

Natural Disaster Housing Reconstruction Plan



As required by HB2450, 81st Legislative Session
Submitted by the Natural Disaster Housing Reconstruction
Advisory Committee
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Background

STATUTORY DIRECTIVE

The Natural Disaster Housing Reconstruction Advisory Committee was created by the 81st Legislature's HB 2450, authored by Representative Craig Eiland and Representative Ryan Guillen, and sponsored by Senator Eddie Lucio Jr. The Advisory Committee members were appointed by the Executive Director of the Texas Department of Housing and Community Affairs (TDHCA) with the purpose of developing a Natural Disaster Housing Reconstruction Plan.

In the process of developing this plan, the advisory committee was tasked with the following duties:

- Evaluate economic circumstances of elderly, disabled, and low-income victims of natural disasters and develop models for providing affordable replacement housing;
- Evaluate existing systems of providing temporary housing to victims of natural disasters and develop alternative systems to increase efficiency and cost-effectiveness;
- Evaluate existing models for providing permanent replacement housing to victims of natural disasters;
- Design alternatives to existing models to improve the sustainability, affordability, desirability, and quality of housing rebuilt in the event of future natural disasters;
- Encourage the participation, coordination, and involvement of appropriate federal organizations; and
- Recommend programs for the rapid and efficient large-scale production of temporary and permanent replacement housing following a natural disaster.

HB 2450 further states that once completed, this Natural Disaster Housing Reconstruction Plan will be used by the Executive Director and Advisory Committee to develop a Housing Reconstruction Demonstration Pilot Program to test the feasibility of implementing the plan for “the large-scale production of replacement housing for victims of federally declared natural disasters.”¹

COMMITTEE ACTIVITIES

From June to August of 2010, the Advisory Committee conducted a series of conference calls to deliberate on each of its legislatively appropriated duties and gather research on each topic. After discussing the key topics involved in reconstructing housing after a natural disaster, the Committee decided to hold three community roundtables in areas affected by recently federally declared natural disasters: Hurricanes Rita, Ike, and Dolly. The Committee completed the following community roundtable schedule:

- Harlingen Roundtable – Wednesday, August 25th, 2010, 11:00am – 1:00pm
 - Harlingen Public Library Auditorium, 410 676 Dr, Harlingen, TX 78550-5072

¹ Texas Government Code, Sec. 2306.542. Housing Reconstruction Demonstration Pilot Program.
<http://www.statutes.legis.state.tx.us/Docs/GV/htm/GV.2306.htm>

- Houston Roundtable – Tuesday, August 31st, 2010, 10:30am – 1:00pm
 - Houston-Galveston Area Council, 3555 Timmons, Conf. Room A, Houston, TX 77027
- Galveston Roundtable – Thursday, September 2nd, 2010, 11:00am – 1:30pm
 - McGuire-Dent Recreation Center, 2222 28th Street, Galveston, TX 77550-7707

In order to get a clear understanding of current housing rebuilding activities after Hurricane Ike, the Galveston Community Roundtable was followed by a tour of a Hurricane Ike home in San Leon, TX. This was a modular home constructed by Oak Creek Homes and funded by the Galveston County Disaster Housing Department's allocation of Hurricane Ike Round 1 Community Development Block Grant funding.

Finally, during September and October of 2010, the Advisory Committee held two in-person meetings to formulate a set of recommendations for the Housing Reconstruction Plan, taking into account previous research gathering efforts and testimony heard during the community roundtables. After these meetings, staff compiled these recommendations and completed the full Housing Reconstruction Plan, which was then submitted to the Executive Director of the Texas Department of Housing and Community Affairs.

Chapter #1: Evaluating existing systems of providing temporary housing to victims of natural disasters

This chapter of the Plan discusses the existing systems used by FEMA to provide immediate, temporary housing following Hurricanes Katrina and Rita, primarily drawing from information gathered by the U.S. Government Accountability Office and testimony given to the Ad Hoc Subcommittee on Disaster Recovery of the U.S. Senate Committee on Homeland Security and Governmental Affairs. Particularly, this section looks at the consequences of flawed policy and financing decisions made at the federal level to temporarily house disaster victims. These consequences include delays in the allocation of assistance, miscommunication regarding consumer eligibility, confusion and frustration on the part of consumers, service providers, and local public officials, and ultimately a failure to aid those who needed it most. Within this chapter, the unique circumstances of low income individuals, persons with disabilities, and persons who are elderly are discussed.

Findings

BACKGROUND – THE 2005 HURRICANE SEASON

Between August 29th and November 1st, 2005, at least 400,000 people were evacuated due to Hurricane Katrina, Rita, & Wilma and thousands remained in a transitional state following these disasters, not knowing when or if they could return home. Those with the fewest resources experienced the highest level of uncertainty. Additionally, the victim's of the storm most in harm's way and most neglected by the government's response were poor and Black, many of whom were elderly or disabled.²

From September 2005 to March 2006, FEMA received over 2.6 million applications for individual disaster assistance, 66% due to Katrina. The Congressional Research Service (CRS) estimated that of the 711,698 individuals acutely impacted by Katrina, 21% had incomes at or below the poverty level and another 20% were between 100-199% of federal poverty. Additionally, of the approximately 700,000 people who lost their homes, an estimated 300,000 were low income or very low income. In the end, housing that

Affects of Hurricanes Katrina & Rita on Low Income Individuals

Before Hurricanes Katrina and Rita, those living along the Gulf Coast were already facing issues of poverty, especially amongst women: 16.2% of women in the Beaumont-Port Arthur MSA lived below the poverty line and 34.7% of female-headed families with children in that MSA lived below the poverty line. Texas ranked 44th out of 50 states for the percent of women living below the poverty line, and particularly the earnings of African-American and Hispanic women in Texas failed to exceed the national average.

Additionally, low income residents had fewer choices with respect to how to prepare for the imminent arrival of Hurricanes Katrina and Rita. People living in social isolation and poverty, especially the elderly and the disabled, have scarce economic resources and locally concentrated social networks and are therefore less able to recuperate their losses after a hurricane. Since Katrina hit at the end of the month, many residents in Louisiana who live paycheck to paycheck had scarce resources for evacuating. Furthermore, low income individuals are least likely to own vehicles, making voluntary evacuation more costly and logistically more difficult.

(Source: There is No Such Thing as a Natural Disaster: Race, Class, and Hurricane Katrina, 2006)

² Crowley, Sheila, "Chapter 7: Where is Home? Housing for Low-Income People after the 2005 Hurricanes," Routledge Taylor & Francis Group, There is No Such Thing as a Natural Disaster: Race, Class, and Hurricane Katrina, 2006

was affordable to low-income people comprised the majority of what was destroyed. The National Low Income Housing Coalition found that over 300,000 housing units were seriously damaged or destroyed by Katrina, 73% of the total housing stock in the areas affected. Of those damaged or destroyed units, 71% were affordable to low-income households, including 57% ownership units. Additionally, in March 2006 HUD reported that 27 public housing authorities (PHAs) in Alabama, Louisiana, Mississippi, and Texas had over 13,600 units that sustained catastrophic or major damage.

After Katrina, those living below the poverty line face even more dire economic circumstances. In many of the areas of Texas where the most evacuees were relocated, they were faced with high poverty rates, particularly for women and female-headed households (Dallas, Fort Worth, Houston, and San Antonio all had over 40% poverty rate for female-headed households).

TEMPORARY HOUSING PROVISION^{3,4}

The Stafford Act authorizes FEMA to expend federal funds to provide assistance to state and local communities once the President has issues a disaster declaration. Temporary housing assistance through FEMA takes two forms, the first of which is Section 403 – Public Assistance (PA) Program.⁵ Section 403 makes funds for emergency shelter available to states, local governments, and social service agencies. Section 403 has no individual eligibility requirements and no limitations/caps on the amount of federal funding provided.

