward meeting the match requirements. Communities need access to these critical public services and infrastructure improvements in order to realize long-term recovery and restoration of housing. The state will dedicate \$105,000,000 to offset the burden of the non-federal share match requirements faced by state entities and local entities and jurisdictions.

Program Area	First Allocation	Second Allocation	Third Allocation	Total	% of Total
Infrastructure: FEMA Nonfederal Share Match	\$0	\$105,000,000	\$0	\$105,000,000	6%

FEMA Nonfederal Share Match (formerly FEMA Public Assistance Nonfederal Share Match)

Summary: The state will work with state agencies and local entities to identify the most efficient means of implementing the nonfederal cost share match program for FEMA eligible projects and programs.

Eligible Activity	Non-federal share 105(a)(9)
National Objective	Urgent need, benefit to low to moderate income persons, elimination of slums and blight

Activity Amount	\$105,000,000
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Proposed Use of Funds: Funds will be provided as payment to state agencies, eligible organizations, local governments or other local entities for eligible activities within approved FEMA projects and programs, including reimbursement of eligible activities. If the state is unable to fund all match requirements, then the state will develop a prioritization or proration methodology for disbursing funds to state agencies, local governments and local nonprofit organizations.

4. Planning

Program Area	First Allocation	Second Allocation	Third Allocation	Total	% of Total
Planning	\$0	\$0	\$9,800,799	\$9,800,799	1%

Watershed Modeling and Flood Risk Planning

Summary: Through this newly created program, the state proposes to model current and future flood risk across each watershed in the disaster impacted regions of the state, as part of a longer-term initiative to develop flood risk modeling data for each of the state’s 59 watersheds.

The modeling and planning described in this program are critical to the long term recovery of housing and neighborhoods, as these activities constitute the first step in identifying structural infrastructure investments that will protect neighborhoods and communities impacted by the 2016 floods, taking into account current and future flood risks. Identifying cost-effective and sustainable structural infrastructure investments through a regional planning and modeling approach will allow the state to comprehensively integrate mitigation efforts into the rebuilding and long-term recovery processes.

Eligible Activity	Planning, 105(a)12
National Objective	Urgent need, benefit to low to moderate income persons, elimination of slums and blight or N/A
Activity Amount	\$9,800,799

Administering Entity: State of Louisiana

Proposed Use of Funds: Funds will be used by the state or will be provided to subrecipients and/or grantees to develop watershed and floodplain modeling plans for current and future risk in order to determine optimal investment in structural and non-structural infrastructure projects that will help protect flood-impacted and CDBG-DR assisted neighborhoods from future flood risks.

Criteria for Selection: Due to limited funding, priority will be determined considering the 10 most impacted and distressed parishes, as well as other assessments of risk among watersheds. To complete this task, OCD-DRU will form a cross-disciplinary task force including the Department of Transportation

and Development (DOTD), the Coastal Protection and Restoration Authority (CPRA), the Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP) and federal partners including the Federal Emergency Management Agency (FEMA). Should additional funding become available, the cross-disciplinary task force may recommend additional planning and modeling of watersheds.

5. Administration and Other Planning Expenses

Program Area	First and Second Allocations	Third Allocation	Total	% of Total
Administration and Other Planning	\$ 66,278,880	\$0	\$ 66,278,880	4%

A. Vulnerable Populations

OCD-DRU, in coordination with the LHA, has designed a suite of programs that account for the specific needs of the state’s most vulnerable populations, understanding that the funding allocated is not sufficient to serve all households in need of assistance. As is identified in the program descriptions above, the state is prioritizing the provision of funding to those most in need of assistance with its owner-occupied and rental housing programs.

Specifically, the homeowner program will prioritize low-to-moderate income individuals and families, elderly persons, and persons with disabilities. The design of the proposed portfolio of rental programs creates affordable units as quickly as possible to provide immediate housing options to individuals and families that are currently homeless or at-risk of homelessness.

