



December 2020

DISASTER HOUSING

Improved Cost Data and Guidance Would Aid FEMA Activation Decisions

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Why GAO Did This Study

The 2017 and 2018 hurricanes (Harvey, Irma, Maria, Florence, and Michael) caused \$325 billion in damage. FEMA provided post-disaster assistance, including rental and direct housing assistance. DHAP was a pilot grant program that provided temporary rental assistance and was used to respond to several hurricanes before 2017.

GAO was asked to review issues related to major disasters in 2018 and housing assistance provided after the 2017 and 2018 hurricanes. This report (1) describes the assistance FEMA provided in response to those hurricanes, and (2) evaluates the extent to which FEMA considered cost-effectiveness in activating programs.

GAO reviewed FEMA and HUD policies, communications, and other documentation; analyzed FEMA data; and interviewed officials at FEMA headquarters and regional offices, HUD, and Texas state and local government offices.

What GAO Recommends

GAO makes two recommendations to FEMA for its temporary housing programs: (1) identify and make changes to its data systems to allow for capture and analysis of programs' full costs, and (2) specify the information needed to compare projected program costs in its guidance on activating programs. DHS agreed with both recommendations, and said it planned to implement them in 2021–2022.

View [GAO-21-116](#). For more information, contact John Pendleton at (202) 512-8678 or pendletonj@gao.gov.

What GAO Found

The Federal Emergency Management Agency (FEMA) relied primarily on rental assistance payments to assist 2017 and 2018 hurricane survivors but also used direct housing programs to address housing needs, as shown in the table below. GAO found that FEMA provided rental assistance to about 746,000 households and direct housing assistance to about 5,400 households. FEMA did not use the Disaster Housing Assistance Program (DHAP)—a pilot grant program managed jointly with the Department of Housing and Urban Development (HUD)—because FEMA viewed its direct housing programs to be more efficient and cost-effective and did not consider DHAP to be a standard post-disaster housing assistance program.

Number of Households Affected by the 2017 and 2018 Hurricanes That Received Rental and Direct Temporary Housing Assistance, by State or Territory

State or territory	Rental assistance	Direct housing assistance
Florida	422,230	1,241
North Carolina	20,198	656
Puerto Rico	147,620	414
Texas	143,465	2,988
U.S. Virgin Islands	12,147	69
Total number of households	745,660	5,368

Source: Federal Emergency Management Agency (FEMA). | GAO-21-116

Notes: FEMA provided the vast majority of its direct housing assistance through transportable temporary housing units such as manufactured housing. Rental assistance data are as of February 13, 2020, and direct housing assistance data are as of July 15, 2020.

FEMA's analyses of the cost-effectiveness of housing assistance programs were limited because program cost data were incomplete or not readily useable. The Robert T. Stafford Disaster Relief and Emergency Assistance Act requires FEMA to consider factors including cost-effectiveness when determining which types of housing assistance to provide. Although FEMA has stated its direct housing programs were relatively more cost-effective than DHAP, FEMA generally could not support these statements with cost data. Specifically, FEMA does not collect key program data in its system, such as monthly subsidy and administrative costs, in a manner that would allow it to analyze the full costs of providing the assistance. Without such information, the agency's program activation decisions will not be well informed, particularly with regard to cost-effectiveness. FEMA policy guidance also says that FEMA is to compare the projected costs of the direct housing programs it is considering activating, but does not consistently specify what cost information to consider, such as whether to use both programmatic and administrative costs. Without such guidance, FEMA cannot reasonably assure that its assessments and their results incorporate consistent and comparable data.

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Abbreviations

FEMA	Federal Emergency Management Agency
DHAP	Disaster Housing Assistance Program
DHAP-Ike	DHAP for Hurricanes Ike and Gustav
DHAP-Katrina	DHAP for Hurricanes Katrina and Rita
DHAP-Sandy	DHAP for Hurricane Sandy
DHS	Department of Homeland Security
FMR	fair market rent
HUD	Department of Housing and Urban Development
PHA	public housing agency
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act

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December 15, 2020

Congressional Addressees

In 2017, three catastrophic hurricanes (Harvey, Irma, and Maria) affected more than 28 million people in Texas, Florida, Puerto Rico, and the U.S. Virgin Islands during a 4-week period, and caused a combined \$276 billion in damage. Each ranks among the five costliest hurricanes on record, according to the National Oceanic and Atmospheric Administration. In 2018, Hurricanes Florence and Michael caused nearly \$50 billion in damage.¹

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) establishes the process for states, territories, and tribes to request a presidential major disaster or emergency declaration.² A disaster declaration then would trigger federal response and recovery programs.³ The President declared each of the 2017 and 2018 hurricanes as major disasters. In response, the Federal Emergency Management Agency (FEMA), a component of the Department of Homeland Security (DHS), provided financial rental assistance directly to individuals and households and offered direct housing assistance through a variety of subprograms under the Individuals and Households Program.

Some members of Congress and others have raised questions about why FEMA did not reactivate a program that had been used in the past—the Disaster Housing Assistance Program (DHAP)—in response to these hurricanes. DHAP was a joint pilot program of FEMA and the Department of Housing and Urban Development (HUD).⁴

¹For purposes of this report, we refer to Harvey, Irma, and Maria as the 2017 hurricanes and Florence and Michael as the 2018 hurricanes.

²42 U.S.C. §§ 5121-5208.

³After receiving a request for a disaster declaration and for programs and subprograms to be activated, FEMA evaluates the request and recommends the assistance needed and whether the President should declare a major disaster.

⁴FEMA and HUD created DHAP through an interagency agreement in 2007 to augment ongoing disaster assistance efforts in the aftermath of Hurricanes Katrina and Rita (2005). The DHAP pilot subsequently was used for Hurricanes Ike and Gustav in 2008 and Hurricane Sandy in 2013. As discussed later in this report, FEMA does not consider DHAP to be a standard post-disaster housing assistance program or an active program.

The Additional Supplemental Appropriations for Disaster Relief Act of 2019 provided GAO supplemental funds to audit issues related to presidentially declared major disasters that occurred in 2018.⁵ We were also asked to review post-disaster housing assistance after the 2017 and 2018 hurricanes. This report (1) describes the post-disaster housing assistance FEMA provided in response to the 2017 and 2018 hurricanes, including any consideration of DHAP; and (2) evaluates the extent to which FEMA considered cost-effectiveness in activating programs.

For both objectives, we reviewed applicable laws and regulations related to post-disaster housing assistance; FEMA and HUD policies, procedures, and other documentation on DHAP; and FEMA documentation on other temporary housing programs. We also interviewed officials from and reviewed reports by the DHS Office of Inspector General, HUD Office of Inspector General, and Congressional Research Service on the programs. We also visited Texas and interviewed regional FEMA and state and local government officials. In selecting Texas, we considered a number of factors, including the extent to which FEMA considered implementing DHAP in the state in response to Hurricane Harvey.

For the first objective, we reviewed documentation of FEMA's rationale for activating post-disaster temporary housing assistance and any consideration of DHAP. For example, we reviewed FEMA responses to requests from Houston, Texas, and Puerto Rico to activate DHAP in 2017.

For the second objective, we reviewed FEMA legal requirements and policy guidance describing how agency staff should determine which programs to activate after a disaster and in what order. For example, we examined FEMA communications and analyses that demonstrated how the agency considered cost information and other factors to inform its program activation decisions. We also assessed the extent to which FEMA collected complete cost information for direct housing programs. For each of the programs, we reviewed available data and interviewed FEMA officials to determine how FEMA collected and stored cost information, such as in paper files or electronically.

Moreover, for both objectives we analyzed available data. Specifically, we analyzed FEMA data to determine the number of survivors assisted and

⁵Pub. L. 116-20, 133 Stat. 871, 892 (2019).

type of assistance they received following the 2017 and 2018 hurricanes. We also analyzed and compared available cost data on financial rental assistance (hereafter, rental assistance) provided under the Individuals and Households Program, the Direct Lease Program, and DHAP. We were not able to assess the relative cost-effectiveness of these programs because comprehensive cost data were not available, which we discuss later in this report. We selected the programs because they all rely on units available in the housing market. (See appendix II for more information on the results of our analysis.)

We also compared available rental subsidy costs for DHAP and rental assistance and compared the rental subsidies for the two types of assistance with local fair market rents (FMR).⁶ (See appendix III for more detailed information on our methodology and results.) As part of this work, we assessed the reliability of FEMA and HUD data and data systems by reviewing relevant documentation and prior GAO data reliability assessments, performing electronic data checks, and interviewing FEMA and HUD officials with knowledge of the systems and methods used to produce these data. We determined that the data were reliable for the purposes of comparing rental subsidies and fair market rents. See appendix I for more information on our scope and methodology.

We conducted this performance audit from April 2019 to December 2020 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

⁶FMR is what HUD determines to be the monthly cost of modest rental units in a specific market area, plus the cost of utilities, excluding telephone service. This amount is updated yearly based on data HUD collects.

Background

Overview of FEMA's Disaster Housing Assistance

The Stafford Act establishes the process for states, territories, and tribes to request a presidential major disaster or emergency declaration.⁷ If approved, the declaration triggers federal response and recovery programs.⁸ One of these programs is FEMA's Individual Assistance Program, which provides assistance to disaster survivors to cover necessary expenses and serious needs (including housing) that cannot be met through insurance or low-interest loans. The Individual Assistance Program consists of six subprograms, including the Individuals and Households Program.⁹

Assistance through the Individuals and Households Program is temporary (generally limited to 18 months after a disaster declaration).¹⁰ One form of assistance is temporary housing, through which households receive rental assistance (to obtain housing while displaced from their primary residence). If households are unable to use rental assistance to secure

⁷42 U.S.C. §§ 5121-5208.

⁸After receiving a request for a disaster declaration and for programs and subprograms to be activated, FEMA evaluates the request and recommends the assistance needed and whether the President should declare a major disaster.

⁹The other five subprograms are (1) Mass Care and Emergency Assistance, which provides life-sustaining services and resources to disaster survivors, such as shelter and food; (2) Crisis Counseling Assistance and Training, which assists individuals and communities in recovering from the psychological effects of a disaster; (3) Disaster Unemployment Assistance, which provides unemployment benefits and reemployment services to individuals unemployed because of a disaster; (4) Disaster Legal Services, which provides free legal help to survivors; and (5) Disaster Case Management, which provides survivors with a single point of contact to facilitate access to services.

¹⁰FEMA defines temporary housing as assistance that covers the gap between survivors "sheltering" (receiving short-term life-sustaining services in a safe and sanitary environment) and returning to permanent housing. Temporary housing assistance may be extended if an extension is determined to be in the public interest.

temporary housing, FEMA may provide direct temporary housing assistance at the request of the state, territory, or tribal government.¹¹

FEMA may provide rental assistance to displaced survivors of disasters. Survivors receive payments—based on the FMR for the location of the pre-disaster residence and on the number of bedrooms the household requires—to rent temporary housing. The payments, including initial and continued assistance awards, can be provided for up to 18 months, plus one additional month used for a security deposit.¹²

FEMA may provide direct housing assistance when requested from state, territory, or tribal governments, and when eligible disaster survivors are unable to use rental assistance to secure temporary housing.¹³ At the time of our review, FEMA guidance described three direct housing programs, as shown in figure 1.¹⁴

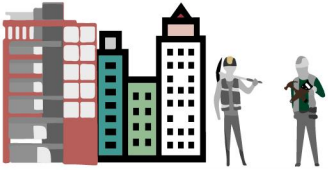


¹¹Other types of financial housing assistance include reimbursement for time spent at hotels or other short-term lodging, and home repair or replacement assistance. The Individuals and Households Program also includes financial assistance for services and needs such as funeral, medical, dental, and child care. We excluded from our analysis financial housing assistance programs that do not provide temporary housing assistance. For more information about our scope and methodology, see appendix I.

¹²In 2020, we found that 26 percent of financial assistance expenditures from 2010 through 2019 under the Individuals and Households Program were for rental assistance. For more information, see GAO, *Disaster Assistance: Additional Actions Needed to Strengthen FEMA's Individuals and Households Program*, [GAO-20-503](#) (Washington, D.C.: Sept. 30, 2020).