Group Sites

About 72% of group site households in Louisiana and 84% in Mississippi reported being pre-disaster renters, many of which had low incomes, were elderly, or had a disability. The reported average income of households on group sites was less than half of the Louisiana state average and less than two-thirds of the Mississippi state average. Those who remained in the group sites the longest were those with limited income and limited choices to find stable employment and permanent housing.

(Source: GAO-09-796, August 2009)

- Manufactured Housing – Factory built housing designed for long-term residential use. This type of housing must be located on sites that are not in a designated floodplain area.
- Recreational Vehicles – Include park model and travel trailers; are designed for short-term use when no other options are available.
- Private Site – Unit is placed on an individual’s private property if the site is feasible and local authorities approve.
- Group Site – Unit is placed at a site FEMA has built to house multiple households. FEMA’s policy is to use commercial manufactured housing or recreational vehicle parks whenever possible, rather than build sites on parks, playgrounds, ball fields, and parking lots.

Recreational Vehicles & Manufactured Housing: During the recovery effort following Hurricanes Katrina and Rita, recreational vehicles and manufactured housing were the two most common

³ Crowley, Sheila, “Chapter 7: Where is Home? Housing for Low-Income People after the 2005 Hurricanes,” Routledge Taylor & Francis Group, There is No Such Thing as a Natural Disaster: Race, Class, and Hurricane Katrina, 2006

⁴ US Government Accountability Office, GAO-09-796, “Disaster Housing: FEMA Needs More Detailed Guidance and Performance Measures to Help Ensure Effective Assistance after Major Disasters,” August 2009.

⁵ “Far from Home: Deficiencies in Federal Disaster Housing Assistance After Hurricanes Katrina and Rita and Recommendations for Improvement,” Special Report by the Ad Hoc Subcommittee on Disaster Recovery of the US Senate Committee on Homeland Security and Governmental Affairs, February 2009.

forms of emergency temporary housing units deployed by FEMA. In most cases, FEMA placed these units on private property near the household's home (115,400 households); however 25,000 households were placed in units at over 700 group sites, including stadium grounds, school fields, and preexisting trailer parks. FEMA was unable to meet the demand for trailers, with a waiting list of over 40,000 in Louisiana. Additional problems with the FEMA trailers included being placed in unsuitable environments, resistance from local communities, inaccessible to individuals with physical disabilities, and being structurally unsuitable for hurricane-prone areas which created an unsafe living environment.

Hotels & Motels: Roughly 85,000 displaced families were placed in hotels paid for by FEMA Section 403 funds. FEMA's attempts to end this program in December 2005 resulted in a lawsuit. FEMA announced numerous deadlines for hotel aid, causing confusion and worry among hotel dwellers.

Rent Assistance: An estimated 60,000 units were rented by states, local governments, and social service agencies that agreed to pay landlords directly in anticipation of reimbursement from FEMA. After the Department of Homeland Security criticized allowing one-year leases, FEMA stated that leases would only last three months causing confusions and distress amongst landlords who were uncertain if their leases would be honored. Although FEMA was supposed to transition people from Section 403 to Section 408 Temporary Housing Assistance, 18,000 of the 55,000 households under Section 403, most of them low income, were deemed ineligible for IHP rental assistance and thus received no housing assistance after April 2006.

TRANSITIONAL HOUSING PROVISION^{6,7}

The second type of temporary housing assistance through FEMA is Section 408 – Transitional Housing Program. Section 408 makes transitional housing available directly to displaced people who meet certain criteria. The amount of assistance provided through Section 408 is based on factors such as assessments of damage, financial need, and fair market rent and individuals/households are eligible if their pre-disaster residence is rendered uninhabitable.

Following Hurricanes Katrina and Rita, the Section 408 was split into two distinct types of assistance: the first part, administered by FEMA, provided direct assistance to eligible evacuees. Part two, administered by HUD, provided voucher-like aid to eligible displaced households that were receiving HUD assistance prior to the hurricane. Despite the fact that government appropriated \$3.5 billion to fund 350,000 Housing Choice Vouchers for Katrina evacuees, this program was not used under Section 408.

Section 408 Transitional Housing Program – Part One:

FEMA provided \$2,358 to each eligible household for 3 months rent; this amount equaled the national Fair Market Rent (FMR) for a two bedroom unit. Eligibility was determined as those who

⁶ "Far from Home: Deficiencies in Federal Disaster Housing Assistance After Hurricanes Katrina and Rita and Recommendations for Improvement," Special Report by the Ad Hoc Subcommittee on Disaster Recovery of the US Senate Committee on Homeland Security and Governmental Affairs, February 2009.

⁷ Crowley, Sheila, "Chapter 7: Where is Home? Housing for Low-Income People after the 2005 Hurricanes," Routledge Taylor & Francis Group, There is No Such Thing as a Natural Disaster: Race, Class, and Hurricane Katrina, 2006

owned or rented a home that FEMA verified as uninhabitable, however there was no clear way for determining uninhabitable units, as no inspections were undertaken. Once this error emerged, a change in policy caused further funding allocation delays and inconsistent information dissemination. Many individuals didn't know if money could be used for things other than housing and since checks were mailed weeks before FEMA's instructions were sent, many households had already spent their funds.

People who received the initial \$2,358 had to go back to FEMA to be recertified for additional assistance. No eligibility or application procedures for ongoing assistance were ever published. Many evacuees were denied assistance, either when converting from 403 to 408 or via recertification under 408 because FEMA claimed they could go home. However, in many cases, homes were still not habitable, former landlords had raised rents or rented out the property to other people, and there were no assurances of jobs or schools.

Section 408 Transitional Housing Program – Part Two:

HUD created the Katrina Disaster Housing Assistance Program (KDHAP) for those individuals who were previously in public housing, Section 8 project based aid, Housing Choice Vouchers, Section 202, Section 811, etc. Also eligible were homeless persons who participated in HUD-funded homeless service programs. However, between 6,000 to 10,000 people resided in the affected areas who were homeless and not previously participants in HUD programs, thus ineligible for disaster aid.

Many barriers existed to families receiving KDHAP assistance. First, PHAs were required to participate and many were reluctant to become involved because there was no guarantee of assistance past the first few months and the funds provided didn't cover the cost of security deposits or utility payments, nor the search assistance needed to place a family in a home. Therefore, only 355 PHAs out of 2,600 nationwide agreed to administer KDHAP. Second, families had to know to affirmatively apply for KDHAP, separately from FEMA registration as there was no assurance that FEMA would tell a family how to apply or if they were eligible. Finally, due to PHAs' reluctance to work with homeless or previously homeless, HUD created another program called KDHAP-SN (special needs), but no guidance was issued for this program until 6 months after the hurricane hit. Because no guidance was given on how an eligible person would know that they were eligible or how to find the administering agency to contact, yet another service barrier to the most vulnerable of displaced people.

POLICY DESIGN FLAWS LIMIT ASSISTANCE TO LOW INCOME INDIVIDUALS

As the Section 403 and 408 programs were administered, many flaws appeared in the design of program rules and regulations. First, the eligibility criteria for Section 408 did not cover people who were neither homeowners nor renters – those low income persons “doubling up.” Doubling up is a common housing practice where more than one household resides in the same place because neither can afford their own homes. However, under FEMA, if two households register and give the same address, one household was disqualified – the “shared household” rule.

Second, since most urban housing markets rents far exceed the national Fair Market Rent (FMR), which is the standard used for FEMA assistance, many households receiving assistance weren't assured that they would be able to afford the rent. Additionally, FEMA funding was not allowed for

security deposits or utilities, both of which can be quite costly, further burdening poorer households. Third, FEMA only provided assistance in 3 month increments, which deterred a large number of landlords from agreeing to rent to evacuees who depend on FEMA rental assistance, due to the lack of certainty regarding when and if the assistance would be extended or renewed. Furthermore, in many locations close to the affected disaster area, the influx of evacuees and lack of vacancy caused the cost of rental housing skyrocketed much higher than the FMR.