In addition to the programs proposed in the initial Action Plan and subsequent amendments, the state continues to work with its federal partners to continue to support vulnerable populations who remain displaced from the March and August floods Disaster Case Management (DCM). Through DCM, the state works with five on-the-ground partners who, as of May 2017, provide direct case management for 1,610 survivor households from the March floods and to 4,004 survivor households from the August floods. This crucial case management service for vulnerable populations ensures that they have access to critical resources to further their recovery needs. The state understands the gravity of the needs of the most vulnerable populations, and continues to work with state, local, and federal partners to provide recovery solutions and a safety net to this population.

TSA expired on May 31, and as of the beginning of June 2017, 32 families remained in TSA. The state has continued to provide assistance to these families through a combination of state resources and through the CDBG-DR funded Rapid Rehousing Program. This program, while temporary, is providing a much needed recovery function for vulnerable populations. The state, in coordination with FEMA, seeks to ensure that all households have a permanent housing plan prior to the exit from TSA or equivalent services. The programs proposed in this Action Plan will play a key role the transition.

Furthermore, the state has requested \$92,000,000 in Social Services Block Grant funds to meet the needs of vulnerable populations through Health Delivery System to rebuild the health care needs of its populations through child care centers, child abuse prevention, mental health services for children, developmental disability services and mental health services for adults, child welfare services, child care services, and a call center/hotline designated to connecting residents with appropriate housing resources.

B. Leveraging Funds

1. Housing

To maximize the impact of the CDBG-DR funding provided to the state, and as part of a continuous effort to prevent duplication of benefits, there will be an ongoing commitment to identify and leverage other federal and non-federal funding sources. Further, the state will utilize existing relationships and strive to create new partnerships with other federal and state agencies, corporations, foundations, nonprofits and other stakeholders as a means of utilizing all viable sources of funding.

CDBG-DR funds will be used to address critical unmet needs that remain following the infusion of funding from other federal sources, including FEMA, NFIP and the SBA. Existing state resources and other funds from the disaster appropriation will also be examined in an effort to ensure that all available funding is utilized where it is most needed.

Specifically, the state is working directly with FEMA and GOSHEP to implement the Shelter at Home Program, which provides emergency damage remediation for families so they can return home while rebuilding. As of March 2017, the program has assisted 10,800 households. While the Shelter at Home program allows for emergency repairs that are different from the long-term repairs funded through the CDBG-DR programs, further assistance through CDBG-DR funding will continue to leverage this initial federal investment from FEMA. Additionally, the state has committed existing Tenant Based Rental Assistance (TBRA) dollars to meet the immediate needs of renters in the impacted parishes. Existing state resources and other funds from the disaster appropriation will also be examined in an effort to ensure that all available funding is utilized where it is most needed.

Furthermore, the state has designed all of the housing programs in this action plan to cover the gap funding needed by leveraging insurance, private funds, and other assistance to complete the repairs from the 2016 Floods. Understanding the limited funding for recovery, the state will encourage all applicants to seek out all other funding sources to meet their full recovery needs.

2. Economic Development

The state will combine funding to address economic development unmet needs from other federal funding sources such as SBA loans, NFIP, non-disaster CDBG funding, the U.S. Department of Agriculture (USDA), and the U.S. Department of Commerce. Non-federal resources such as local and state economic development public funds, as well as private financing and equity investments, will provide additional leverage to disaster recovery funds.

3. Infrastructure

The state will combine funding to address infrastructure unmet needs from other federal funding sources such as non-disaster CDBG funding, USDA, and FEMA PA. Additional non-federal resources such as local and state public funds will provide additional leverage to these disaster recovery funds.

4. Mitigation

The state is committed to a multi-pronged approach to addressing mitigation needs community wide. The state will leverage FEMA HMGP funds to implement large scale mitigation projects, which provide mitigation measures at the parcel level, yet impact a community as a whole. Leveraging mitigation dollars will allow for the state to invest in resilient infrastructure to rebuild impacted areas to standards that will reduce impacts from future flooding events. For example, the State may consider combining CDBG-DR funds to leverage HMGP funds used for strategic buyouts in a floodplain. Further details on mitigation projects will be outlined in future action plans.