¹³When determining which housing assistance to provide, the Stafford Act and its implementing regulations require FEMA to consider cost-effectiveness, convenience to individuals and households, and suitability and availability. See 42 U.S.C. § 5174(b)(2)(A) and 44 C.F.R. § 206.110(c).

¹⁴FEMA also may provide assistance for permanent or semi-permanent housing construction through direct housing assistance programs when no alternative housing resources are available and all other types of temporary housing are unavailable, infeasible, or not cost-effective. FEMA's Multi-Family Lease and Repair and Direct Lease Programs were developed since DHAP was last implemented in 2013.

Figure 1: FEMA Direct Housing Programs That Provide Temporary Disaster Housing Assistance

Program	Description
<p>Multi-Family Lease and Repair</p> 	<p>FEMA places disaster survivors in existing, vacant multifamily housing (such as apartments) that the agency has repaired or improved.</p>
<p>Transportable Temporary Housing Units</p> 	<p>FEMA places disaster survivors in FEMA-purchased or leased units such as manufactured housing that can be placed on private, commercial, or group sites. Private sites are typically on the survivor's property. Commercial sites are manufactured home parks in which FEMA leases pads. Group sites are on land that local governments provide, on which FEMA adds infrastructure such as pads and utilities.</p>
<p>Direct Lease</p> 	<p>FEMA places disaster survivors in residential properties that are not typically available to the public, such as corporate apartments or vacation rentals. FEMA contracts with property management companies to locate, acquire, and manage properties for the program.</p>

Source: Federal Emergency Management Agency (FEMA). | GAO-21-116

Data table for Figure 1: FEMA Direct Housing Programs That Provide Temporary Disaster Housing Assistance

Program	Description
Multi-Family Lease and Repair	FEMA places disaster survivors in existing, vacant multifamily housing (such as apartments) that the agency has repaired or improved.
Transportable Temporary Housing Units	FEMA places disaster survivors in FEMA-purchased or leased units such as manufactured housing that can be placed on private, commercial, or group sites. Private sites are typically on the survivor's property. Commercial sites are manufactured home parks in which FEMA leases pads. Group sites are on land that local governments provide, on which FEMA adds infrastructure such as pads and utilities.
Direct Lease	FEMA places disaster survivors in residential properties that are not typically available to the public, such as corporate apartments or vacation rentals. FEMA contracts with property management companies to locate, acquire, and manage properties for the program.

Overview of the Disaster Housing Assistance Program

DHAP was a pilot grant program that provided disaster survivors with temporary rental assistance, through local public housing agencies

(PHA), and supported their transition to long-term housing.¹⁵ FEMA and HUD created DHAP through an interagency agreement in 2007 to augment ongoing disaster assistance efforts in the aftermath of Hurricanes Katrina and Rita (2005), known as DHAP-Katrina. The DHAP pilot subsequently was used for Hurricanes Ike and Gustav (DHAP-Ike) in 2008 and Hurricane Sandy (DHAP-Sandy) in 2013. As discussed later in this report, FEMA does not consider DHAP to be a standard post-disaster housing assistance program or an active program.

In addition to providing rental assistance for survivors, DHAP was intended to promote self-sufficiency through mandatory case management and a requirement for families to incrementally increase their contributions to their monthly rent.¹⁶ DHAP was modeled after HUD's Housing Choice Voucher program, and HUD administered the program through its network of local PHAs.¹⁷ Under DHAP, PHAs were responsible for helping participating households search for housing, making rental subsidy payments, performing unit inspections, and reporting financial and other data in HUD's data systems.¹⁸ We discuss the features of DHAP and other temporary housing assistance programs in more detail in appendix IV.

FEMA Did Not Use DHAP and Largely Relied on Rental Assistance, Rather Than Direct

¹⁵PHAs typically are local agencies created under state law to manage housing for low-income residents at rents they can afford.

¹⁶As of September 30, 2020, DHAP had been activated three times: in 2007, to serve survivors of Hurricanes Katrina and Rita; in 2008, for Hurricanes Ike and Gustav; and in 2013, for Hurricane Sandy. Under DHAP-Katrina and DHAP-Ike, rent contributions generally started at \$50 per month and incrementally increased by an additional \$50 each month thereafter. Under DHAP-Sandy, rent contributions were based on pre-disaster housing expenses or on a percentage of the household's post-disaster adjusted gross income, with the contribution percentage increasing every 3 months.

¹⁷PHAs administer the Section 8 Housing Choice Voucher Program, which assists very low-income families, the elderly, and disabled persons rent housing in the private market. Participants are free to choose any housing that meets program requirements and are not limited to units in subsidized housing projects.

¹⁸PHAs also were responsible for providing case-management services under DHAP-Katrina and DHAP-Ike.

Housing, to Assist 2017 and 2018 Hurricane Survivors

While rental assistance constituted the vast majority of temporary housing assistance FEMA provided after the 2017 and 2018 hurricanes, FEMA also used three direct housing programs—Multi-Family Lease and Repair, Transportable Temporary Housing Units, and Direct Lease—but not DHAP. FEMA denied requests from the governments of the City of Houston and Puerto Rico to activate DHAP for Hurricanes Harvey and Maria, respectively. In its responses, FEMA indicated that the agency could meet the housing needs of the survivors through its other temporary housing programs, including the Direct Lease Program. For example, in a letter to the Mayor of Houston, FEMA explained that eligible survivors of Hurricane Harvey who needed direct housing assistance could receive assistance through the Direct Lease and Multi-Family Lease and Repair Programs at no cost to them. Similarly, in a letter to the Governor of Puerto Rico, FEMA stated that the agency preferred the Direct Lease Program to DHAP because it could be implemented more quickly and with less administrative burden (because it would not require the agency to enter into agreements with HUD and local PHAs for program administration). The letter also noted that, unlike DHAP, the Direct Lease Program did not require participants to contribute to their rent or find housing on their own.¹⁹

In addition, FEMA indicated on its website that it did not activate DHAP in response to Hurricane Maria based on its interpretation that a 2011 DHS Office of Inspector General report concluded that DHAP was neither efficient nor cost-effective.²⁰ Partly for this reason, FEMA officials told us that the agency did not consider DHAP to be a standard form of direct

¹⁹As previously noted, households participating in DHAP were expected to incrementally increase contributions to their monthly rent. Although PHAs helped these households search for a rental unit, ultimately the household was responsible for identifying a unit. Under Direct Lease, FEMA (through contractors) identifies participating rental units.

²⁰Federal Emergency Management Agency, “Myths vs. Facts: Disaster Housing Assistance Program for Maria Survivors,” News Release FS 037 (Washington, D.C.: June 7, 2018). Accessed on September 14, 2020, at <https://www.fema.gov/news-release/20200220/myths-vs-facts-disaster-housing-assistance-program-maria-survivors>. Department of Homeland Security, Office of Inspector General, *Effectiveness and Costs of FEMA’s Disaster Housing Assistance Program*, OIG-11-102 (Washington, D.C.: Aug. 12, 2011). The 2011 report recommended that FEMA conduct a cost-benefit analysis of DHAP before reactivating the program, which FEMA had not completed as of September 2020.

housing assistance or to be an active program at the time of the 2017 and 2018 hurricanes. However, the DHS Office of Inspector General clarified to FEMA that its 2011 report found that the Office of Inspector General could not evaluate the effectiveness and efficiency of DHAP because FEMA did not maintain reliable program effectiveness and cost information. We examine FEMA’s statements about the relative cost-effectiveness of these programs later in this report.

While FEMA used its three direct housing programs in 2017 and 2018, they did not play a large role in addressing the temporary housing needs of disaster survivors. Instead, FEMA primarily provided rental assistance through the Individuals and Households Program. Specifically, table 1 shows that FEMA provided rental assistance to approximately 746,000 households, as of February 13, 2020.

Table 1: Number of Households Affected by the 2017 and 2018 Hurricanes That Received Rental Assistance, as of February 13, 2020

State or territory	Hurricane	Year	Number of households assisted
Texas	Harvey	2017	143,465
Florida	Irma	2017	401,149
Puerto Rico	Irma Maria	2017	147,620
U.S. Virgin Islands	Irma Maria	2017	12,147
North Carolina	Florence	2018	20,198
Florida	Michael	2018	21,081
Total			745,660

Source: GAO analysis of Federal Emergency Management Agency data. | GAO-21-116

In contrast, table 2 shows that FEMA assisted about 5,400 households through its direct housing programs, as of July 15, 2020. Transportable temporary housing units were the most frequently used form of temporary housing (and used only in the continental United States). Direct Lease was used most often in Puerto Rico and Multi-Family Lease and Repair was used only in Puerto Rico.

Table 2: Number of Households Affected by the 2017 and 2018 Hurricanes That Received Direct Temporary Housing Assistance, by Program, as of July 15, 2020

State or territory	Hurricane	Year	Multi-Family Lease and Repair ^a	Transportable Temporary Housing Units	Direct Lease	Total
Texas	Harvey	2017	0	2,853	135	2,988
Florida	Irma	2017	0	246	72	318
Puerto Rico	Irma Maria	2017	17	0	397	414
U.S. Virgin Islands	Irma Maria	2017	0	0	69	69
North Carolina	Florence	2018	0	656	0	656
Florida	Michael	2018	0	883	40	923
Total number of households served			17	4,638	713	5,368

Source: GAO analysis of Federal Emergency Management Agency data. | GAO-21-116

^aFEMA activated but did not implement the program for Hurricanes Harvey, Florence, or Michael because it did not identify any feasible properties.

The widespread use of rental assistance over direct housing programs is consistent with FEMA guidance that states the agency may provide direct temporary housing assistance only when eligible households are unable to use rental assistance to secure temporary housing.

Scarcity of Data Limits FEMA’s Ability to Determine the Relative Cost-Effectiveness of Direct Housing Programs

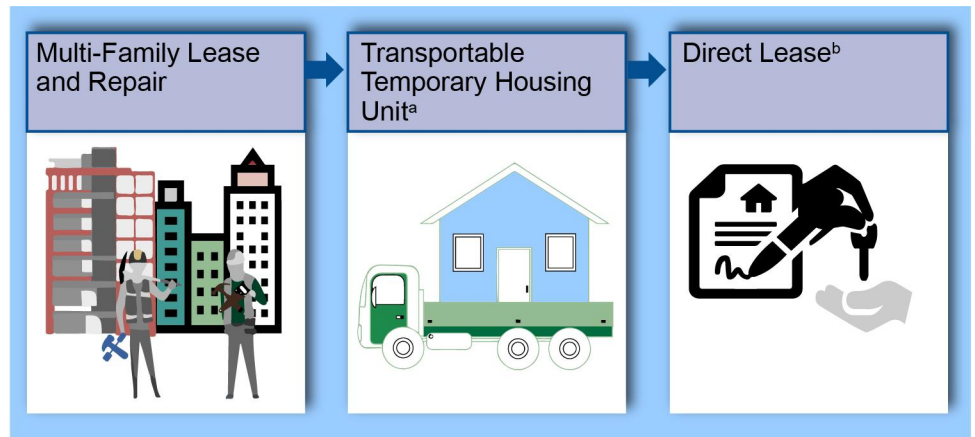
Although FEMA has stated its direct housing programs were relatively more cost-effective than DHAP, FEMA generally could not support these statements with cost data. As previously discussed, a 2011 DHS Office of Inspector General report found that the Office of Inspector General could not evaluate the effectiveness and efficiency of DHAP because FEMA did not maintain reliable program effectiveness and cost information.²¹

According to FEMA, it developed a sequence in 2016 to help guide the

²¹OIG-11-102. The 2011 report recommended that FEMA conduct a cost-benefit analysis of DHAP before reactivating the program. FEMA did not conduct this analysis because, according to the agency, cost information was not available and it does not plan to use the program to respond to future disasters. The DHS Office of Inspector General closed this recommendation.

agency's determination for when to activate direct housing programs (see fig. 2). FEMA officials said the sequence generally ranks the programs by their cost-effectiveness.²²

Figure 2: FEMA's General Sequence for Considering Activation of Direct Temporary Housing Assistance



Source: Federal Emergency Management Agency (FEMA). | GAO-21-116

^aTransportable temporary housing units are first considered for private sites provided by an applicant, and then for commercial sites (existing manufactured home parks).