Finally, after the initial appropriation of federal disaster relief funding, the first rebuilding supplemental appropriation, approved on December 30, 2005, reallocated \$17.1 billion to hurricane rebuilding efforts. However, the bill reduced income-targeting for the use of CDBG funds from 70% of funding to low and moderate income households, to 50% of funding. Additionally, HUD had the authority to waive the 50% requirement if a state could demonstrate compelling need. These policies effectively limited the number of low-income individuals and families receiving assistance.

THE AFTERMATH - FEMA'S NATIONAL DISASTER HOUSING STRATEGY

Acknowledging the many failures that occurred in the housing recovery effort following the 2005 hurricane season, Congress passed the Post-Katrina Emergency Management Reform Act (PKEMRA) in October 2006. PKEMRA required that FEMA develop, coordinate, and maintain a 'national disaster housing strategy' that describes, among other things, plans for the operation of temporary housing options, such as travel trailers. On January 16, 2009, FEMA released the final version of its *National Disaster Housing Strategy*, which among other things, outlines the most efficient and cost-effective way to best meet the short and long-term housing needs of individuals and households affected by a major disaster. However the Strategy does not identify alternatives to travel trailers because evaluations are ongoing, nor does it provide clear guidance on what other temporary housing options states should use instead of travel trailers while FEMA completes these assessments. The Strategy also fails to describe the specific conditions where trailer would be a viable option or those situations where trailer should not be used.

The Government Accountability Office found this gap in FEMA's Strategy troubling, seeing as travel trailers in group sites are the least preferred temporary housing option when it comes to suitability.⁸ The GAO found that after the 2005 hurricanes, travel trailers were placed in isolated locations and lacked access to needed services. However, FEMA's Strategy does not recommend any replacement option that would be deployable on the scale needed to respond to a major disaster.

The GAO study identified three factors to be used to assess how trailers in group sites compared with possible alternative temporary housing options:

- Cost – Total cost to the government for purchasing, installing, maintaining and deactivating the housing unit. The average unit cost for trailers ranged from \$75,000 to \$84,000, while the monthly rents for existing housing units were based on HUD fair market rent levels.

⁸ US Government Accountability Office, GAO-09-796, "Disaster Housing: FEMA Needs More Detailed Guidance and Performance Measures to Help Ensure Effective Assistance after Major Disasters," August 2009.

- Availability – Assessing the viability of temporary housing options. FEMA faced obstacles in locating victims close to their home communities as well as confronted unwillingness on the part of local landlords to participate in the program.
- Suitability – Temporary housing options must be in close proximity to work or transportation routes, to access health and social services. The GAO recommended utilizing existing administrative networks, like PHAs, to help find suitable housing.

The GAO study concluded by acknowledging that no single alternative to travel trailers was best suited to provide temporary housing after a disaster, but that a mix of housing options should be considered. However, while FEMA policy states that travel trailers will be used as a last resort, officials acknowledged that trailers will continue to be used following a catastrophic disaster as a main source of temporary housing.⁹

CONCLUSION

Fundamental to the future of housing in those areas affected by natural disasters, particularly along the Gulf Coast, is the question of who has the right to return. Is each displaced person who wants to come home going to be welcome? Low income housing organizations are faced with the conundrum of how to preserve affordable housing for the lowest income people, including persons who are elderly and persons with disabilities. Unless innovative housing options are implemented, the probability that enough new housing affordable to the lowest income people will be built to replace the numbers of affordable units they could afford that were lost is very low.

⁹ “Far from Home: Deficiencies in Federal Disaster Housing Assistance After Hurricanes Katrina and Rita and Recommendations for Improvement,” Special Report by the Ad Hoc Subcommittee on Disaster Recovery of the US Senate Committee on Homeland Security and Governmental Affairs, February 2009.

Chapter #2: Efforts to develop alternative temporary housing models for victims of natural disasters

JOINT HOUSING SOLUTIONS GROUP (JHSG)¹⁰

As mentioned in the previous chapter, following Hurricanes Katrina and Rita emergency housing needs were largely satisfied by the use of travel trailers, manufactured housing, and park model homes. While each of the types of housing had advantages for specific applications, it could be argued that those units were purchased based largely on their availability.¹¹ Based on the experiences in the Gulf Region, the Federal Emergency Management Agency (FEMA) created the Joint Housing Solutions Group (JHSG) in September 2006, to assess potential housing products and producers. The JHSG was created with the mission of improving FEMA's disaster housing assistance capacity by increasing the range of housing options it can provide to individuals and communities impacted by disasters.

One of the main accomplishments of the JHSG was to update the Housing Assessment Tool (HAT 2.0), a survey instrument intended for housing developers which contains 186 questions about the major aspects of potential housing products. This tool uses four criteria, including Range of Use (adaptability under various conditions), Livability (how well units accommodate for a household's daily living essentials), Timeliness (how fast units can be made ready for occupancy) and Cost (how cost-effective the unit is in absolute terms and relative to other housing options). The revised HAT was deployed February 20, 2009.¹²

Other duties completed by the JHSG included the creation of a Disaster Housing Scoping Tool to help define and project housing needs following a disaster. The primary function of the Tool is to assist FEMA planning teams to more systematically and accurately predict if a direct housing mission is required, as well as project the parameters of this mission. Additionally, JHSG created Occupant Surveys to assess the problems incurred by tenants of temporary housing and their overall satisfaction, assessed the potential of alternative temporary units, updated baselines for Alternative Housing Unit RFP, and released solicitation for Improved Travel Trailers.

As published in the 2007 FEMA Disaster Assistance Directorate (DAD), the JHSG identified seven action items that FEMA should consider implementing to leverage the lessons and knowledge gained from JHSG assessments to strengthen its temporary housing mission.¹³ They include:

- Development of Alternative Housing Options Strategy - This strategy would pull together the housing stakeholders, establish concrete alternative housing options objectives, and lay out a

¹⁰ Federal Emergency Management Agency, "Alternative Housing Pilot Program," A presentation at the National Hurricane Conference, April 9, 2009.

<http://www.hurricanemeeting.com/files/09Presentations/K1%20Naomi%20Johnson%20Ryan%20Buras.pdf>

¹¹ U.S. Department of Housing and Urban Development, Office of Policy Development and Research, "Joint Housing Solutions Group," *Cityscape: A Journal of Policy Development and Research*, Vol. 9, No. 3, 2007.

<http://www.huduser.org/periodicals/cityscape/technotes/JHSG.pdf>

¹² Federal Emergency Management Agency, Housing Assessment Tool, "Joint Housing Solutions Group," www.asd.fema.gov/inter/hat/public/aboutJHSG.htm

¹³ Federal Emergency Management Agency, "Disaster Assistance Directorate," http://www.fema.gov/media/fact_sheets/dad.shtm

plan for choosing alternative housing options, exploiting or creating new alternative housing opportunities, and operating within the context of the National Disaster Housing Strategy.

- Continued Identification and Assessment of Potential Alternative Housing Units
- Pilot of Most Promising Alternative Housing Unit(s)
- Development of Performance Specifications for New Alternative Housing Units (Other Than Travel Trailers, Park Models and Manufactured Homes)
- Procurement Plan for Pilot and Full Implementation of Alternative Units
- Increased Coordination Between JHSG and Alternative Housing Pilot Program (AHPP)
- Public Information and Outreach

Finally, beginning in 2009, JHSG awarded four contracts to TL Industries, Frontier RV, Harbor Homes, and D&D Disaster Services for the manufacture of low emission travel trailers.¹⁴ JHSG developed new performance specifications, including requirements to eliminate the use of formaldehyde emitting materials, maintain continuous air exchange, install venting and HVAC systems that meet HUD standards, and test air quality of units. FEMA intends to order at least 100 units from each contract award, with the ability to order 6,000 units, divided equally among contractors, each year for five years.