5. Other Sources of Funds

As part of the state's ongoing recovery efforts, OCD-DRU leverages CDBG-DR funds with the following sources of funds which may include but is not limited to:

- Low-Income Housing Tax Credit Programs;
- HOME Program;
- Medicaid Funded Provision of Medical Services;
- FEMA PA;
- New Market Tax Credit Programs;
- Historic Tax Credit Programs;
- Live Performance Tax Credits Programs;
- HUD 242 Loan Program;
- Private Resources (Developers/Non-Profit Organizations/Homeowners/Landlords);
- Other federal programs and resources; and
- State Capital Outlay Program.

C. Contractor Standards and Appeals Process

Recovery programs implemented by the State of Louisiana will incorporate uniform best practices of construction standards for all construction contractors performing work in all relevant jurisdictions. Construction contractors will be required to carry required licenses, insurance coverage(s) for all work performed, and state-contracted contractors will be required to provide a warranty period for all work performed. Contractor standards will be enumerated for each program (e.g. homeowners and rental property owners) in respective policies and procedures documents, and will pertain to the scale and type of work being performed. The state will implement an appeals process for homeowners, rental property owners and small business owners related to program eligibility and program application process. In addition, the state will implement an appeals process for the Restore Louisiana state managed homeowner program to allow for appeals of rehabilitation contractor work that is not in keeping with established contractor standards and workmanship detailed in relevant policies and procedures manuals governing the respective program. In the state managed homeowner program, the homeowners will make an appeal to the state or its designated vendor to contest the work completed by the state-contracted homebuilding contractor. Details of the point of contact and procedure for submitting the appeal will be detailed in the program policies and procedures. In the homeowner managed program, the homeowner will resolve conflicts with the homebuilding contractor directly, as the state is not a party to the contract between the homeowner and the homebuilding contractor.

The State of Louisiana intends to promote high quality, durable and energy efficient construction methods in affected parishes. All newly constructed buildings must meet all locally adopted building codes, standards and ordinances. In the absence of locally adopted and enforced building codes that are more restrictive than the state building code the requirements of the State Building Code will apply. Future property damage will be minimized by incorporating resilience standards through requiring that any rebuilding be done according to the best available science for that area with respect to base flood elevations.

D. Planning and Coordination

The State of Louisiana has historically experienced flooding, coastal land loss, subsidence and wetland degradation with a significant portion of the southern half of the state below sea level, and the constant threat of tropical storms and hurricanes. Since the flooding and damage associated with hurricanes

Katrina and Rita in 2005, followed by hurricanes Gustav and Ike in 2008 and Hurricane Isaac in 2012, the state has been proactive in undertaking measures that address resiliency and sustainability, as well as educating the public so that future risk for communities and individuals is minimized. Louisiana articulated its vision for a recovery that is “Safer, Stronger and Smarter” translated into the following actions:

- Oversight for ensuring impacted parishes developed Long Term Recovery Plans as required under FEMA’s ESF-14 in 2006;
- State adoption of the National Building Code Standards in 2006;
- Proactively ensuring parish adoption of the Advisory Base Flood Elevations (ABFEs) with concurrent adjustments in permits issued for new construction and height or elevation requirements issued after the respective adoptions;
- Funding of “Louisiana Speaks” – a major regional initiative for all of south Louisiana reflecting visions and strategies for resiliency and sustainable growth practices (May 2007). More than 27,000 citizens, a historical first in the United States, participated in developing the plan. The 94-page document in hardcopy and disc and two subsequent publications: “Louisiana Speaks: Planning Toolkit” and “Louisiana Speaks: Pattern Book” were widely distributed to planners, government entities, local nonprofits and associations and citizens; and
- The Coastal Protection Restoration Authority (CPRA) funded by the Louisiana Legislature to develop a 2017 Coastal Master Plan (CMP) with specific projects within each parish designed for protection of the coast and communities. CPRA collaborates extensively with a wide range of other federal, state and local agencies, has developed an interdisciplinary planning process that engages diverse groups of coastal stakeholders, focus groups, and national and international experts in order to capture the wide range of perspectives and expertise necessary in developing a holistic coastal planning effort for the 2017 CMP. Under the CPRA effort, numerous supporting teams have been formed, which include:
 - Framework Development Team (FDT) which serves as the primary cross-disciplinary collaborative group, consists of representatives from federal, state and local governments; NGOs; business and industry; academia; and coastal communities.
 - Science and Engineering Board (SEB) which includes scientists and engineers with national or international experience who cover the range of disciplines, including socio-economics, coastal modeling, water and natural resources, urban planning, wetlands, fisheries, coastal geoscience, economic policy, and risk reduction
 - Resiliency Technical Advisory Committee (TAC) is a small cross-disciplinary advisory group that offers working-level guidance and recommendations on the programmatic and policy measures needed to implement a comprehensive flood risk and resilience program. The TAC comprises experts in the areas of climate adaptation planning, community planning, socio-economics, social vulnerability, hazard mitigation, disaster planning, and environmental policy.

Because OCD-DRU has administered CDBG-DR disaster recovery funds since 2006, mechanisms are in place to serve as guidelines for not only CDBG compliance, but also comprehensive planning and prioritization of projects for the short-term and long-term recovery of communities. These mechanisms include:

- The state’s template for the development of a disaster recovery proposal to use CDBG-DR funds at the parish level is being adapted to incorporate assurances that projects will reflect “unmet needs” as established in the state’s Action Plan, as well as take into consideration and reflect:
 - The Flood Recovery Strategy emanating from the NDRF;
 - Local ABFEs and Flood Insurance Rate Maps (FIRMs);
 - The parish Hazard Mitigation Plan required by GOSHEP;
 - The parish’s Long Term Recovery Plan (ESF-14);
 - An assessment of local land use plans, zoning and floodplain management ordinances permit requirements;
 - The Master Plan of the CPRA (where applicable); and
 - Regional coordination with the respective regional planning commission.

This action will enable the leveraging of CDBG-DR funds with other funding sources and already identified priorities for sustainability and resiliency;

- The state has guidelines on elevation and costs for specific types of housing and encourages coordination of CDBG-DR funding with FEMA’s HMGP; and
- The Pilot Comprehensive Resiliency Program, implemented in 2010 under funding from hurricanes Gustav and Ike, is a proactive program to develop and facilitate local planning that incorporates sustainability and resiliency into land use plans, zoning and floodplain management. The program funds were made available to local governments and non-profit entities in parishes impacted by hurricanes Gustav and Ike through a competitive application process. Twenty-nine communities were awarded grants through the competitive program. These projects include water management, floodplain ordinances, comprehensive plans, zoning codes and a plan for wetland carbon. In addition, 17 building code inspectors are funded for a two-year period in 10 communities to assist with enforcement and adaptation of permit policies and fees to allow for those communities to ultimately sustain the effort to manage growth, compliance and blight.

The education component of the Resiliency Program, through a joint venture with the LSU Coastal Sustainable Studio, has established a permanent online library, reflecting the plans developed through the Resiliency Program, criteria for determining sustainability and resiliency at the local level and educational tools. The OCD-DRU and LSU initiative includes a series of statewide webinars and workshops that provide national perspectives through recognized experts and local tools and strategies for implementation. Topics to date have included: “Gaining Economic Advantage through Environmental and Hazard Mitigation”, “Social Resilience: Bridging Planning and Communication through Technology” and “Retrofitting for Resiliency”. The Forum, “NFIP: Preparing for Changes to Flood Insurance” that was held June 17, 2013 was designed to help parishes and municipalities develop community-scale strategies that reduce flood risk and increase their scores on the Community Rating System. All webinars and workshops are available on the Louisiana Resiliency Assistance Program website at <http://resiliency.lsu.edu/>. Outreach for these sessions are statewide to elected officials, disaster recovery subrecipients, floodplain managers, planners, etc. Distribution is both by LSU, OCD-DRU and through partners such as the Louisiana Municipal Association, the Louisiana Chapter of the American Planning Association, the Floodplain Management Association and others. Therefore, in preparation of this Action Plan, the state has ensured

that this document does not conflict with any existing regional recovery plans. The state will continue to coordinate with regional and local governments to ensure that all recovery efforts are aligned.