^bAfter considering Direct Lease, FEMA staff are to consider activation of transportable temporary housing units on group sites (FEMA-constructed sites on land that state, tribal, or territorial governments provide).

But we found that cost data issues—which we examine in the following sections—have persisted and largely precluded FEMA from demonstrating the relative cost-effectiveness of its housing programs and DHAP. The data limitations also limited our ability to compare the costs and cost-effectiveness of direct housing programs (see apps. II and III).

FEMA Data on Direct Housing Costs Have Limitations

Multi-Family Lease and Repair. FEMA stated that it determined that the Multi-Family Lease and Repair Program was the most cost-effective form of direct housing based on historical data. However, officials acknowledged that the program had not been widely used since its creation and that available cost information for the program is therefore limited. For example, in 2008, FEMA conducted two pilots of the program

²²Other factors FEMA considered in developing the sequence were convenience to individuals and households and timeliness and availability of the form of assistance.

(as required by Congress) and found that repairs and monthly operating costs for each unit under the program were 66–83 percent less than the cost of providing manufactured homes under the Transportable Temporary Housing Units Program.²³ FEMA based the analysis on the rehabilitation of two small properties: a 7-unit apartment property in Cedar Rapids, Iowa, and a 32-unit apartment complex in Galveston, Texas.²⁴

Moreover, the data are incomplete because FEMA does not collect unit-level data needed to assess the full cost of implementing the Multi-Family Lease and Repair Program. FEMA guidance states that when implementing the program, the agency is required to calculate the value of the lease for a property by deducting the repairs and improvements and routine maintenance costs. If the cost of repairs and improvements is below the total amount of rent required by the lease, FEMA is to pay the remaining amount of rent to the owner through monthly rent payments. If these costs are above the total rent required by the lease, no additional monthly rent is paid. FEMA also may pay a monthly maintenance fee for the duration of the program, but FEMA’s data systems do not capture these data.

Transportable Temporary Housing Units. Costs associated with the implementation of the program include the purchase, delivery, installation, maintenance, repair, and removal of the units. In February 2020, the DHS Office of Inspector General found that FEMA did not maintain complete records on the costs of implementing the program in response to Hurricane Harvey.²⁵ Specifically, the report stated that FEMA took 8 months to provide records, such as invoices, needed to calculate program costs and that when FEMA responded, it provided incomplete information. For example, FEMA provided invoices for 1,866 of the 2,596

²³See Federal Emergency Management Agency, *Individuals and Households Pilot Program Fiscal Year 2009 Report to Congress* (Washington, D.C.: May 19, 2009).

²⁴The Multi-Family Lease and Repair Program was piloted to respond to two disasters in 2008: severe storms, tornadoes, and flooding in Iowa and Hurricane Ike in Texas. FEMA most recently implemented the Multi-Family Lease and Repair Program following the 2016 flooding in Baton Rouge, Louisiana, rehabilitating 12 properties with a total of 163 units. According to FEMA, the total amount of expenditures for these units was approximately \$2,195,634 (an average per-property cost of about \$182,970 and an average per-unit cost of \$13,470).

²⁵Department of Homeland Security, Office of Inspector General, *FEMA Purchased More Manufactured Housing Units Than It Needed in Texas After Hurricane Harvey*, OIG-20-15 (Washington D.C.: Feb. 26, 2020).

units (72 percent) requested. The DHS Office of Inspector General recommended that FEMA take steps to maintain a complete set of supporting documentation, including invoices and bills for the program. FEMA concurred with the recommendation and said it would identify any resources needed to improve its records management system for its direct housing-related costs. As of September 2020, FEMA had not yet addressed this recommendation.

Direct Lease. We found that FEMA does not maintain Direct Lease data in a format that could allow the agency to readily calculate the full cost of the program.²⁶ Specifically, FEMA does not capture the monthly rent paid for Direct Lease units or associated direct administrative costs (such as set-up fees and monthly property management fees) needed to determine the full cost of providing housing under the program. Instead, FEMA collects data at the contract level on program obligations and expenditures (accounting-related transactions), which FEMA uses to calculate aggregate expenditures for its direct housing programs.²⁷ FEMA officials said the only sources for the unit-level information needed to calculate the full cost of these programs are individual contract documents (hard copy), which could be located in a relevant FEMA field or regional office.

Indirect administrative costs for direct housing programs. FEMA tracks the administrative costs for its overall Individual Assistance Program, which includes rental assistance and direct housing programs. But FEMA does not collect data on indirect administrative costs such as

²⁶Because we could not estimate the cost-effectiveness of FEMA's direct housing programs, we compared available rental subsidy costs for DHAP and rental assistance and how the rental subsidies for the programs compared to local fair market rents (see app. III for more information).

²⁷FEMA collects the accounting-related transaction data in its Web Integrated Financial Management Information System. According to FEMA data, as of June 18, 2020, the agency expended approximately \$18 million to provide Direct Lease assistance to households affected by the 2017 and 2018 hurricanes. See appendix II for more detailed information about these expenditures.

disaster-related personnel costs, including salaries and benefits for staff of each direct housing program.²⁸

The Stafford Act requires FEMA to consider cost-effectiveness, among other things, when determining the appropriate housing assistance to provide to disaster survivors.²⁹ Furthermore, the National Disaster Housing Strategy states that when analyzing disaster housing options, FEMA should assess how cost-effective a housing unit would be in absolute terms and in terms of its value relative to other housing options.³⁰ Additionally, we call for identification of data sources and collection procedures to obtain relevant, credible information and plans to analyze data in ways that allow for valid conclusions to be drawn.³¹ According to FEMA officials, the agency's systems were not designed to capture these cost data on its direct housing programs. For example, according to FEMA officials, the Housing Operations Management Enterprise System captures some unit-level data for direct housing programs, such as dates for when a household moves in and out of a unit and location of the unit.³² However, it does not track cost data for direct housing programs.

FEMA officials stated that the agency has been developing a new enterprise data system called the Grants Management Modernization System. In April 2019, we reported on delays with the implementation of the system and recommended that FEMA finalize time frames for

²⁸FEMA said it started tracking these costs partially in response to a prior GAO recommendation and based on a cost-benefit analysis the agency conducted. In December 2014, we recommended that the FEMA Administrator assess the costs versus the benefits of tracking administrative cost data for major disasters by Public Assistance, Individual Assistance, Hazard Mitigation, and Mission Assignment, and if feasible, track this information. FEMA implemented this recommendation. See GAO, *Federal Emergency Management Agency: Opportunities Exist to Strengthen Oversight of Administrative Costs for Major Disasters*, [GAO-15-65](#) (Washington, D.C.: Dec. 17, 2014).

²⁹The other factors are convenience to individuals and households and suitability and availability. See 42 U.S.C. § 5174(b)(2)(A) and 44 C.F.R. § 206.110(c).

³⁰Federal Emergency Management Agency, *National Disaster Housing Strategy* (Washington, D.C.: Jan. 16, 2009).

³¹GAO, *Designing Evaluations: 2012 Revision*, [GAO-12-208G](#) (Washington, D.C.: Jan. 31, 2012).

³²FEMA uses the Housing Operations Management Enterprise System to manage direct housing assistance programs. We reported that program officials said the system lacks controls, is inconsistently used by field staff, and has incomplete information. See [GAO-20-503](#) for more information.

implementing the system.³³ FEMA officials said this system would allow the agency to streamline the process of providing direct housing assistance by replacing paper-based processes with electronic transactions. They also said the system would allow the agency to capture unit-level data, depending on the type of temporary housing provided.

However, FEMA officials told us that system development is being conducted in phases, and the disaster housing assistance component remains in the design phase. According to the officials, while the new system could be configured to collect cost information such as rental rates and associated fees of a housing unit, discussions on what data the system will capture on the direct housing assistance programs have not yet occurred. As of September 22, 2020, FEMA officials said they were not yet able to finalize a time frame for full system implementation of this component.

Having cost information for its direct housing programs—such as through the new Grants Management Modernization System—would enable FEMA to account for the full costs of each program. Without such information, the agency’s program activation decisions will not be well-informed in relation to cost-effectiveness, which the Stafford Act requires FEMA to consider.

Available Data Show That Subsidy Costs of Rental Assistance and DHAP Were Similar, but Differences in Administrative and Other Costs Could Not Be Compared

Our analysis of available data showed that the subsidy costs of FEMA’s rental assistance and DHAP were similar, but we could not compare the administrative and other costs because FEMA does not collect these data. The average unit subsidy cost under both types of assistance were similar in two of the four comparison groups at which we looked for Hurricanes Katrina and Rita (see table 3). For the other two comparison groups, the subsidy cost was lower under rental assistance than under DHAP (the difference averaged 13 percent). When comparing these costs

³³FEMA concurred with the recommendation but, as of September 2020, the agency had not implemented it. See GAO, *FEMA Grants Modernization: Improvements Needed to Strengthen Program Management and Cybersecurity*, [GAO-19-164](#) (Washington, D.C.: Apr. 9, 2019).

for Hurricanes Ike and Gustav, the costs either were similar or averaged 16 percent higher under rental assistance than under DHAP. Similarly, our comparison of the subsidy costs for selected hurricanes and the local fair market rent (FMR) showed that the average subsidy costs were generally below or similar to the applicable FMR.³⁴ The similar costs across these two programs are, in part, due to requirements to apply the FMR to limit rent levels subsidized under both types of assistance. See appendix III for more details on our subsidy costs comparison analyses and the results.

Table 3: Relative Subsidy Costs of Two Types of Rental Assistance Used for Hurricanes Katrina, Rita, Ike, and Gustav and Comparison to the FMR, Selected Comparison Groups, Fiscal Years 2008 and 2009

Comparison groups	RA and DHAP-Katrina compared to each other		RA and DHAP-Katrina compared to FMR		RA and DHAP-Ike compared to each other		RA and DHAP-Ike compared to FMR	
	RA	DHAP	RA	DHAP	RA	DHAP	RA	DHAP
Number of groups in which subsidy cost was higher	0	2	0	0	15	0	12	0
Number of groups in which subsidy cost was similar	2	2	2	0	2	2	4	4
Number of groups in which subsidy cost was lower	2	0	2	4	0	15	1	13
Total comparison groups	4	4	4	4	17	17	17	17

Legend: DHAP = Disaster Housing Assistance Program; FMR = fair market rent; RA = rental assistance

Source: GAO analysis of Federal Emergency Management Agency (FEMA) and Department of Housing and Urban Development data. | GAO-21-116

Notes: To develop the comparison groups, we selected samples of rental units in counties where there were at least 30 observations for units of a particular size (for instance, 2-bedroom) and the subsidy cost for a unit was at least \$100 in fiscal year 2019 dollars. An observation is a unit that a household rented in a fiscal year in a county (such as a 2-bedroom unit in Harris County, Texas, in fiscal year 2008). FEMA used DHAP three times. The initial version was known as DHAP-Katrina, which served survivors of Hurricanes Katrina and Rita; DHAP-Ike served survivors of Hurricanes Ike and Gustav; and DHAP-Sandy served survivors of Hurricane Sandy.

We could not compare the administrative and other costs of rental assistance and DHAP. Household-level data were not available for either

³⁴As previously noted, FMR is what HUD determines to be the monthly cost of modest rental units in a specific market area, plus the cost of utilities, excluding telephone service.

program.³⁵ However, because FEMA and HUD established the administrative and case-management fees for DHAP before its implementation, we were able to estimate the fees paid to the five largest PHAs that administered DHAP-Katrina and DHAP-Ike. Administrative fees were equal to approximately 22 and 18 percent of the DHAP-Katrina and DHAP-Ike subsidy costs, respectively.³⁶ Similarly, the case-management fees were approximately 14 and 17 percent of the subsidy costs of DHAP-Katrina and DHAP-Ike, respectively. Administrative cost information was not available for rental assistance because FEMA tracks administrative costs only at the overall Individual Assistance Program level.³⁷ As previously discussed, this is a significant gap in the information because these costs can make up a relatively large part of the total cost of delivering housing assistance and related services.