FEMA – ALTERNATIVE HOUSING PILOT PROGRAM (AHPP)¹⁵

In 2006, Congress appropriated \$400 million for a four year pilot program (Public Law 109-234) to identify and evaluate better ways of housing disaster victims. The objectives of AHPP are to:

- (1) Evaluate the efficacy of non-traditional short and long-term housing alternatives,
- (2) Identify, develop, and evaluate alternatives to and alternative forms of FEMA disaster housing,
- (3) Consider the feasibility of these options as a part of housing assistance that could be made available by federal agencies or state agencies for other disasters,
- (4) Assure that pilot projects address the needs of a variety of populations, such as persons with disabilities and the elderly, and historically underserved populations

FEMA stated that the program's implications were to increase federal options for the types of disaster recovery units, augment recovery knowledge through evaluation of the program's impact on residents' quality of life, increase capacity at the state and local level, and enhance collaboration amongst federal, state, and local governments and the private sector.

Background of AHPP

On September 15, 2006, the AHPP Guidance and Application Kit issued and by October 20th, 29 projects were submitted to FEMA. Ultimately, five projects were chosen in four states: Louisiana, Mississippi, Texas, and Alabama. Projects were scored based on five factors, including: the manner in which they improve upon existing temporary housing and long term recovery; the extent to which the option can provide ready for occupancy housing with time frames and in quantities sufficient to meet disaster needs; the life cycle cost, including cost to acquire, transport, install, and

¹⁴ RV Business, "FEMA Awards Contracts to Four Trailer Makers," April 8, 2009, www.rvbusiness.com/2009/04/fema-awards-contract-to-four-trailer-makers

¹⁵ FEMA, "Alternative Housing Pilot Program," A presentation at the National Hurricane Conference, April 9, 2009

maintain housing; the capacity of the approach to be utilized in and adapted to a variety of site conditions and locations; and the extent to which local officials and communities are part of or support the program.

As one of the goals of the AHPP was to enhance cross-agency collaboration, FEMA and HUD explored the possibility for greater partnership through the program's implementation and evaluation. Both agencies played a role in funding the projects, monitoring compliance, providing technical assistance, evaluating the results of the program, and perform national outreach to disseminate these results. Additionally, the state grantee was given a significant role in administering the AHPP. States managed the project by submitting input on the design of units, selecting suitable sites for placement, select eligible applicants, and maintaining the general scope of the project. The state grantees were also responsible for ensuring that project met the various program requirements, including environmental and accessibility standards. A final report of the impacts and success of the AHPP is expected to be released by FEMA and HUD in December of 2011.

Projects Undertaken through AHPP^{16,17}

City of Bayou La Batre Project, Alabama. Bayou La Batre was awarded \$15.67 million to develop 194 single-family modular homes built using cement fiber materials. The one and two bedroom layouts are immediately deployable as temporary housing, while the three and four bedroom layouts could be permanently installed and are UFAS compliant. Homes are transported on one truck and can be deconstructed and reset on another foundation. In terms of siting, Bayou La Batre proposed building a disaster housing group site, outside the storm surge zone, that can also serve as a permanent sub-division for families. The state claimed that this project gained substantial community support.

Cypress Cottage Partners Project, Louisiana. Cypress Realty Partners were awarded \$74.54 million to develop and manage 475 infill housing units in four locations: the Treme neighborhood, Jackson Barracks, Lake Charles, and Abbeville. The project designed two housing models, the Katrina Cottage (single family home with 2 and 3 bedroom layouts) and the Carpet Cottage (one story multifamily offering 1, 2, and 4 bedroom layouts). Cypress promoted these multiple layouts as allowing for the provision of disaster housing to a diverse population. A partnership between Cypress Group and Lowe's created production capacity to build and deploy these Cottages quickly. Finally, the state sought to facilitate affordable homeownership of these cottages through the eventual decommissioning of units for use as permanent housing.

Green Mobile Project, Mississippi. Referred to as the Mississippi Eco-Cottage, this project was awarded \$5.89 million to create 100 energy efficient and affordable housing units that can serve as temporary or permanent dwellings. Eco-Cottages emphasized innovative site design, green building technologies, durability, and interior design that can be adapted to a variety of family needs. Additionally, plans were non-proprietary, allowing the designs to be used nationwide.

¹⁶ Department of Homeland Security, Office of Inspector General, OIG-07-39, "Evaluation of the Federal Emergency Management Agency's Alternative Housing Pilot Program," April 2007.

¹⁷ FEMA, Fact Sheet – Awards, "Selected Grant Awards for Alternative Housing Pilot Project," www.fema.gov/media/fact_sheet/ahpp_awards.shtm

Heston Group Project, Texas. The Heston Group was awarded \$16.47 million to construct 250 single-family, pre-fabricated, panelized housing units. Featured designs were two, three, and four bedroom layouts, all UFAS compliant, which can each fit into an 8' x 20' shipping container. The Heston Group maintained that these housing units could be transported by truck, barge, or train, ensuring quick delivery. Additionally, units could be pre-positioned, stored flat, and reused. Finally, Heston Group boasted that these houses could be constructed in 8 hours by a 6 person crew, with minimal skills and training needed.

NOTE: The Heston Homes project was unsuccessful because of design flaws in the units produced and the inability of the Heston Group to perform to its contractual requirements. For further information, please see Appendix A.

*Mississippi Alternative Housing Program.*¹⁸ The Mississippi Emergency Management Agency (MEMA) was granted \$281 million to build 3,100 housing units. The main models developed were the Park Model, a one bedroom, 400 sq ft unit, and the Mississippi Cottage, two and three bedroom units between 728 and 840 sq ft. All units feature hurricane straps and anchor attachments for added protection against storms and are wind resistant up to 150 mph. Alternative housing units will be placed on individual lots, commercial group sites, or other multifamily sites identified by non-profit organizations or local governments

¹⁸ Mississippi Emergency Management Agency, Mississippi Alternative Housing, www.msccottage.org/reservist

Chapter #3: Obstacles to Implementing Temporary to Permanent Housing: A Case Study of the Alternative Housing Pilot Program in Louisiana & Mississippi

What ultimately arose out of the projects implemented by the Alternative Housing Pilot Program were housing models that could be created for use as immediate emergency housing, but could also be transitioned into permanent housing. This idea of “temp to perm” disaster housing received much positive attention from state housing and emergency management officials, but was met with strong resistance on the part of local public officials and communities. Ultimately, this resistance created many challenges to realizing the full potential of the AHPP projects as long-term recovery solutions.

Cypress Partner Project, Louisiana¹⁹

In November 2008, the National Building Museum held a lecture in which representatives from the Louisiana Recovery Authority (LRA) and Cypress Realty Partners evaluated the Cypress Partner Project implemented through the AHPP. Their evaluation is discussed below.

FIRST STEPS – OCTOBER 2005 TO DECEMBER 2006

Through the Mississippi Renewal Forum convened in October 2005, Andres Duany and Marianne Cusato created the Katrina Cottage model, designed to be a safe, affordable homes that could be designed and built for less than the life cycle cost of temporary FEMA travel trailers and mobile homes. Lowe’s Home Improvement then partnered with Cusato to design 15 different floor plans and material packages for Mississippi and Louisiana customers to select from and purchase. Katrina Cottages ranged from 500 to 1500 square feet.