6. Citizen Participation

A. Citizen Participation Plan

The State of Louisiana developed a specific Citizen Participation Plan for disaster recovery from the 2016 Severe Storms and Flooding in compliance with CDBG regulations and all applicable waivers. The plan includes citizen participation requirements both for the state and also the parishes or other entities that will implement activities under this grant. The State's full Citizen Participation Plan is Appendix B of this document.

Citizens and other stakeholders will be given an opportunity for reasonable and timely access to information and a period for submitting comments relating to this Disaster Recovery Action Plan and any ensuing substantial amendments. Publication of the Action Plan, public comment, and substantial amendment criteria is located on the OCD-DRU website.

The state is committed to providing access to the Action Plan and programs detailed within to all its citizens. These efforts include special consideration for those with limited English proficiency (LEP) and persons with disabilities. The Action Plan and substantial amendments will be translated into Spanish and Vietnamese to reach the LEP population in the impacted areas. Citizens with disabilities or those who need technical assistance can contact the OCD-DRU office for assistance, either via:

- Telephone, voice 225-219-9600 or LA Relay Service 711;
- Email at ocd@la.gov; or
- Mail to the Office of Community Development, Disaster Recovery Unit, Post Office Box 94095, Baton Rouge, LA, 70804-9095.

The OCD-DRU website (<http://www.doa.la.gov/Pages/ocd-dru/Index.aspx>) will contain direct links to the Action Plan, amendments, reports and recovery programs and will be updated to provide additional information.

1. Citizen Input

The state has been in ongoing communications with its residents, local government leaders, state legislators and other stakeholders in communities impacted from both the March and August flooding events. This continuous outreach has helped identify the needs and priorities of the impacted communities and informs the programs set forth in this Action Plan.

OCD-DRU personnel have provided ongoing support within the parishes since the flooding events. State officials have held frequent calls and meetings with these and other impacted communities to discuss, among other things, the storms' effects on the local housing stock, infrastructure and business communities. These meetings have included seven public meetings held across the state as part of its Citizen Participation outreach associated with the first allocation of funds, as well as six public meetings of the Recover Louisiana Task Force.

2. Louisiana Disaster Housing Task Force

FEMA's NDRF is a guide that enables effective recovery support to disaster-impacted states, tribes, territorial and local jurisdictions. It provides a flexible structure that enables disaster recovery managers

to operate in a unified and collaborative manner. It also focuses on how best to restore, redevelop and revitalize the health, social, economic, natural and environmental fabric of the community and build a more resilient Nation. As part of Louisiana's framework, the Disaster Housing Task force was created and implemented following Hurricane Isaac. Immediately following the March floods, the Louisiana Disaster Housing Task Force (Task Force) was activated and remained in effect throughout the August flooding event. The Task Force includes: state personnel from OCD-DRU, GOHSEP, the LHC and the state Department of Children and Family Services (DCFS); representatives from HUD and FEMA; and members from the local Voluntary Organizations Active in Disaster (VOAD).

The Task Force has played an essential role in maintaining contact with the leaders of the impacted parishes, assessing needs on the local level and providing data as needed. The state's outreach efforts will continue throughout the duration of the program planning and recovery process, in accordance with the Citizen Participation Plan.

3. Restore Louisiana Task Force

In response to the flooding events in March and August, Governor John Bel Edwards enacted the Restore Louisiana Task Force (RLTF), charged with overseeing the state's recovery efforts from flooding events in 2016. The RLTF comprises key stakeholders from the public and private sectors who represent the entire state, including impacted parishes. Their roles as elected officials or advisory roles in the community position them to provide strategic direction to create policy and advise the governor and OCD-DRU staff in the aftermath of the 2016 Severe Storms and Flooding.