FEMA Has Revised Guidance for Conducting Direct Housing Assessments but Does Not Specify All Required Cost Information

FEMA recently revised its policies and procedures on how to assess projected costs when determining which direct housing programs to activate after disasters, but the current guidance does not specify which

³⁵FEMA does not track households after they exit temporary post-disaster housing; thus, information is not available on the extent to which households subsequently obtained permanent housing. However, a HUD study surveyed a sample of households that received post-disaster housing through DHAP-Katrina. The results of the study indicated that 2 years after the program ended more than half of the DHAP-Katrina households had transitioned to the Housing Choice Voucher program and many households that did not transition to this program appeared to be at risk of housing instability. But HUD also stated that without a control or comparison group, it was not possible to know how these or similar households would have fared without DHAP-Katrina. It also was not possible to determine the role of household characteristics versus program interventions and economic or other conditions that could have influenced outcomes. Department of Housing and Urban Development, *Study of Household Transition from the Disaster Housing Assistance Program (DHAP-Katrina)* (Washington, D.C.: March 2013).

³⁶For DHAP-Katrina, PHAs also received a fee for pre-transition activities including briefing families on DHAP and the process by which the household may transition to the program. We could not estimate the expenditures for this fee because data were not available.

³⁷As previously discussed, the Individual Assistance Program consists of six subprograms, including the Individuals and Households Program. Rental assistance is provided under the Individuals and Households Program.

costs to include.³⁸ In 2020, FEMA issued a guide for its direct housing programs that generally replaces guidance in effect for the 2017 and 2018 hurricanes.³⁹ The previous FEMA guidance directed staff to complete a series of assessments in which they were to document whether an individual direct housing program was needed after a disaster or why it could not be used.⁴⁰ However, agency staff did not consistently conduct these assessments. Agency officials told us they did not think it was necessary to complete all the assessments given the magnitude of the 2017 hurricanes and the need to activate the available programs.

According to FEMA officials, the agency has since revised its assessment process and documentation requirements and these changes are intended to more consistently assess direct housing options when multiple catastrophic events happen within short periods of time.⁴¹ Under the 2020 Direct Housing guidance, FEMA is to compare the relative projected costs of each direct housing program it is considering activating.

³⁸As previously discussed, FEMA does not consider DHAP to be an active program or a standard post-disaster housing assistance program; therefore, FEMA did not include the program in its policies and procedures for activating programs after a disaster.

³⁹Federal Emergency Management Agency, *Direct Housing Guide* (Washington, D.C.: February 2020).

⁴⁰Federal Emergency Management Agency, *Recovery Standard Operating Procedure: Direct Housing Assessment* (Washington, D.C.: August 2017). FEMA was to conduct three types of assessments after the 2017 and 2018 disasters to inform its decisions on the appropriate types of direct housing assistance to provide: (1) Direct Housing Initial Assessment, which assessed the need for direct housing assistance; (2) Direct Housing Analytical Assessment, which was used to recommend the specific types of assistance needed; and (3) Direct Housing Implementation Planning documentation, which identified compliance and resource requirements and available locations and properties for implementing the direct housing assistance needed.

⁴¹FEMA combined elements of the three types of assessments required in the 2017 and 2018 guidance into a single assessment called the Sheltering and Housing Strategy.

However, the guidance does not specify what cost information FEMA staff should consider when conducting these assessments.⁴²

- **Multi-Family Lease and Repair Program and Transportable Temporary Housing Units (private and commercial sites).** Once FEMA approves direct housing assistance, it can activate these programs. The 2020 Direct Housing Guide describes the process for approving estimated property repair costs for Multi-Family Lease and Repair using the cost of acquiring the lowest-cost manufactured housing unit FEMA provides as a baseline.⁴³ According to the guide, this is done to ensure that implementation of Multi-Family Lease and Repair remains cost-effective compared to other forms of assistance per the Stafford Act.⁴⁴ However, the guidance for this comparative analysis does not require consideration of all program costs for transportable temporary housing units, such as those associated with delivering, installing, maintaining, repairing, and removing the units.
- **Direct Lease Program and Transportable Temporary Housing Units (group sites).** When requesting to activate Direct Lease, FEMA staff responsible for coordination between FEMA and state agencies and other entities are to include the estimated costs and time frames associated with Direct Lease, as well as the costs and time frames of implementing programs that precede it in the sequence (Multi-Family Lease and Repair and transportable temporary housing units on private and commercial sites). Activation of transportable temporary housing units in group sites also requires a separate written request with the estimated costs of implementing this program. However, the 2020 Direct Housing Guide and related guidance do not specify what

⁴²FEMA regional offices coordinate with state and local officials to assess disaster-caused community impacts and determine the availability of housing resources. FEMA also deploys teams of headquarters and regional staff to help develop a strategy for identifying housing options for disaster survivors (in the Sheltering and Housing Strategy). Authorizing officials in FEMA use information from the strategy and related assessments to determine whether to activate direct housing assistance and which programs to activate.

⁴³According to FEMA officials, staff also may use multifamily lease and repair properties that exceed the baseline if (1) the agency determines not enough properties within baseline are available to meet needs, and (2) using the above-baseline properties would still be more cost-effective than using transportable temporary housing units.

⁴⁴Pursuant to Section 408(c)(1)(B)(ii) of the Stafford Act (42 U.S.C. § 5174(c)(1)(B)(ii)), FEMA has authority, to the extent it would be a cost-effective alternative to other temporary housing options, to enter into lease agreements with owners of multifamily rental properties in areas covered by a major disaster declaration to provide temporary housing to eligible individuals and households and make the repairs needed to make the housing safe and adequate.

cost information to include in this analysis, such as programmatic and administrative cost data.

As previously discussed, the National Disaster Housing Strategy states that when analyzing disaster housing options, FEMA should assess how cost-effective a housing unit would be in absolute terms and in terms of its value relative to other housing options. According to FEMA, detailed information on the types of costs that need to be included in the cost estimates is not included in its guidance because the costs can vary by program and location. For example, FEMA said that the cost of expanding a commercial site for placement of transportable temporary housing units can vary based on the amount of work required to prepare the site (such as excavation or paving and ensuring access to utilities) and market rates for labor and materials. Given the variation in costs, FEMA officials said that they do not want to be prescriptive about what costs staff should consider. However, FEMA officials also said it is possible to develop general categories of program costs that staff could use to compare cost estimates across direct housing programs.

Without more specific guidance on the program costs that should be assessed when determining which direct housing assistance programs to activate, FEMA may not take into account the full potential costs of the programs it chooses to activate. Staff also may interpret guidance differently, creating a lack of consistency in how assessments are conducted and decisions are made. In addition, FEMA cannot provide reasonable assurance that the projected costs of activating the programs incorporate comparable costs.

Conclusions

FEMA does not consider DHAP to be a standard post-disaster housing assistance program and considers its direct housing assistance programs to be more cost-effective. FEMA has developed policies and tools to help it consider which of its current direct housing programs to activate after a disaster. However, information on the cost-effectiveness of these programs is limited because FEMA does not collect program data in a manner that allows the agency to analyze the full costs of providing such assistance. FEMA is statutorily directed to consider certain factors, including cost-effectiveness, before activating its programs. The limitations of the cost data diminish FEMA's ability to do so. The development of a new enterprise data system offers FEMA opportunities to readily capture comprehensive cost data, which FEMA currently does

not plan to collect. By capturing such information in this or another relevant system, FEMA would be able to better judge whether its program activation decisions balance cost-effectiveness against the other requirements of the Stafford Act for meeting the housing needs of disaster survivors.

FEMA recently issued guidance on post-disaster assessments, but the guidance does not consistently specify the cost information required to estimate housing program implementation costs. By revising the guidance to specify which cost information to use in its assessments, FEMA could more consistently compare the projected costs of implementing each direct housing program.

Recommendations for Executive Action

We are making the following two recommendations to FEMA:

The Administrator of FEMA should identify and make changes to the applicable data system to capture cost data, including administrative costs for each of its housing assistance programs that will allow the agency to analyze the full cost of providing assistance under each program. (Recommendation 1)

The Administrator of FEMA should specify the information needed to compare the projected costs of each direct housing program in its guidance for assessing which programs to activate. (Recommendation 2)

Agency Comments and Our Evaluation

We provided a draft of this report to DHS and HUD for review and comment. In written comments, which are summarized below and reproduced in appendix V, DHS agreed with both of our two recommendations. DHS also provided technical comments, which we incorporated as appropriate. HUD did not provide any comments.

In its general comments, DHS stated that FEMA did not implement DHAP in response to the 2017 and 2018 hurricanes because FEMA developed Direct Lease assistance as a more efficient and effective alternative to DHAP. However, as discussed in the report, due to data limitations, FEMA could not support these statements with cost data.

DHS agreed with the draft report's first recommendation to identify and make changes to its Grants Management Modernization System or other applicable data system to capture cost data, including administrative costs for each of its housing assistance programs that will allow the agency to analyze the full cost of providing assistance under each program. Specifically, it stated that FEMA plans to identify requirements needed to meet this recommendation and identify a system for implementation by September 2021. According to DHS, FEMA plans to implement the new system by September 30, 2022. As part of its technical comments, DHS suggested that we omit reference to a specific system to provide them greater flexibility for implementing the recommendation. Although the recommendation in the draft report provided that flexibility by acknowledging that changes also could be made in another applicable data system, we revised the recommendation to clarify our intent by deleting "Grants Management Modernization System."

DHS agreed with our second recommendation to specify the information needed to compare the projected costs of each direct housing program in its guidance for assessing which programs to activate. DHS stated that FEMA plans to develop and finalize internal job aids and templates as needed to specify the information necessary to estimate projected costs of direct housing options and perform comparative analyses to evaluate potential direct housing solutions. FEMA plans to implement the recommendation by September 30, 2021.

We are sending copies of this report to the appropriate congressional committees and the Secretary of Homeland Security, the Secretary of Housing and Urban Development, and the FEMA Administrator. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-8678 or pendletonj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VI.

Letter

A handwritten signature in black ink that reads "John H. Pendleton". The signature is written in a cursive style with a long horizontal flourish extending to the right.

John H. Pendleton
Director, Financial Markets and Community Investment

List of Addressees

The Honorable Gary C. Peters
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate
The Honorable Shelley Moore Capito
Chairman
The Honorable Jon Tester
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
United States Senate
The Honorable Lucille Roybal-Allard
Chairwoman
The Honorable Chuck Fleischmann
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
House of Representatives

Appendix I: Objectives, Scope, and Methodology

This report (1) describes the post-disaster housing assistance the Federal Emergency Management Agency (FEMA) provided in response to the 2017 and 2018 hurricanes, including any consideration of the Disaster Housing Assistance Program (DHAP); and (2) evaluates the extent to which FEMA considered cost-effectiveness in activating programs. We focused our review on hurricanes that occurred in 2017 (Harvey, Irma, and Maria) and 2018 (Florence and Michael)—for which the President declared a major disaster and for which FEMA provided temporary housing assistance through its Individuals and Households Program.

For both objectives, we reviewed applicable laws and regulations related to post-disaster housing assistance. We reviewed FEMA and Department of Housing and Urban Development (HUD) documentation of program policies, administrative procedures, guidelines, and communications, such as letters and emails. We also reviewed Department of Homeland Security (DHS) Office of Inspector General, HUD Office of Inspector General, HUD, and Congressional Research Service reports on DHAP and post-disaster temporary housing programs.¹ We reviewed FEMA programs that provided temporary housing assistance and excluded from our review programs related to sheltering and permanent housing assistance.² We interviewed FEMA, HUD, DHS Office of Inspector General, HUD Office of Inspector General, and Congressional Research Service officials.