During the winter and spring of 2006, the LRA launched a community planning initiative, conducted through a series of citizen-outreach meetings, called “Louisiana Speaks.” Through Louisiana Speaks, over 27,000 citizens participated in the creation of long-term plans for rebuilding their communities in a manner that is safer, stronger, and more sustainable. In March 2006, six months prior to FEMA’s announcement of the AHPP, Louisiana Speaks meetings led by Andres Duany were held in Lake Charles, Abbeyville, and St. Bernard Parish, where stakeholders engaged in planning and design charettes. Through this process a pattern book was published with the architectural and design specifications agreed upon by the public. Then, once the AHPP guidance was released, LRA issued a Request for Ideas (RFI) that required applicants to be responsive to these designs.

Cypress Realty Partners, which had already purchased Katrina Cottages for development of an infill site in Old South Baton Rouge, responded to the RFI. They assembled a submission team of Andres Duany, Marianne Cusato, Lowe’s as the material providers, and Worthington Industries as the steel framing provider. Their submission included seven different home designs, incorporating several models from the Katrina Cottage series, as well as a multifamily design. Cypress also reached out to the local leadership that participated in Louisiana Speaks in order to get public support for the designs. In December 2006, the Cypress Partner Project was awarded \$75 million

¹⁹ National Building Museum, Community in the Aftermath Lecture, November 2008

from FEMA and the governor selected the Louisiana Housing and Finance Agency to administer the program.

CYPRESS UNITS – SITING, DESIGN, MATERIALS, & COST

Designs. All designs are “temp-to-perm,” meaning they can be used for short term temporary housing and then transitioned to permanent housing. Additionally, all homes are designed to be easily expanded.

- Design #1: 612 sq ft, two bedroom, one bath; can be expanded to 1,080 sq ft
- Design #2: 910 sq ft, three bedroom, one bath; can be expanded to 1,800 sq ft
- Design #3: 936 sq ft, two stories, two bedrooms, 1.5 bath; can be expanded to 1,200 sq ft
- Design #4: Expanded version of design #1 – 1,080 sq ft, three bedroom, two bath
- Design #5: 1,112 sq ft, three bedroom, two bath; ADA compliant
- Design #6 & 7: Single story multifamily structures; ADA compliant
 - Six different sizes, from a 655 sq ft one bedroom, one bath to a 1,220 sq ft three bedroom, two bath

Materials. The Cypress partner project chose to use materials that were hurricane resistant as well as energy efficient. First, the units utilized HardiPlank, a fiber cement siding for exteriors that has a 50 year warranty. Second, steel framing was installed, to withstand Category 4 strength winds as well as resist possible rot and mold. Third, double paned window with insulated glass that suppresses radiated heat flow. Finally, appliances were installed that meet Energy Star standard for energy efficiency. Additionally, for infill lots in New Orleans, Cypress is using Structurally Insulated Panels (SIPs), which are energy efficient and durable.

Siting. Contract with LRA is for three new group site communities in Jackson Barracks, Lake Charles, and New Orleans. Jackson Barracks was slated for 59 single family and 32 multifamily cottages, the Fields Neighborhood of Lake Charles had 34 larger single family cottages planned, and the Fischer Housing Development in New Orleans was slated for 124 single-family homes. In addition to group sites, Cypress planned to create 36 scattered site, modular homes in Lake Charles and 137 scattered site, modular homes in New Orleans. Finally, Cypress planned to develop 42 single-family homes in an infill subdivision in Hidden Cove, Baton Rouge and 27 single-family modular homes in an infill subdivision in Harbor Estates, Westwego.

Cost. The seven housing types range in cost from \$100,000 to \$135,000, which is inclusive of everything from foundation, steel framing, materials, labor, and site infrastructure.

CHALLENGES IN IMPLEMENTING PROJECT

In March 2008, Governor Jindal moved the administration of AHPP over to the LRA. Upon taking over the program, the LRA identified the following on-going challenges:

Obtaining suitable sites for construction. AHPP was predicated on developing both group sites on raw land as well as infill sites in New Orleans. For the group sites, the LRA received resistance from local communities in getting appropriated sites that were environmentally acceptable. For the

infill sites, adjudicated properties were not held free and clear, thus making the process to obtain those properties very lengthy.

Constitutional impediments. State of Louisiana prohibits the transfer of property from one state entity to another without going out to public auction. This hampered the LRA's ability to use former FEMA temporary housing sites and transform them into permanent communities. In the end, infill properties were purchased by the state through their Road Home Program in conjunction with the New Orleans Redevelopment Authority.

Misconceptions. Local officials and the public did not understand that the project was a permanent housing solution. Additionally, a stigma persisted that the AHPP units would lower the property values of the surrounding neighborhood.

HOUSING PROGRESS^{20,21}

Jackson Barracks: \$16 million project. Infrastructure design and environmental assessment completed October 2008, infrastructure bids completed November 2008, and construction began December 2008. Cypress has completed full infrastructure to site and construction of the 59 single-family homes and is currently constructing the remaining 32 multifamily units.

Fields Neighborhood, Lake Charles: \$4.3 million project. Subdivision approved in September 2008, infrastructure design and environmental assessment completed December 2008, construction began February 2009. Cypress has completed construction on all 34 single-family homes.

Fischer Housing Development, New Orleans: \$18 million project. Cypress is currently completing partial infrastructure to site and constructing the 124 single-family homes.

Lake Charles Scattered Sites: \$4.8 million project. Cypress is currently constructing and placing the 36 single-family modular homes.

New Orleans Scattered Sites: \$20 million project. Cypress is currently constructing and placing approximately 137 single-family modular homes.

Harbor Estates, Westwego: \$3.4 million project. Currently constructing and placing 27 single-family modular homes.

Hidden Cove, Baton Rouge: \$5.3 million project. Infrastructure design and environmental assessment completed January 2009, construction began March 2009. Cypress has completed construction on all 42 single-family homes.

²⁰ Louisiana Housing Pilot Program, Powerpoint Presentation, "Alternative Housing Pilot Program," November 2008
<http://lra.louisiana.gov/assets/docs/searchable/meetings/2008/11/111808AHPP.pdf>

²¹ Cypress Realty, "FEMA Alternative Housing Pilot Program in Louisiana,"
<http://www.cypressgroupdc.com/Projects.php>

Mississippi Alternative Housing Program²²

FEMA established an interagency agreement with HUD to evaluate the Alternative Housing Pilot Program (AHPP). FEMA contracted with Abt Associates Inc. to conduct this evaluation and in February 2009, the first case study was published, assessing the Mississippi Alternative Housing Program (MAHP) administered by the Mississippi Emergency Management Administration (MEMA).

In Mississippi, 3,075 cottages were constructed and over 2,800 were deployed by MEMA. These cottages were designed to be converted to permanent use. However, despite the cottages' disaster-resistant construction and high quality, many municipalities have banned or severely restricted the permanent placement of cottages on the mistaken assumption that these cottages are indistinguishable from mobile homes. Examples of excessive restrictions on cottages include veto power of any resident within 160 feet of a proposed cottage site, requirements of pre-Katrina title and homestead exemption, and prohibitions against conversion to rental use. Additionally, in some cities such as Gautier, even the largest cottages fall short of zoning codes which mandate homes in residential areas to be at least 1,325 square feet.

Despite advocacy efforts and litigation, the conversion of individual cottages to permanent use remains stymied by case management complications, prohibitive elevation and foundation costs, and local government opposition. As a result, only 42% of cottages have been converted to permanency and only 31% in Hancock County, where the largest amount of cottages were originally placed.

FIRST STEPS

MAHP adopted the Incident Command System (ICS) management approach, which was organized around five major functional areas: command, operations, planning, logistics and finance, and administration. MAHP immediately established detailed goals and performance standards to support the program's vision and codified them in a Performance Management Plan (PMP). Within the first three months of receiving the AHPP funding, MEMA had created a new organization focused solely on MAHP, conducted outreach to over 14,000 families, and negotiated MOUs with 14 local governments.