Furthermore, the RLTF establishes and recommends to state and local agencies both short and long-term priorities in developing plans for recovery and redevelopment. These priorities and plans focus on the following areas: housing rehabilitation and redevelopment; economic and workforce development; education, infrastructure and transportation; healthcare; fiscal stability; family services; and agriculture.

Additionally, the RLTF coordinates with GOSHEP, OCD-DRU, and the affected parishes and municipalities to assist in collecting and analyzing data about the ongoing residential, business and public infrastructure needs for recovery, identifying additional sources of federal funding, and sets priorities and offers direction to OCD-DRU and GOHSEP related to the use of funds made available through the Robert T. Stafford Disaster Relief and Emergency Assistance Act and any additional available federal funds.

The state's template for the development of a disaster recovery proposal to utilize CDBG-DR funds has been adapted to incorporate the NDRF process. As a function of the Restore Louisiana Task Force, Task Force members engage in smaller working group sessions to deliberate and recommend program strategies related to particular recovery areas. These working groups have been structured to mirror the Recovery Support Functions (RSF) outlined in the NDRF: Community Planning and Capacity Building; Economic Recovery; Health and Social Services; Housing; Infrastructure Systems; and Natural and Cultural Resources. Each working group has been assigned an OCD-DRU staff member responsible for ensuring that local, state and federal members of the RSFs are invited and encouraged to participate in each of the RLTF working group sessions. By combining these functions, the state has been able to draw upon and incorporate the expertise, strategies and perspectives from local, state and federal stakeholders in the initial and ongoing programs design process.

The RLTF also establishes a federal and state legislative agenda for the recovery and redevelopment effort and for coordinating between levels and branches of government to implement that agenda. The RLTF comprises 21 voting members representing the impacted parishes and communities of Louisiana.

4. Consultation with Units of Local Government, Tribes and Stakeholders

With 56 parishes impacted by the 2016 Severe Storms and Flooding, the state has continued ongoing dialogue and consultation with all Units of Local Governments (UGLGs), stakeholders and tribes during and after the direct impacts of the disasters. OCD-DRU's outreach team provides daily support to many of the impacted parishes and has conducted technical assistance and assessment meetings with impacted parishes. Additionally, OCD-DRU staff has consulted with representatives from local chambers of commerce, financial institutions, non-profit organizations and community development financial institutions to seek input on the experiences of residents and businesses following the storms. Input from these stakeholders has informed the initial program design and ongoing consultation will incorporate best practices and local knowledge into the development of program policies and procedures.

For specific consultation on Action Plan development, the state worked with both the Louisiana Municipal Association (LMA) and the Louisiana Police Jury Association to conduct webinars to provide a platform for UGLGs, non-entitlement, entitlement communities to provide input and consultation. Additionally, through the RSF 1 – Community and Capacity Building (RSF 1) of the Task Force, OCD-DRU staff in coordination with FEMA and GOHSEP have conducted numerous meetings with UGLGs to advise and assess ongoing recovery needs.

In conjunction with the NDRF, the state hosted the ***Louisiana Symposium on Recovery and Resilience*** on December 8, 2016, which provided impacted parishes and municipalities with an opportunity to learn about and share best practices. The one-day event included 184 participants representing 18 flood-impacted parishes. The Symposium provided the following to attendees:

- The opportunity to hear from and dialogue with peers and subject matter experts with experience in addressing recovery issues and resilience in Louisiana and other parts of the nation.
- Information about regional and state watershed management within Louisiana with an opportunity for a targeted discussion on implementation going forward.
- Specifics on how the State of Louisiana's approach to responding to the needs created by the floods.

The symposium included seven breakout sessions, including panels and feedback on risk reduction, resilient implementation, and long term community planning and recovery. The event will be followed up by other statewide training opportunities and targeted workshops in individual communities as needed.