¹For example, see Department of Homeland Security, Office of Inspector General, *Effectiveness and Costs of FEMA's Disaster Housing Assistance Program*, OIG-11-102 (Washington, D.C.: Aug. 12, 2011); and *FEMA Purchased More Manufactured Housing Units Than It Needed in Texas After Hurricane Harvey*, OIG-20-15 (Washington, D.C.: Feb. 26, 2020). Also see Congressional Research Service, *The Evolving Use of Disaster Housing Assistance and the Roles of the Disaster Housing Assistance Program (DHAP) and the Individuals and Households Program (IHP)*, IN11094 (Washington, D.C.: Apr. 9, 2019).

²FEMA defines temporary housing as that which covers the gap between sheltering and the return of disaster survivors to permanent housing. Sheltering is the provision of short-term life-sustaining services in a safe, sanitary, and secure environment for disaster survivors, while permanent housing can be sustained without continued disaster-related assistance.

We also visited Texas and interviewed regional FEMA, state, and local government officials (including public housing agency officials) for their views on DHAP and FEMA's other temporary housing programs. We selected Texas for our visit based on the following factors: (1) the state was affected by a disaster in the time period of our review (2017–2018); (2) FEMA considered implementing DHAP in the state in response to Hurricane Harvey; (3) FEMA authorized the use of the Direct Lease and Disaster Case Management Programs—which had been used in place of DHAP—in Texas; and (4) public housing agencies that administered DHAP for past disasters were located in the state.³

For the first objective, we reviewed documentation from FEMA that described which post-disaster temporary housing assistance the agency activated and explained FEMA's reasons for not activating DHAP after the 2017 and 2018 hurricanes. For example, we reviewed FEMA responses to requests from Houston, Texas, and Puerto Rico to activate DHAP in 2017. We reviewed documentation from HUD and the DHS Office of Inspector General related to DHAP after the 2017 and 2018 hurricanes.

For the second objective, we reviewed applicable laws, regulations, FEMA unified policy guidance, and standard operating procedures describing how the agency should determine which programs to activate after a disaster and in what order. We also reviewed information from FEMA needs assessments, program approval letters, and other documentation that described FEMA analyses and the factors the agency considered, including cost-effectiveness, in making its program activation decisions for the 2017 and 2018 hurricanes. We reviewed FEMA's program guidance, the National Disaster Housing Strategy, and GAO guidance on evaluating programs.⁴

We assessed the extent to which FEMA collected complete cost information for direct housing programs. For each of these programs, we requested and reviewed available data and interviewed FEMA officials to determine how FEMA collected and stored cost information, such as whether information was maintained in paper files or electronically.

³The City of Houston, Texas, requested that FEMA activate DHAP after Hurricane Harvey and FEMA and HUD developed a draft agreement to administer DHAP for this disaster.

⁴For example, see Federal Emergency Management Agency, *National Disaster Housing Strategy* (Washington, D.C.: Jan. 16, 2009). Also, see GAO, *Designing Evaluations: 2012 Revision*, [GAO-12-208G](#) (Washington, D.C.: Jan. 31, 2012).

Additionally, we interviewed FEMA officials on the cost-effectiveness of their post-disaster temporary housing programs and the data systems used to collect and maintain cost information.

Furthermore, for both objectives we analyzed available data. Specifically, we analyzed FEMA data on the number of survivors assisted and type of temporary housing assistance FEMA provided following the 2017 and 2018 hurricanes. We also analyzed aggregate cost data to describe the total subsidy amounts of DHAP and the financial rental assistance (rental assistance) provided under the Individuals and Households Program, the Direct Lease Program, and to the extent possible, the average monthly subsidies of these programs. We selected these three types of temporary housing assistance because they rely on available units in the housing market.

We compared available rental subsidy costs for DHAP and rental assistance, which were the only types of assistance with data available at the household level. We also assessed how the rental subsidies for these types of assistance compared to local fair market rents. We assessed the reliability of the data by reviewing relevant documentation and prior GAO data reliability assessments, performing electronic data checks, and interviewing FEMA and HUD officials with knowledge of the systems and methods used to produce these data. We deemed these data sufficiently reliable for the purpose of comparing program subsidy costs and fair market rents. For additional information on our methodology and data sources, see appendixes II and III.

We also identified and compared key features of DHAP and FEMA's temporary housing assistance programs. We identified and selected key program features by reviewing FEMA and HUD program guidance and standard operating procedures, and consulting GAO guidance on program reviews.⁵ The factors we considered in our selection included those affecting program goals and costs, and those affecting program participants, such as supportive services. To identify key features of DHAP, we reviewed operating requirements issued by HUD, interagency agreements between FEMA and HUD, FEMA guidance, and Congressional Research Service reports. To identify key features of other post-disaster housing programs, we reviewed FEMA program guidance,

⁵GAO, *Fragmentation, Overlap, and Duplication: An Evaluation and Management Guide*, GAO-15-49SP (Washington, D.C.: Apr. 14, 2015).

standard operating procedures, and policy memorandums. See appendix IV for more information.

We conducted this performance audit from April 2019 to December 2020 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Descriptive Statistics for Selected Post-Disaster Rental Assistance Programs

This appendix provides descriptive statistics that we developed on selected post-disaster rental assistance programs of the Federal Emergency Management Agency (FEMA). Our review found that FEMA had limited data readily available to assess the full cost of its temporary housing assistance programs.¹ As a result, we analyzed aggregate cost data to describe the total subsidy amounts (rental assistance payments) and, to the extent possible, the average monthly subsidy amounts of the three different types of temporary housing that rely on available units in the housing market: the financial rental assistance (rental assistance) provided under the Individuals and Households Program, the Disaster Housing Assistance Program (DHAP), and the Direct Lease Program. When possible, we also described the administrative costs of the programs.

Overview of Assistance for Which We Analyzed Certain Cost Data

The primary form of temporary housing FEMA provides to eligible disaster survivors (households) is rental assistance; that is, payments to households to rent temporary housing while they are displaced from their primary residences. FEMA provided rental assistance to disaster survivors after the following hurricanes: Katrina and Rita in 2005; Ike and Gustav in 2008; Sandy in 2012; Harvey, Irma, and Maria in 2017; and Florence and Michael in 2018.²

¹FEMA defines temporary housing as assistance that covers the gap between survivors “sheltering” (receiving short-term life-sustaining services in a safe and sanitary environment) and returning to permanent housing (which can be sustained without continued disaster-related assistance).

²For purposes of this report, we refer to Harvey, Irma, and Maria as the 2017 hurricanes and Florence and Michael as the 2018 hurricanes.

FEMA also may provide temporary housing assistance in the form of housing units to eligible disaster survivors unable to use rental assistance to secure temporary housing. Since Hurricane Katrina, FEMA has used different programs that rely on the existing rental market to provide this assistance, including DHAP and Direct Lease.³

- DHAP was a joint FEMA and Department of Housing and Urban Development (HUD) pilot program that provided rental assistance and case-management services to survivors of disasters. FEMA used DHAP three times. The initial version was known as DHAP-Katrina, which served survivors of Hurricanes Katrina and Rita; DHAP-Ike served survivors of Hurricanes Ike and Gustav; and DHAP-Sandy served survivors of Hurricane Sandy. Local public housing agencies (PHA) assisted with the administration of DHAP.
- For the 2017 and 2018 hurricanes, FEMA generally provided direct rental housing assistance to survivors through its Direct Lease Program, which places disaster survivors in residential properties that are not typically available to the public, such as corporate apartments or vacation rentals.⁴

Available Cost Data, by Type of Assistance

Available data on costs vary by type of assistance. For example, data were available on monthly rental assistance payments (subsidy costs) provided to survivors for both rental assistance and DHAP, but only aggregate costs (total expenditure of the program at the disaster-event level) were available for Direct Lease. Furthermore, data on administrative costs for each of the three programs are limited or not available. We present selected cost data by type of assistance in the following section.

³Similar to FEMA rental assistance, under DHAP households were responsible for identifying a rental unit. Similar to FEMA's Direct Lease program, under DHAP the federal government made rental payments directly to landlords on behalf of eligible disaster survivors.

⁴FEMA also activated the Multi-Family Lease and Repair and the Transportable Temporary Housing Units Programs after these hurricanes. Multi-Family Lease and Repair uses rental properties in multifamily properties, but FEMA did not widely use this program to assist survivors of these hurricanes. As a result, we focused on rental assistance and Direct Lease because, like DHAP, they rely on the existing rental market.

Appendix II: Descriptive Statistics for Selected Post-Disaster Rental Assistance Programs

Rental Assistance. For this type of assistance, FEMA maintains information such as rental assistance payments, temporary housing unit location, and number of bedrooms in the unit.⁵ See table 4 for information on the number of households assisted, total subsidy cost, and average subsidy cost of the rental assistance provided for selected hurricanes.

Table 4: Number of Households Served and Total and Average Subsidy Cost of Rental Assistance, by Selected Hurricanes, as of February 13, 2020

Hurricane	Year	Number of households served	Total subsidy cost (2019 dollars)	Average monthly subsidy cost per household (2019 dollars)
Katrina	2005	670,543	3,110,000,000	925
Rita	2005	57,353	105,000,000	675
Ike	2008	67,860	199,000,000	970
Gustav	2008	23,434	59,200,000	839
Sandy	2012	137,701	650,000,000	1,585
Harvey	2017	143,465	341,000,000	1,059
Irma	2017	407,786	543,000,000	1,157
Maria	2017	153,130	152,000,000	537
Florence	2018	20,198	38,300,000	819
Michael	2018	21,081	48,300,000	941
Total		1,702,551	5,245,800,000	951

Source: GAO analysis of Federal Emergency Management Agency data. | GAO-21-116

FEMA tracks rental assistance payments but not administrative costs for rental assistance. FEMA stated the agency instead tracks major administrative costs for its overall Individual Assistance Program, which includes the administration of rental assistance.

DHAP. For DHAP, HUD required PHAs to report PHA-level information on the number of units leased and housing assistance payments made each month into the Voucher Management System.⁶

⁵FEMA uses the National Emergency Management Information System, which stores survivor case files, as the master database to administer its assistance programs.

⁶The Voucher Management System is HUD’s centralized system to monitor and manage PHAs and to obligate and disburse voucher funding to them.

Appendix II: Descriptive Statistics for Selected Post-Disaster Rental Assistance Programs

Our analysis shows that the five largest PHAs that administered DHAP-Katrina provided a total of approximately \$241 million in subsidy payments, with an average monthly subsidy payment of \$808 in 2019 dollars (see table 5).⁷

Table 5: Number of Households Served and Total and Average Monthly Subsidy Payment from the Five Largest PHAs That Administered DHAP-Katrina

Public Housing Agency (PHA)	Number of households served	Total subsidy payment (2019 dollars)	Average monthly subsidy payment per household (2019 dollars)
Housing Authority of New Orleans, Louisiana	6,006	120,106,202	909
Harris County Housing Authority, Texas	3,481	47,129,763	645
Houston Housing Authority, Texas	2,437	45,069,002	840
Housing Authority of Jefferson Parish, Louisiana	1,649	22,341,020	752
Housing Authority of East Baton Rouge, Louisiana	713	5,997,272	647
Total	14,287	240,643,259	808

Source: GAO analysis of Department of Housing and Urban Development data. | GAO-21-116

Notes: Using data from the Disaster Information System, we selected the five largest PHAs that administered DHAP in response to Hurricanes Katrina and Rita (DHAP-Katrina) based on the total number of households they served. Because the Voucher Management System data we used to calculate the subsidy payment costs only capture the number of households served each month, we could not calculate the total number of unique households that each PHA served through DHAP-Katrina. As a result, we calculated the average number of households served to approximate the number of households assisted through DHAP-Katrina.

The five largest PHAs that administered DHAP-Ike provided a total of approximately \$127 million in subsidy payments, with an average monthly subsidy payment of \$714 in 2019 dollars (see table 6).⁸

⁷Using data from the Disaster Information System we selected the five largest PHAs that administered DHAP-Katrina based on the total number of households they served. The Housing Authority of New Orleans, Harris County Housing Authority, Houston Housing Authority, Housing Authority of Jefferson Parish, and Housing Authority of East Baton Rouge administered assistance to the majority of the DHAP-Katrina survivors.