A headquarters office was established in Gulfport, along with a transition site for the receipt of Cottages. Additionally, MAHP established smaller field offices in Hancock, Harrison, and Jackson Counties for the use of site inspectors. MEMA contracted with engineering consulting firm PBS&J to provide management and technical support to MAHP. Significant operational, financial, and administrative support was also provided by the State Department of Finance and Administration (DFA). Finally, MAHP coordinated closely with the Governor's Office of Recovery and Renewal.

PARK MODEL & MISSISSIPPI MODEL COTTAGES

Manufacturing & Installation. Once cottage designs were complete, MAHP issued an RFP and held pre-bid conferences with interested manufacturers. MAHP procured units from six different vendors operating in 10 separate locations. Although the original RFP called for manufacturers to transport the Cottages directly to the sites and install the units themselves, MAHP determined that

²² "Developing a More Viable Disaster Housing Unit: A Case Study of the Mississippi Alternative Housing Program."

a separate haul and install contract would be negotiated and that a transition site would be needed to hold the units. A transition site allowed for the inspection and repair of units and was needed when sites were not yet ready for installation. Direct contracting with local haul and install contractors also allowed MAHP to have more control over timing and ensure that installation was coordinated with permitting and applicant preparation.

Quality Management. Upon arrival at the Gulfport transition site, each unit received close visual inspection to check construction features, paint, kitchen and bathroom fixtures, and functionality of windows and doors. Utilities and appliances were tested. While all manufacturers were required to use materials of equal quality, the quality of the finished product varied considerably. Numerous discussions were needed amongst MAHP staff and manufacturer representatives.

MAHP staff paced deliveries and deployments so that fewer than 300 units would be at the transition site at any given time. An inspection of units by FEMA and HUD experts in December 2007 determined that MAHP accessible units did not meet UFAS and changes had to be made to the specification of future units, but no retrofitting of existing units or exchanges were made.

Eligibility & Application. Permanent resident of Hancock, Harrison, or Jackson counties who were currently residing in a FEMA provided travel trailer or mobile home were eligible applicants for MAHP. There was no application process for the program, as eligible participants were automatically registered for the program by MEMA. Then, through a proportional random selection process individuals were selected and notified by phone and mail.

Outreach & Selection. A call center was established in Gulfport to contact the 14,000 selected families and demand turned out to be much smaller than initially assumed. The call center had difficulty reaching applicants using FEMA's contact information database and many letters were returned as undeliverable. Due to the Governor's insistence, a second call center was opened in Jackson to take questions about the program and an attempt to hand deliver the 2,000 returned letters was made. Demand remained low in the three coastal counties causing the program to be expanded in early 2008 to include Pearl River and George Counties.

CHALLENGES IN IMPLEMENTING TEMPORARY HOUSING

Local Resistance. Due to the overwhelming demands of recovery on local authorities, many officials did not see housing as an immediate priority, instead focusing efforts on restoring the basic infrastructure and economy of the community. Some community resistance was related to misperceptions about MAHP units – bringing in more “temporary” disaster housing to an area that already had been pushing to remove the FEMA trailers was seen by local communities as contradictory and detrimental to rebuilding permanent housing. Additionally, local leaders, having seen FEMA give multiple extensions for travel trailer occupancy, feared that a similar extension process for the Cottages was inevitable, even after assurance by MAHP of a March 2009 demobilization deadline.

Additionally, communities expressed concerns about Cottages not fitting with the style and size of many neighborhoods. Local officials argued that small Cottages would do less to restore the tax base than larger, more expensive homes or condos. Finally, MAHP's proposal to develop a group site met the most resistance of all. Possible recreation of the aesthetic and social problems caused

by the FEMA trailer parks made communities very concerned and as a result, MAHP ultimately used existing commercial mobile home parks in all 14 jurisdictions.

Memorandum of Understanding. Entering into MOUs with each jurisdiction turned out to be more difficult and time consuming than MAHP staff initially expected. MOUs were tailored to meet the needs of each jurisdiction, with modifications focusing on concerns regarding the quality of units, unit installations, and the use of units for permanent housing. Many communities limited the possibility of placing MAHP units by only permitting units on private residential lots, only approving units where a FEMA travel trailer previously existed, requiring applicants to provide evidence that they were rebuilding a permanent unit in order to obtain a permit, or authorizing placement of units only where local zoning allowed modular or manufactured homes.

MAHP staff and contractors were frustrated by the differing requirements across jurisdictions. Additionally, many jurisdictions frequently modified their requirements and did not always communicate these changes with MAHP staff. At the same time, local jurisdictions were frustrated by MAHP's lack of knowledge about jurisdictional boundaries.

Site Approval & Installation. The biggest constraint on program participation was the availability of an eligible site. However, upon finding a site, additional challenges arose. MAHP housing advisors were teamed with applicants to explain program requirements, assist them in obtaining permits from local jurisdictions, and filling out several complex forms. Site approval challenged MAHP organizationally, as a lack of coordination between PBS&J inspectors and housing advisors led to confusion regarding which sites and which applicants had completed the necessary steps for approval. The result was a backlog of cases where housing advisor tasks were completed and inspector tasks were not or vice versa.

Coordination issues also arose after the sites were approved, as haul and install contractors, inspectors, housing advisors, applicants, building officials, and the utility company all had to work in tandem to make the unit ready for occupancy. Additionally, MAHP found that some manufacturer installation instructions were unclear and had to be modified.

Occupancy Standards & Maintenance. Initially MAHP established occupancy standards to simulate disaster standards, but realized that these did not work well for a pilot program implemented two years later. A liberalization of standards frustrated participants who had received their units prior to the decision, as families of the same size were now receiving larger units.

For the move-in process, housing advisors again had to walk applicants through complex documents, including the Lease Agreement, Maintenance Agreement, and Right of Entry/Ingress-Egress Statement. It was difficult to determine whether a particular maintenance problem was a warranty item that would be handled by the manufacturer, or a non-warranty item to be handled by a MAHP selected contractor. Additionally, the responsibilities of the participant when it came to maintenance differed between the FEMA and MAHP programs, causing confusion (MAHP required residents to address routine, minor maintenance needs, FEMA did not).

TRANSITION TO PERMANENT HOUSING

MAHP anticipated that Cottages would be converted from temporary to permanent housing by installing units on permanent foundations or incorporated into multifamily rental developments. However, local governments were resistant to these permanent housing projects and especially to the concept of developing group sites. Additionally, the organizational start-up and temporary housing activities alone were greater priorities for the first nine months of the program. Thus, minimal attention was given to planning for the transition to permanent housing until April 2008.

Once an emphasis was placed on permanent housing, MEMA's first step was to draft an RFP to procure the project management role. The Hagerty Consulting Group was chosen for their housing development policy expertise. Next, engineering specifications were developed for the permanent foundations and installation design and procedures were revisited. Additionally, MEMA worked with the state legislature to amend a statute, which allowed MEMA to sell, transfer, or lease units to non-profit organizations.

CHALLENGES TO PERMANENT HOUSING TRANSITION: APRIL 2008 – AUGUST 2008

The Disposition Plan. In designing the Dispositions Plan, Hagerty Consulting encountered difficulty in accessing reliable and updated information of MAHP participants because the information collected by housing advisors during their monthly visits was never entered into the MAHP database for analysis. Specifically, MAHP did not have current income information to determine what types of permanent housing resource participants could afford.

Compliance. One of the impediments to transition to permanent housing was that during the temporary housing phase, roughly 300 Cottages had been placed in Coastal High Hazard Areas (Velocity-Zones). However, FEMA prohibited the permanent installation of Cottages in these areas, meaning that all units would have to be demobilized. Another challenge concerned elevation - IRC specifies that Cottage elevations may not exceed 5'7"; however federal elevation regulations were changed after Katrina to require a much higher elevation. This effectively prohibited permanent installation of Cottages, even if participants owned their own land. Additionally, cost of elevation was also a feasibility issue, with MAHP estimating an additional \$10,000 per unit to elevate a unit 5'7", on top of the \$20,000 base installation cost. It is possible that this cost would be passed onto the participant purchasing the unit.