The RSF 1 Planning and Capacity Committee is developing a Community Long-Term Planning Process specifically for Louisiana, building off of the state's Stronger Communities Together process, which has been successful in 32 communities across the state. All six RSF's are participating in the development of the template and will participate in the implementation to be provided to the ten most impacted communities. GOHSEP, FEMA, and OCD-DRU will collaborate to provide oversight of the project. The process is being modified to include: (1) guidance on how to set up a local planning advisory group consisting of a diverse set of key stakeholders who will champion and follow-up on implementation; (2) guidance on the public process of getting residents educated and involved in all aspects of the development of the plan so that they are knowledgeable and supportive of decisions going forward; (3) redesigning the elements to be addressed to reflect the six RSF's as the core – planning/capacity, infrastructure, housing, economic development, health and social resources, natural and cultural resources, and a resilience and hazard mitigation component; and (4) guidance on resilience and hazard mitigation criteria for any projects identified and prioritized so that they are designed to reduce risk. The

criteria mirror what has been developed for the LA SAFE initiative to ensure coordinated efforts and common messaging within local communities and across the state as a whole.

Timeline for a statewide training kickoff is April 2017 with a goal for all communities impacted by 4277 and 4263 to have a resiliency/recovery strategy within six months. Targeted follow-up and support will be provided to the ten most impacted communities throughout the process to ensure this effort is expedited and done as models for other communities within the state and as a template for the NDRF nationally. Support includes on the ground staff support, review of existing hazard mitigation/comprehensive land use plans, education on mitigation/resiliency strategies and best practices, tracking community input, etc.

Combined outreach efforts between GOSHEP, FEMA and OCD-DRU have already been conducted to conduct preliminary capacity assessments and get buy-in from local leadership and stakeholders for the Community Long Term Planning Process.

Through the Governor's Office of Indian Affairs, the state conducted outreach to the ten state recognized tribes after both the March and August flooding events. Two of the ten tribes are located within the impacted parishes, and the state is committed to working with these tribes to ensure that the recovery needs are being addressed.

Additionally, the Governor's Office of Indian Affairs has completed outreach to the four federally recognized tribes and continues to assess impacts and needs of the tribes to ensure recovery needs are being addressed at the state and federal level.

Because of the widespread impact of the flooding events, the state is committed to ongoing consultation through regional public meetings, the RLTF, meetings with UGLGs and tribes in impacted parishes and with the public to ensure the continuation of robust consultation efforts with these key groups throughout the recovery process.

B. Citizen Complaints

The state and its subrecipients have established procedures for responding to citizens' complaints regarding activities carried out utilizing these CDBG-DR funds. The Citizen Participation Plan provides full details. Citizens will be provided with an appropriate address, telephone number and times during which they may submit such complaints. The state and subrecipients will provide a written response to each complaint within 15 days of receiving a complaint, as practicable.

C. Receipt of Comments

This Action Plan was posted for public comment on February 1, 2017. The plan was posted online in English, Spanish, and Vietnamese. Public notices were published in eight newspapers, including The Advocate, the state's journal of record, and a press release was also distributed.

D. Amendments to the Disaster Recovery Action Plan

1. Substantial Amendments

Per 81 FR 83254, substantial amendments are defined by a change in program benefit or eligibility criteria; the addition or deletion of an activity; or the allocation or reallocation of a monetary threshold specified by the grantee. For purposes of this allocation of funding, the state will define the threshold for a substantial amendment as the greater of a re-allocation of more than \$5 million dollars or a reallocation which constitutes a change of 15 percent or greater of a program budget.

Only those amendments that meet the definition of a substantial amendment are subject to the citizen participation process.

2. Submittal of Amendments

A substantial amendment to the Action Plan will follow the same procedures for publication as the original Action Plan in accordance with the Citizen Participation Plan. All amendments, both substantial and non-substantial, will be posted on the OCD-DRU website in sequential order after HUD has given final approval. Action Plan Amendments will also be incorporated into the Original Action Plan.