⁸Using data from the Disaster Information System, we selected the five largest PHAs that administered DHAP-Ike based on the total number of households they served. The Housing Authority of the City of Galveston, Harris County Housing Authority, Houston Housing Authority, Housing Authority of Port Arthur, and Pilgrim Rest Community Development Agency administered the majority of assistance to DHAP-Ike survivors.

**Appendix II: Descriptive Statistics for Selected
Post-Disaster Rental Assistance Programs**

Table 6: Number of Households Served and Total and Average Monthly Subsidy Payment from the Five Largest PHAs That Administered DHAP-Ike

Public Housing Agency (PHA)	Number of households served	Total subsidy payment (2019 dollars)	Average monthly subsidy payment per household (2019 dollars)
Housing Authority of the City of Galveston, Texas	1,615	50,668,192	784
Harris County Housing Authority, Texas	1,279	32,238,350	720
Houston Housing Authority, Texas	815	22,461,906	707
Housing Authority of Port Arthur, Texas	551	13,679,688	637
Pilgrim Rest Community Development Agency, Louisiana	407	8,415,141	530
Total	4,667	127,463,277	714

Source: GAO analysis of Department of Housing and Urban Development data. | GAO-21-116

Notes: Using data from the Disaster Information System, we selected the five largest PHAs that administered DHAP in response to Hurricanes Ike and Gustav (DHAP-Ike) based on the total number of households they served. Because the Voucher Management System data we used to calculate the subsidy payment costs only capture the number of households served each month, we could not calculate the total number of unique households that each PHA served through DHAP-Ike. As a result, we calculated the average number of households served to approximate the number of households assisted through DHAP-Ike.

For DHAP-Sandy, the PHA that administered the program provided a total of approximately \$5 million in subsidy payments, with an average monthly subsidy payment of approximately \$1,860 (2019 dollars).

In addition to subsidy payments, FEMA paid fees associated with the provision of case-management services and program administration to participating PHAs. These fees changed each time FEMA activated DHAP for HUD implementation (see table 7).

Table 7: Case-Management and Administrative Fees FEMA Paid Under Each DHAP Iteration

Program fee	DHAP-Katrina	DHAP-Ike	DHAP-Sandy
Case-management fee Case-management services include a needs assessment and individual development plan, which guided the service provision to the household for the duration of the household's participation in DHAP.	\$92 per month for each household receiving case-management services	\$100 per month for each household receiving case-management services	Not applicable – PHAs did not provide case management under this program

**Appendix II: Descriptive Statistics for Selected
Post-Disaster Rental Assistance Programs**

Program fee	DHAP-Katrina	DHAP-Ike	DHAP-Sandy
Administrative fees			
Pre-transition activities fee Pre-transition services include briefing families on DHAP and the process by which the household may transition to the program and briefing potential property owners on the program.	\$92 per month for each household that received pre-transition services between September 1, 2007, and November 1, 2007	None	None
One-time placement fee Fee paid for the successful placement of the household in DHAP.	\$1,000–\$1,500	\$1,000	\$150–\$600, depending on when a household entered a contract to participate in the program and whether the PHA used a broker to locate a rental unit
Administrative fee Ongoing PHA responsibilities, such as determining whether rents are reasonable and inspecting units to ensure they are decent, safe, and sanitary.	15% of initial estimated DHAP rent subsidy payment for each assigned household	One-time \$1,000 administrative fee for each family assigned to the PHA from the beginning of the program through July 2009 Beginning August 1, 2009, 14% of initial DHAP rent subsidy for each month household is under contract	One-time \$500 administrative fee for each family assigned to the PHA Ongoing fees of \$100 per month per household once under contract
<i>Broker fees</i> If needed, for using a real estate broker to identify available units meeting program requirements.	None	None	Maximum \$1,500 per household

Legend: DHAP = Disaster Housing Assistance Program; FEMA = Federal Emergency Management Agency; PHA = public housing agencies.

Source: GAO analysis of Department of Housing and Urban Development information. | GAO-21-116

Note: DHAP was activated three times and was referred to as DHAP-Katrina (2007) which served survivors of Hurricanes Katrina and Rita; DHAP-Ike (2008) which served survivors of Hurricanes Ike and Gustav; and DHAP-Sandy (2013) which served survivors of Hurricane Sandy.

Tables 8 and 9 provide estimates of the case-management and administrative fees that FEMA paid to the five largest PHAs that administered DHAP-Katrina and DHAP-Ike.⁹

⁹The Voucher Management System data are reported on a monthly basis and represent the rental assistance payments and number of households served in a particular month. Because some of the case-management and administrative fees were based on the number of households referred to HUD rather than the actual survivors served under DHAP, we used the Voucher Management System data to estimate costs associated with these fees.

**Appendix II: Descriptive Statistics for Selected
Post-Disaster Rental Assistance Programs**

Table 8: Estimated Expenditures for Case-Management and Administrative Fees, by the Five Largest PHAs That Administered DHAP-Katrina

PHA	Case-management fee^a (2019 dollars)	Placement fee (range)^b (2019 dollars)	Administrative fee (2019 dollars)
Housing Authority of New Orleans, Louisiana	14,652,898	7,279,426 - 10,919,139	18,015,930
Harris County Housing Authority, Texas	8,207,840	4,219,830 - 6,329,745	7,069,465
Houston Housing Authority, Texas	6,066,634	2,954,392 - 4,431,588	6,760,350
Housing Authority of Jefferson Parish, Louisiana	3,292,678	1,999,260 - 2,998,890	3,351,153
Housing Authority of East Baton Rouge, Louisiana	1,023,692	864,400 - 1,296,600	899,591
Total	33,243,743	17,317,308 - 25,975,962	36,096,489

Legend: DHAP = Disaster Housing Assistance Program; PHA = public housing agency.

Source: GAO analysis of Department of Housing and Urban Development (HUD) data. | GAO-21-116

Note: Using data from the Disaster Information System, we selected the five largest PHAs that administered DHAP in response to Hurricanes Katrina and Rita (DHAP-Katrina) based on the total number of households they served.

^aDHAP-Katrina was implemented in three phases and the case-management fee was calculated using two different approaches during each phase. For an initial period, HUD calculated the fee based on the number of households assigned to the PHA. After that period, HUD based the fee on the number of households participating in the program. The Voucher Management System captured data on the actual number of units leased and housing assistance payments made each month for DHAP. As a result, our estimate does not account for families who were assigned to the program but ultimately did not participate in it.

^bThe placement fee for households that were in a FEMA-assisted or identified unit was \$1,000; for all other households the fee was \$1,500. HUD's Voucher Management System did not capture data on whether households were in FEMA-assisted or identified units. Therefore, we estimated the minimum and maximum amount that a PHA could receive based on the possible two fee amounts. PHAs also received a pre-transition activities fee; but we could not estimate the expenditures for this fee because data were not available.

Table 9: Estimated Expenditures for Case-Management and Administrative Fees, by the Five Largest PHAs That Administered DHAP-Ike

PHA	Case-management fee (2019 dollars)	Placement fee (2019 dollars)	Administrative fee (2019 dollars)
Housing Authority of the City of Galveston, Texas	7,627,074	1,891,240	6,726,116
Harris County Housing Authority, Texas	5,304,838	1,498,438	4,281,519
Houston Housing Authority, Texas	3,760,116	954,775	2,895,283
Housing Authority of Port Arthur, Texas	2,544,377	645,317	1,855,282
Pilgrim Rest Community Development Agency, Louisiana	1,872,172	477,102	1,330,112
Total	21,108,577	5,466,873	17,088,312

Legend: DHAP = Disaster Housing Assistance Program; PHA = public housing agency.

Source: GAO analysis of Department of Housing and Urban Development data. | GAO-21-116

Note: Using data from the Disaster Information System we selected the five largest PHAs that administered DHAP in response to Hurricanes Ike and Gustav (DHAP-Ike) based on the total number of households they served. For an initial period, PHAs were paid a one-time administrative fee of \$1,000 for households assigned to the PHA. After this period, PHAs were paid 14 percent of the initial

Appendix II: Descriptive Statistics for Selected Post-Disaster Rental Assistance Programs

DHAP rent subsidy payment for each month the household was in the program. The Voucher Management System captured data on the actual number of units leased and housing assistance payments made each month for DHAP. As such, our estimate does not account for families who were assigned to the program but ultimately did not participate in it.

Direct Lease. FEMA does not capture data on the monthly rent paid or associated administrative costs of the Direct Lease Program. Instead, FEMA collects accounting-related transactions such as obligations and expenditures.¹⁰ Based on these data, FEMA is able to provide aggregate obligations and expenditures but is not able to provide unit-level cost data (see table 10).

Table 10: Total Direct Lease Program Obligations and Expenditures, as of June 18, 2020, by Hurricane

Disaster area	Hurricane	Year	Obligated dollars	Expended dollars
Florida	Irma	2017	4,256,737	4,073,510
Texas	Harvey	2017	3,966,482	3,741,173
Puerto Rico	Irma	2017	0	0
Puerto Rico	Maria	2017	6,768,107	6,743,107
U.S. Virgin Islands	Irma	2017	0	0
U.S. Virgin Islands	Maria	2017	1,975,895	1,804,188
North Carolina	Florence	2018	Not applicable	Not applicable
Florida	Michael	2018	1,749,523	1,392,102
Total			18,716,744	17,754,080

Source: Federal Emergency Management Agency. | GAO-21-116

Note: The Direct Lease Program was not activated to respond to Hurricane Florence.

Similar to rental assistance, FEMA does not track general administrative costs for the Direct Lease Program.

¹⁰FEMA collects accounting-related transactions in its Web Integrated Financial Management Information System.

Appendix III: Comparison of Available Subsidy Costs Data for the Disaster Housing Assistance Program and Rental Assistance

This appendix compares the subsidy amounts provided under two types of Federal Emergency Management Agency (FEMA) temporary housing assistance—financial rental assistance (rental assistance) provided under the Individuals and Households Program and the Disaster Housing Assistance Program (DHAP).¹ Our review found that FEMA had limited data readily available to assess the cost-effectiveness of its temporary housing assistance programs. Because we could not estimate the cost-effectiveness of these programs, we compared their subsidy amounts.²

- **Rental Assistance** provides payments to households to cover the monthly rent of temporary housing while they are displaced from their primary residences (and is provided in all disasters for which the Individuals and Households Program is authorized). FEMA provided rental assistance to survivors of Hurricanes Katrina and Rita that made landfall in 2005; Ike and Gustav in 2008; Sandy in 2012; Harvey, Irma, and Maria in 2017; and Florence and Michael in 2018.³
- The **Disaster Housing Assistance Program** made rental payments directly to landlords on behalf of eligible disaster survivors. FEMA has used DHAP three times: in 2007 to serve survivors of Hurricanes Katrina and Rita (DHAP-Katrina), in 2008 to serve survivors of Hurricanes Ike and Gustav (DHAP-Ike), and in 2013 for Hurricane

¹FEMA defines temporary housing as that which covers the gap between disaster survivors “sheltering” (receiving short-term life-sustaining services in a safe and sanitary environment) and returning to permanent housing (which can be sustained without continued disaster-related assistance). Temporary housing assistance may be extended upon a determination that an extension would be in the public interest.

²We conducted the analysis based on household-level data.

³For purposes of this report, we refer to Harvey, Irma, and Maria as the 2017 hurricanes and Florence and Michael as the 2018 hurricanes.

**Appendix III: Comparison of Available Subsidy
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Sandy (DHAP-Sandy). Local public housing agencies (PHA) assisted with the administration of DHAP.

We also compared the housing subsidy amounts of these programs to a local rental cost benchmark—the Department of Housing and Urban Development’s (HUD) fair market rent (FMR) for the area where an assisted unit is located.⁴

Available Subsidy Cost Data We Analyzed

For rental assistance, we analyzed available applicant data for the hurricanes mentioned previously. The data, available at the household level from a FEMA information system, included total amounts of rental assistance awarded for what are termed initial and continued rental periods.⁵ FEMA awards an initial rental assistance payment to eligible households for up to 2 months, and may award continued rental assistance for up to 18 months. FEMA does not require households to provide the address of the rental unit to receive initial payments, but requires households applying for continued assistance to provide the location of the rental unit. Therefore, we focused our analysis of the FEMA data on continued rental assistance. To determine the monthly housing assistance payments, we used data for the total amounts of rental assistance and total number of months the assistance was awarded.