Community Approval. Obtaining local jurisdiction approvals was a technical challenge, as participants have to comply with local zoning and code requirements. For example, above ground utility lines that were acceptable for temporary units were not permitted long-term. Other units had to be moved to meet local set-back requirements that were previously waived. In some jurisdictions, two structures cannot remain permanently on the same lot, so owners were forced to choose between continuing to repair their damaged home or keeping their Cottage.

Several jurisdictions have 1,000 sq ft minimum requirements for residential units, which disqualified both the Park Model and the Cottages. In response, Habitat for Humanity launched a pilot program in Hancock County to pursue options for adding additions to the Cottages to mitigate this requirement.

By the summer of 2008, Hancock, Harrison, and Jackson County approved permanent placement of MAHP units, but only for areas zoned for mobile, manufactured, or modular homes. Some incorporated jurisdictions, such as Biloxi, Pass Christian, and Gautier remain adamant that no

Cottages will be permanently placed, regardless of location. Many local leaders made these decisions having never personally seen the inside of a Cottage. Additionally, many communities, given their experience with FEMA, were not convinced that the MAHP demobilization deadline was real, assuming MAHP would extend deadlines for residents who were not finished rebuilding. Others feared that Cottages would remain permanently by default.

Homeownership Program. MAHP staff reported that participants were very frustrated with the lack of information about a purchase plan. In June 2008, MAHP undertook a Permanent Housing Survey to figure out the needs of program participants. Survey findings revealed that of the 1,166 pre-disaster homeowners and 636 pre-disaster renters, 72% and 92% respectively were interested in purchasing their Cottage. However, about ¾ of both groups indicated that they could only afford to pay between \$0-\$400 per month in mortgage, utilities, taxes, and insurance. Based upon MAHP preliminary estimate that \$400 is the minimum threshold for ownership expenses (maintenance, taxes, insurance, utilities) other than the purchase price, it appears that a significant number of the interested occupants would not be able to afford a Cottage, even if it were provided mortgage-free.

In addition to the lack of affordability of the unit, MAHP required anyone who purchased a unit to maintain homeowner/hazard insurance on the unit and if required, flood insurance, creating yet another expense. Thus, for many program participants, their only option was to pursue financing from a lending institution. However, with low incomes and poor credit scores, many found it difficult to secure financing. Additionally, many lenders have minimum required loan amounts for their existing products that were higher than the amounts needed by participants.

FURTHER IMPEDIMENTS TO PROGRESS: NOVEMBER 2008-AUGUST 2009

November 2008-February 2009^{23,24}

In November 2008, Hancock County had 1,147 cottages still in use: 138 cottages in Bay St. Louis, 210 in Waveland, 121 in Pass Christian, and 678 in unincorporated Hancock County. MEMA officials pleaded with incorporated jurisdictions to extend the deadline for removal of cottages past March 31, 2009 so that program participants could have the opportunity to convert their cottage into permanent housing. Although Gulf Coast Housing Director Gerald Blessey acknowledged that permanent housing efforts had not moved as quickly as anticipated, MEMA was offering to sell cottages to residents on a sliding scale, based on income, with prices ranging from \$500 to \$26,000. If allowed by these jurisdictions, the cottages would be removed from their trailer beds and placed on permanent foundations as modular homes. Once this has occurred, the cottages meet all building code standards that apply to modular homes.

However, the Bay St. Louis and Waveland City Councils and the Hancock County Board of Supervisors all voted to remove all MEMA units from residentially zoned neighborhoods by the March 31, 2009 deadline and to only allow residents to buy their cottages in the few areas zoned for mobile home parks and commercial parks. City Councilmember's claimed the cottages were staunchly opposed by constituents who had rebuilt their permanent pre-disaster homes and thought

²³ Dwayne Bremer, "Cottage Crisis Looming," The Sea Coast Echo, November 21, 2008. Retrieved from the Mississippi Center for Justice, http://www.mscenterforjustice.org/news-article.php?article_id=92

²⁴ Dwayne Bremer, "Bay Council says cottages must go," The Sea Coast Echo, December 17, 2008. Retrieved from the Mississippi Center for Justice, http://www.mscenterforjustice.org/news-article.php?article_id=90

the cottages would decrease neighborhood property values. Many cottage residents did not want to move into commercial parks and current parks have little vacancies.

March-June 2009²⁵

In response to outcry by program participants, the Mississippi Center of Justice rallied eight cottage residents to sue the City of Waveland, stating that the Board adopted ordinance restricting future use of cottages was unfair and forced residents from living within the jurisdiction. On June 3, 2009, the Waveland Board voted to rescind 15 of the 16 restrictions. However, this only affected the 30 cottages remaining in the city, as the new placement of cottages remained prohibited.²⁶

As the March 31st deadline loomed closer, MEMA began to remove cottages from these jurisdictions, placing them in temporary storage sites, including Gulfport where 670 cottages now lay vacant. As of June 2009, 1,800 families remain in temporary cottages and 20,000 families were still living in temporary FEMA trailers and apartments.

August 2009

Table 1: Mississippi Cottage Conversion Rate²⁷

	Occupied September 2008	Approved to Buy	Percent Retained
Hancock	1,077	330	31%
Harrison	934	438	47%
Jackson	750	368	49%
Other	42	31	74%
Coastwide	2,803	1,167	42%

Many community organizations, who had been promised allocation of cottages for owner-occupied and rental uses, continued to face challenges with the tangled approval and compliance processes imposed by federal and state agencies. These organizations included: Enterprise Corporation of the Delta, Mercy Housing and Human Development, Habitat for Humanity, and the North Gulfport Community Land Trust.

In the end, many individuals who applied for purchase of a permanent cottage are still waiting with uncertainty, as the state has delayed developing long-term solutions, not in small part due to local government restrictions and their refusal to grant permits or alter zoning codes.

HOUSING PROGRESS:

Community Organizations. In early 2008, a renewed interest in acquiring Cottages among community organizations surfaced. This likely stemmed from the Mississippi Development

²⁵ Spencer S. Hsu, “Permanence Eludes Some Katrina Victims: Many Still Live in Trailers, Rentals,” *The Washington Post*, June 13, 2009.

²⁶ Dwayne Bremer, “Waveland will allow cottages to stay,” *The Sea Coast Echo*, June, 3, 2009. Extracted from the Mississippi Center for Justice, http://www.mscenterforjustice.org/news-article.php?article_id=108

²⁷ The Steps Coalition, “Hurricane Katrina: Has Mississippi Fallen Further Behind?: Trends and Challenges in Mississippi’s Disaster Recovery,” Updated September 2009.

Authority's reallocation of \$241 million in CDBG funding from the Homeownership Assistance Grant Program to the Long Term Workforce Housing Program (LTWHP). LTWHP provides grants and loans to non-profit and for-profit organizations to help develop long term affordable housing and a second and third rounds of funding were released April 2008 and September 2008. In July 2008, MAHP initiated a Letter of Interest application process for community organizations to propose permanent housing projects.

Some organizations have seen success in placing MAHP units. Habitat for Humanity worked with Lexington Homes, one of the cottage manufacturers, to design an addition to the units. They received approval from Hancock County to site these units, with the expanded square footage, in infill lots. Additionally, Renaissance Development Corporation is working to provide relocation and permanent placement for all 300 Cottages that were temporarily installed in Velocity Zones, starting with 40 approved in Hancock County.