For DHAP, we analyzed available household-level data for DHAP-Katrina, DHAP-Ike, and DHAP-Sandy from a HUD information system.⁶ For each DHAP iteration from 2008 through 2014, we analyzed monthly housing assistance payments.

⁴FMR is the HUD-estimated cost of renting a moderately priced dwelling in a local housing market. HUD annually estimates FMR for standard-quality rental units throughout the United States. FMRs help determine rental subsidies for HUD’s rental assistance programs.

⁵FEMA provided data on rental assistance, as of February 13, 2020, from its National Emergency Management Information System, which stores survivor case files.

⁶Data are from HUD’s Disaster Information System, which HUD used to administer DHAP. HUD required PHAs to submit household-level data into this system. DHAP-Katrina operated from November 1, 2007, to March 1, 2009; DHAP-Ike from November 1, 2008, to March 31, 2010; and DHAP-Sandy from March 25, 2013, to December 31, 2014.

Methodologies We Used for Subsidy Costs Comparisons

We performed three comparisons:

- subsidized costs for rental assistance to subsidized costs for DHAP, in fiscal years 2008 (for Hurricanes Katrina and Rita) and 2009 (for Hurricanes Ike and Gustav);
- subsidized costs for these two types of assistance to the published FMR in the local area (county), in fiscal years 2008 and 2009 (for Hurricanes Katrina, Rita, Ike, and Gustav); and
- subsidized costs for rental assistance to the FMR, in fiscal years 2014, 2018, 2019, and 2020 (for Hurricanes Sandy, Harvey, Irma, Maria, Florence, and Michael).

To make these comparisons, we analyzed data for a small sample of locations for which we had sufficient data to conduct the analysis. The sample was limited by missing data on the locations of the rental units and housing assistance payments. We initially selected counties with more than 100 observations (household records). We subsequently selected samples of rental units in counties where there were at least 30 observations per unit and the subsidy cost for a unit was at least \$100 in fiscal year 2019 dollars. An observation is a unit that a household rented in a county in a fiscal year (for example, a 2-bedroom unit in Harris County, Texas, in fiscal year 2008).

For our first comparison analysis, we created lower and upper values of the confidence interval of the difference in the means of the subsidy costs. The difference in subsidy costs is statistically significant if the constructed confidence interval of the difference does not include zero; costs are similar otherwise. For our second and third comparison analyses, we used the confidence interval estimate of the subsidy costs for determining comparability. The subsidy costs are regarded as statistically different if the confidence interval does not include the FMR;

costs are similar, otherwise.⁷ The estimates are by fiscal year, county, and number of bedrooms.

Results of Our Comparison Analysis

Subsidy costs under rental assistance generally were lower than under DHAP-Katrina, but they generally were higher than under DHAP-Ike.⁸ Across the hurricanes in our scope, subsidy costs under rental assistance also generally were lower than the local FMR. We analyzed 72 comparison groups (which consist of rental units by bedroom count and by county, for different fiscal years).

Katrina and Rita (Fiscal Year 2008)

For Hurricanes Katrina and Rita, we compared the subsidy costs under both types of assistance for four comparison groups in two counties in fiscal year 2008. As shown in figure 3, the subsidy costs under rental assistance were similar to or lower than the costs under DHAP (by an average of 13 percent). When we compared rental assistance to the local FMR, subsidy costs also varied across the comparison groups (lower in two—by an average of 15 percent—and similar in two).⁹ In contrast, subsidy costs for DHAP were lower than the local FMR for all four comparison groups (by an average of 4 percent).

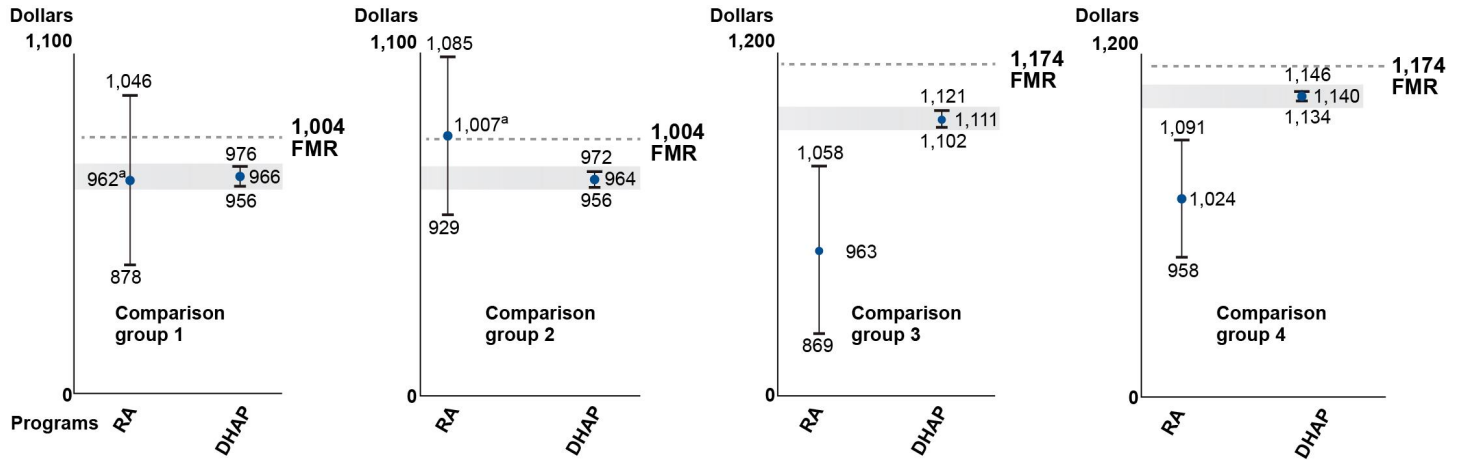
⁷We excluded comparison groups where the subsidy costs were the same by fiscal year, county, and number of bedrooms, meaning that the standard errors of the estimates were zero. According to FEMA, these likely represented cases in which the subsidy costs were the same as the local FMR. Thus, the samples we analyzed represented cases in which the subsidy costs were lower than the FMR or FEMA approved an increase in the subsidy costs of up to 125 percent of the FMR based on the actual costs of the rental units. As a result, disaster survivors received different dollar amounts, ranging from the FMR to 125 percent of the FMR. The larger amounts involved disasters with many displaced survivors and limited rental resources.

⁸We combined Hurricanes Katrina and Rita, and also Ike and Gustav because DHAP had been activated to respond for the combined (not the individual) hurricanes.

⁹According to FEMA, the subsidy costs were lower or equal to the FMR because the subsidy costs were generally the same as the FMR of the local area. Where subsidy costs were higher than the FMR, FEMA had approved an increase in subsidy costs based on the actual costs of the rental units.

Appendix III: Comparison of Available Subsidy Costs Data for the Disaster Housing Assistance Program and Rental Assistance

Figure 3: Range of Subsidy Costs of Two Types of Rental Assistance Used for Hurricanes Katrina and Rita and Comparison to FMR, Selected Comparison Groups, Fiscal Year 2008



Legend: DHAP = Disaster Housing Assistance Program; FMR = fair market rent; RA = rental assistance

● = mean

┆ = Interval for estimate (2.5 to 97.5th percentile)

Source: GAO analysis of Federal Emergency Management Agency and Department of Housing and Urban Development data. | GAO-21-116

Data table for Figure 3: Range of Subsidy Costs of Two Types of Rental Assistance Used for Hurricanes Katrina and Rita and Comparison to FMR, Selected Comparison Groups, Fiscal Year 2008

Comparison Group 1

	FRA	DHAP
middle	962	966
bottom	878	956
top	1046	976
FMR	--	1004

Comparison Group 2

	FRA	DHAP
middle	1007	964
bottom	929	956
top	1085	972
FMR	--	1004

Appendix III: Comparison of Available Subsidy Costs Data for the Disaster Housing Assistance Program and Rental Assistance

Comparison Group 3

	FRA	DHAP
middle	963	1111
bottom	869	1102
top	1058	1121
FMR	--	1174

Comparison Group 4

	FRA	DHAP
middle	1024	1140
bottom	958	1134
top	1091	1146
FMR	--	1174

Note: To develop the comparison groups, we selected samples of rental units in counties where there were at least 30 observations for units of a particular size (for instance, 2-bedroom) and the subsidy cost for a unit was at least \$100 in fiscal year 2019 dollars. An observation is a unit that a household rented in a fiscal year in a county (such as a 2-bedroom unit in Harris County, Texas, in fiscal year 2008). When comparing programs, subsidy costs are statistically different when the ranges for the confidence intervals do not overlap.

^aSubsidy costs were not statistically different from the FMR (and therefore considered to be similar).

Ike and Gustav (Fiscal Year 2009)

For Hurricanes Ike and Gustav, we compared the subsidy costs of both types of assistance for 17 comparison groups in nine counties in fiscal year 2009. As shown in table 11, subsidy costs under DHAP were generally lower than under rental assistance (by an average of 16 percent). This also generally held true when we compared both types of assistance to the local FMR (that is, subsidy costs under rental assistance were higher than FMR for most groups—by an average 8 percent).¹⁰ Under DHAP, subsidy costs were lower than FMR for most groups (by an average 8 percent).

¹⁰According to FEMA, the subsidy costs were lower or equal to the FMR because the subsidy costs were generally the same as the FMR of the local area. Where subsidy costs were higher than the FMR, FEMA had approved an increase in subsidy costs based on the actual costs of the rental units.

Appendix III: Comparison of Available Subsidy Costs Data for the Disaster Housing Assistance Program and Rental Assistance

Table 11: Relative Subsidy Costs of Two Types of Rental Assistance Used for Hurricanes Ike and Gustav and Comparison to FMR, Selected Comparison Groups, Fiscal Year 2009

Comparison groups	RA and DHAP compared to each other		RA and DHAP compared to FMR	
	RA	DHAP	RA	DHAP
Number of groups in which subsidy cost was higher	15	0	12	0
Number of groups in which subsidy cost was similar	2	2	4	4
Number of groups in which subsidy cost was lower	0	15	1	13
Total comparison groups	17	17	17	17

Legend: DHAP = Disaster Housing Assistance Program; FMR = fair market rent; RA = rental assistance

Source: GAO analysis of data from the Federal Emergency Management Agency and Department of Housing and Urban Development. | GAO-21-116

Note: To develop the comparison groups, we selected samples of rental units in counties where there were at least 30 observations for units of a particular size (for instance, 2-bedroom) and the subsidy cost for a unit was at least \$100 in fiscal year 2019 dollars. An observation is a unit that a household rented in a fiscal year in a county (such as a 2-bedroom unit in Harris County, Texas, in fiscal year 2008).

Sandy, Harvey, Irma, Maria, Florence, and Michael (Fiscal Years 2014–2020)

We also compared subsidy costs under rental assistance to the local FMR for fiscal years 2014–2020 (Hurricanes Sandy, Harvey, Irma, Maria, Florence, and Michael). We did not include DHAP in the comparison because it was either not deployed or there were not enough data to compare DHAP with rental assistance. Our analysis of these data showed that subsidy costs under rental assistance generally were lower than or similar to FMRs (see table 12).¹¹

Table 12: Subsidy Costs of Rental Assistance (Used after Multiple Hurricanes) Relative to FMR, Selected Comparison Groups, Fiscal Years 2014–2020

RA subsidy costs compared to FMR	Sandy (FY14)	Harvey (FY18)	Harvey (FY19)	Irma (FY18)	Irma (FY19)	Maria (FY18)	Florence (FY19)	Michael (FY19)	Michael (FY20)	Total
Number of groups with subsidy cost higher than FMR	3	0	0	0	0	0	0	0	2	5
Number of groups with subsidy cost similar to FMR	6	0	0	0	0	2	0	0	1	9

¹¹According to FEMA, the subsidy costs were lower or equal to the FMR because the subsidy costs were generally the same as the FMR of the local area. Where subsidy costs were higher than the FMR, FEMA had approved an increase in subsidy costs based on the actual costs of the rental units.

**Appendix III: Comparison of Available Subsidy
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RA subsidy costs compared to FMR	Sandy (FY14)	Harvey (FY18)	Harvey (FY19)	Irma (FY18)	Irma (FY19)	Maria (FY18)	Florence (FY19)	Michael (FY19)	Michael (FY20)	Total
Number of groups with subsidy cost lower than FMR	5	17	6	1	1	0	4	3	0	37
Total comparison groups	14	17	6	1	1	2	4	3	3	51

Legend: FMR = fair market rent; RA = rental assistance; FY = fiscal year

Source: GAO analysis of data from Federal Emergency Management Agency and Department of Housing and Urban Development. | GAO-21-116

Note: We compared subsidy costs for rental assistance provided after Hurricanes Sandy, Harvey, Irma, Maria, Florence, and Michael. To develop the comparison groups, we selected samples of rental units in counties where there were at least 30 observations for units of a particular size (for instance, 2-bedroom) and the subsidy cost for a unit was at least \$100 in fiscal year 2019 dollars. An observation is a unit that a household rented in a fiscal year in a county (such as a 2-bedroom unit in Harris County, Texas, in fiscal year 2008).

Although data are not available to explain what contributed to the limited program cost variance, factors affecting costs may include differences in the expertise of intermediaries (such as public housing agencies) and the availability of local rental housing units after the disasters.

Appendix IV: Key Features of Temporary Housing Programs

Table 13 compares key features of selected temporary housing assistance programs administered by the Federal Emergency Management Agency (FEMA). FEMA defines temporary housing as assistance that covers the gap between sheltering (receiving short-term life-sustaining services in a safe environment) and the return of disaster survivors to permanent housing. The table does not include programs related to sheltering and permanent housing assistance.

Table 13: Key Features of Selected Temporary Disaster Housing Programs

Feature	Disaster Housing Assistance Program (DHAP) ^a	Rental Assistance	Multi-Family Lease and Repair	Transportable Temporary Housing Units	Direct Lease
Type of housing assistance	Subsidized rent paid directly to the landlord of an existing residential property. ^b Public housing agencies (PHA) provide temporary housing search assistance.	Financial assistance to survivor to rent housing anywhere in the United States.	Housing at an existing residential multifamily property, repaired and leased by FEMA, located in or near disaster-affected area. FEMA matches survivor with temporary housing unit.	Recreational vehicles or manufactured housing placed on survivors' private properties or commercial sites or other locations. FEMA matches survivor to transportable temporary housing unit.	Housing at an existing residential property FEMA has leased that is not typically available to the public (corporate apartments, vacation rentals), located in or near disaster-affected area. FEMA matches survivor with temporary housing unit.
Administrative structure	FEMA funds and oversees program and HUD administers it through local PHAs.	FEMA administers program.	FEMA administers program directly or through state, tribal, or territorial governments.	FEMA administers program directly or through state, tribal, or territorial governments; and manages contracts (such as for installing transportable temporary housing units).	FEMA administers program directly or through state, tribal, or territorial governments. FEMA contracts with property management companies to locate, acquire, and manage properties.

Appendix IV: Key Features of Temporary Housing Programs

Feature	Disaster Housing Assistance Program (DHAP)^a	Rental Assistance	Multi-Family Lease and Repair	Transportable Temporary Housing Units	Direct Lease
Supportive services	Case-management services, including needs assessment, permanent housing search assistance, employment assistance.	None	Recertification services, including needs assessment, permanent housing search assistance, referrals to organizations to address any impediments to transition to permanent housing.	Recertification services, including needs assessment, permanent housing search assistance, referrals to organizations to address any impediments to transition to permanent housing.	Recertification services, including needs assessment, permanent housing search assistance, referrals to organizations to address any impediments to transition to permanent housing.
Survivor requirements and responsibilities	Locate temporary housing. Participate in case-management services. Contribute to rent. ^c Sign lease with property owner. If rent is higher than rental subsidy, survivor must pay difference.	Locate temporary housing. Sign lease with property owner. If rent is higher than financial assistance provided, survivor must pay difference.	Actively participate in “recertification” process, which includes demonstration of progress in survivor’s plan to move into permanent housing. Sign lease with property owner.	Actively participate in the “recertification” process, which includes demonstration of progress in survivor’s plan to move into permanent housing.	Actively participate in the “recertification” process, which includes demonstration of progress in survivor’s plan to move into permanent housing.
Income considerations	Survivor rental contributions are capped to a percentage of income. ^d	None for the first 2 months of assistance. Beyond 2 months, survivor must demonstrate post-disaster housing costs exceed 30% of the household’s gross income.	None.	None.	None.

Source: GAO analysis of Federal Emergency Management Agency (FEMA) and Department of Housing and Urban Development (HUD) information. | GAO-21-116

^aDHAP was activated three times, and was known as DHAP-Katrina (2007), DHAP-Ike (2008), and DHAP-Sandy (2013).

^bRental unit could be located anywhere in the United States for DHAP-Katrina and DHAP-Ike. For DHAP-Sandy, the rental unit were restricted to New York State.

^cUnder DHAP-Katrina and DHAP-Ike, rent contributions started at \$50 per month and increased by an additional \$50 each month thereafter. Under DHAP-Sandy, rent contributions were based on pre-disaster housing expenses or on a percentage of the household’s post-disaster adjusted gross income, with the contribution percentage increasing every 3 months.

^dRental contributions were capped at 30 percent of income for DHAP-Katrina and DHAP-Ike. For DHAP-Sandy, rental contributions were the higher of (1) pre-disaster housing costs or (2) 40 percent of income.

Appendix V: Comments from the Department of Homeland Security

U.S. Department of Homeland Security
Washington, DC 20528



November 25, 2020

John H. Pendleton
Director, Financial Markets and Community Investment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Re: Management Response to Draft Report GAO-21-116, "DISASTER HOUSING:
Improved Cost Data and Guidance Would Aid FEMA Activation Decisions"

Dear Mr. Pendleton:

Thank you for the opportunity to comment on this draft report. The U.S. Department of Homeland Security (DHS or the Department) appreciates the U.S. Government Accountability Office's (GAO) work in planning and conducting its review and issuing this report.

The Department is pleased to note GAO's recognition of the Federal Emergency Management Agency's (FEMA) reliance on multiple forms of Individual and Household Program (IHP) housing assistance to help survivors recover from the 2017 and 2018 hurricanes referenced in this report. This included providing IHP housing assistance through financial rental assistance (rental assistance) to approximately 746,000 households and direct housing assistance to approximately 5,400 households in eight declared disasters in five states and territories.¹ FEMA provided direct housing assistance, based on the applicable FEMA Individual Assistance (IA) Division policy guidance, in the forms of (1) Direct Lease; (2) Transportable Temporary Housing Units; (3) Multi-Family Lease and Repair; and (4) Permanent Housing Construction.² FEMA

¹ See 4332-DR-TX, the major disaster declaration signed by the President on August 25, 2017, and amended on August 27, 2017, August 30, 2017, September 1, 2017, September 2, 2017, September 4, 2017, September 12, 2017, September 15, 2017, September 18, 2017, and September 19, 2017.

² The following policy guidance for implementing direct housing assistance applied to the 2017 and 2018 disasters: (1) Individuals and Households Program Unified Guidance, 2016; (2) Direct Housing Guide Operational Draft, August 2017; (3) Direct Housing Assessment Standard Operating Procedures (SOP), August 2017; (4) Continued Direct Temporary Housing Assistance Recertification and Close Out SOP, October 2017; (5) Multi-Family Lease and Repair SOP, October 2017; (6) Direct Lease SOP, November 2017; and (7) Direct Lease Policy Memo, 2018. These guidance documents were updated and/or superseded based on lessons learned and best practices from the 2017 and 2018 disasters by the following: (1) Individual Assistance Program and Policy Guide (IAPPG), March 2019; (2) Direct Housing Guide version 2, February 2020; and (3) Sheltering and Housing Field Teams Operations Manual, August 2020.

**Appendix V: Comments from the Department
of Homeland Security**

documented its analysis regarding the need for direct housing assistance within approval or denial memorandums in response to specific requests for direct housing assistance (sometimes referred to as direct housing assessments).

It is important to note, however, that FEMA did not implement the Disaster Housing Assistance Program (DHAP) pilot program in response to the 2017 and 2018 hurricanes because FEMA developed Direct Lease assistance as a more efficient and effective alternative to DHAP, using authority from the “Robert T. Stafford Disaster Relief and Emergency Assistance Act,” PL 100-707, enacted November 23, 1988, to provide direct temporary housing assistance. Specifically, FEMA contracted with property owners to provide available housing resources directly to the eligible applicants pursuant to FEMA IA Division policies pertaining to IHP Direct Lease assistance. Historically, DHAP took three-to-six months to implement, including FEMA entering into an Interagency Agreement with the Department of Housing and Urban Development and establishing separate grant agreements with each Public Housing Agency servicing eligible applicants to execute the DHAP pilot program.

FEMA remains committed to providing disaster survivors with adequate, timely and accessible assistance, as well as to fulfilling its responsibility to be a good steward of taxpayer funds in the furtherance of FEMA’s mission of helping people before, during and after disasters.

The draft report contained two recommendations with which the Department concurs. Attached find our detailed response to each recommendation. DHS previously submitted technical comments addressing several accuracy, contextual, and editorial issues with the report under a separate cover for GAO’s consideration.

Again, thank you for the opportunity to comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,

JIM H

CRUMPACKER

Digitally signed by JIM H
CRUMPACKER
Date: 2020.11.25 11:57:05
-05'00'

JIM H. CRUMPACKER, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

Attachment

**Attachment: Management Response to Recommendations
Contained in GAO-21-116**

GAO recommended that the Administrator of FEMA:

Recommendation 1: Identify and make changes to its Grants Management Modernization System or other applicable data system to capture cost data, including administrative costs for each of its housing assistance programs that will allow the agency to analyze the full cost of providing assistance under each program.

Response: Concur. FEMA's IA Division will identify requirements needed to meet this recommendation and identify a system for implementation. FEMA's Logistics Management Division is in the process of developing an interim solution to capture Transportable Temporary Housing Units (TTHU) costs. Specifically, this involves working to acquire and field the IBM Maximo software to capture lifecycle costs for TTHUs. However, the IA Division will also work with the Recovery Technology Programs Division to analyze requirements for a system to capture direct housing related costs by September 2021, and then implement the new system. Estimated Completion Date (ECD): September 30, 2022.

Recommendation 2: Specify the information needed to compare the projected costs of each direct housing program in its guidance for assessing which programs to activate.

Response: Concur. The FEMA IA Division's Disaster Housing Unit will develop and finalize internal job aids and/or templates as needed to specify the information necessary to estimate projected costs of direct housing options and perform comparative analyses to evaluate potential direct housing solutions. FEMA's IA Division will determine the appropriate types of housing assistance to be provided through the comparative analysis assessment based on cost effectiveness, convenience to the individuals and households, and the suitability and availability of the types of assistance. ECD: September 30, 2021.

Text of Appendix V: Comments from the Department of Homeland Security

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November 25, 2020

John H. Pendleton

Director, Financial Markets and Community Investment

U.S. Government Accountability Office 441 G Street, NW

Washington, DC 20548

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JIM H. CRUMPACKER, CIA, CFE

Director

Departmental GAO-OIG Liaison Office

Attachment

Page 3

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Appendix VI: GAO Contact and Staff Acknowledgments

GAO Contact

John H. Pendleton, (202) 512-8678, pendletonj@gao.gov

Staff Acknowledgments

In addition to the individual named above, Lisa Moore (Assistant Director), Josephine Perez (Analyst in Charge), Meghana Acharya, John Karikari, Jae Kim, Jill Lacey, Matthew Lowney, John McGrail, Amanda Parker, Barbara Roesmann, and Jena Sinkfield made key contributions to this report.

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