Housing Choice Vouchers. In December 2007, Housing Choice Voucher funds previously obligated by the Mississippi Regional Housing Authority (MHRA) were freed up, enabling MHRA to partner more actively with MAHP on permanent housing efforts. First, MAHP transitioned all 323 Cottages in commercial mobile home parks to the South Mississippi Development Corporation (SMDC), a nonprofit subsidiary of MHRA. SMDC will lease the units and MHRA will offer Vouchers to current commercial park occupants. Second, MHRA has proposed three new permanent developments using 227 new and refurbished Cottages, owned and managed by SMDC as rental housing. Units will be available to families that have Vouchers and also to market-rate renters. Finally, MRHA through SMDC, is taking ownership of 80 units of Eco Cottages sited in Picayune.

Chapter #4: Evaluating existing models for providing permanent replacement housing to victims of natural disasters

This section of the Plan evaluates the federal government’s response to the need for permanent housing options to replace damaged or destroyed housing following a natural disaster. While policy actions were taken following Hurricanes Katrina and Rita to utilize both single family as well as multifamily rental and homeownership solutions, gaps remain in the ability to finance permanent replacement housing.

Findings

*FEDERAL ASSISTANCE AFTER THE 2005 HURRICANE SEASON*²⁸

Background. After Hurricanes Katrina and Rita, federal assistance for the repair or replacement of permanent housing was made available to homeowners and rental property owners in three forms: grants, loans, and tax incentives. Those programs serving homeowners only included the Individuals and Households Program: Repair or Replacement Assistance and the Home Disaster Loan Program. Programs serving homeowners or renters included the CDBG program, the Hazard Mitigation Grant Program, and some tax incentives. Programs serving renters only included the Capital Fund Emergency/Natural Disaster Funding, GO Zone LIHTCs, Physical Disaster Business Loan, and Public Assistance for Permanent Work.

State Use of Permanent Housing Financing. To make CDBG funds available for the repair and replacement of permanent housing, both Louisiana and Mississippi created new programs for homeowners and small rental property owners:

Louisiana created the Road Home Homeowner Program for homeowners to rebuild their homes on their own property or sell their property and relocate. Also created was the Road Home Small Rental Property Program which made forgivable loans in two funding rounds. At first funding came as a reimbursement, but in December 2008, an up-front financing option was added.

Mississippi created the Homeowner Assistance Program for homeowners that sustained flood damage. Also created was the Small Rental Assistance Program for owner in Hancock, Harrison, Jackson, and Pearl River Counties. Four types of assistance were provided, including: rental income subsidy, repair or reconstruction of Katrina-damaged property, reconstruction or conversion reimbursement of non-Katrina-damaged property, and new construction reimbursement. Finally, Mississippi created the Long Term Workforce Housing Program to provide grants and loans to local governments, non-profits, and for-profit organizations to provide long term affordable housing stock, benefiting households earning 120% AMI or less.

Challenges to Receiving Permanent Housing Financing. Homeowners and rental property owners faced challenges in applying for and use federal assistance. Challenges included gaps in

²⁸ US Government Accountability Office, Report to Congressional Requesters, GAO-10-17, “Disaster Assistance: Federal Assistance for Permanent Housing Primarily Benefited Homeowners; Opportunities Exist to Better Target Rental Housing Needs,” January 2010.

financing needed to complete repairs, delays in the availability of funds, and adverse economic conditions, including high insurance premiums, high construction costs, and tightening credit markets.

Public Housing Authorities (PHAs) also faced considerable challenges in obtaining funding for the recovery of public housing units. Although 80% of the 7,000 public housing units in New Orleans were damaged by Hurricane Katrina, less than \$30 million was made available for damages to all PHAs nationwide through the Capital Fund Emergency/Natural Disaster Funding Program.

Results of Permanent Housing Allocation. In both Louisiana and Mississippi, more homeowner units were damaged than rental units, but the proportional damage to rental stock was greater. However, federal assistance addressed the repair and replacement needs of 62% of damaged homeowner units, but only 18% of damaged rental units. Federal programs provided assistance to 303,000 homeowner units, compared to 43,000 rental units and 115,000 homeowner units received funding from two or more programs. Louisiana and Mississippi awarded roughly \$11 billion of their CDBG funds to homeowner programs while only allocating \$1 billion to the owners of small rental properties. For example, demand for the Road Home Small Rental Property Program was 7 to 8 times what the funding could support. Additionally, the completion of CDBG-funded small rental units in Louisiana and Mississippi has been very limited, with only 14% of 10,115 rental units in Louisiana and 25% of 4,242 rental units in Mississippi complete as of August 2009.

*PKEMRA CHANGES PERMANENT HOUSING OPPORTUNITIES*²⁹

Before passage of the Post-Katrina Emergency Management Reform Act (PKEMRA) in October 2006, direct assistance for permanent housing was limited to “insular areas outside the continental United States and in other remote locations when alternative housing resources are not available.” FEMA’s rationale was that repetitive repairs to homes in a vulnerable area were not sound investments of federal aid and that construction of permanent, disaster resistant housing was economically sensible.

However, PKEMRA amended this section of the Stafford Act by adding “semi-permanent” to the type of housing that could be constructed, and by striking the term “remote,” in order to substantially broaden FEMA’s options in considering temporary housing alternatives in certain situations. PKEMRA also create the Individuals and Households Pilot Program (IHPP) for FEMA to lease private apartment units and make repairs to those units. Repairs to multifamily rental housing stock could now be considered by FEMA as an alternative permanent housing solution to single family rental or homeownership options.

*FEMA’S INDIVIDUALS AND HOUSEHOLDS PILOT PROGRAM (IHPP)*³⁰

Background. Following the passage of PKEMRA, IHPP was created by FEMA to evaluate the efficacy and ability to provide timely and cost-effective housing to individuals and households

²⁹ McCarthy, Francis X. CRS Report to Congress, “FEMA Disaster Housing: From Sheltering to Permanent Housing,” Congressional Research Service 7-5700, September 16, 2009.

³⁰ Homeland Security, Federal Emergency Management Agency, “Individuals and Households Pilot Program: Fiscal Year 2009 Report to Congress,” May 19, 2009.

affected by a disaster through the use of repair to multifamily rental property. The pilot was tested in Cedar Rapids, IA following May 2008 tornadoes and in Galveston, TX after Hurricane Ike.

Lease Agreement. FEMA required property owners to modify the standard lease to include the provision that the monthly rent for the FEMA applicant would be \$0. This was done to facilitate the transition of applicants to long-term or permanent housing at the end of the contract period. Applicants may choose to stay at the property and enter into a standard lease agreement with the owner. In Cedar Rapids Iowa, the Cedar Valley apartment owner agreed to \$0 leases in exchange for FEMA funding repairs to 7 units and paying operating costs for 14 months. In Galveston Texas, the Carelton Courtyard apartment owner agreed to \$0 leases in exchange for FEMA repairs to 32 units and paying operating costs for 30 months.

Cost Comparison. FEMA compared the cost of repairs and monthly operating cost of each unit against the cost of providing manufactured homes under Section 408. FEMA used acquisition, installation, and monthly maintenance costs for manufactured homes for the comparison.

- Iowa Pilot
 - Cost of Providing 7 Manufactured Homes - \$439,376
 - Cost of Pilot Repair to 7 Units - \$76, 854
 - Savings to Federal Government - \$362,522
- Texas Pilot
 - Cost of Providing 32 Manufactured Homes - \$2,650,624
 - Cost of Pilot Repair to 32 Units - \$897,358
 - Savings to Federal Government - \$1,753,266

FEMA NATIONAL DISASTER HOUSING STRATEGY – PERMANENT HOUSING

On January 16, 2009, FEMA released the final version of the *National Disaster Housing Strategy*, which has a *Disaster Housing Community Site Operations Annex*. This Annex states that FEMA is responsible for closing group sites and assisting households in transitioning to permanent housing.³¹ However the annex is lacking several important pieces of information relating to how this transition will occur. First, the Annex does not explain how other federal or state agencies will be involved in completing tasks associated with transitioning a group site household to permanent housing and what mechanisms will be used to ensure that victims can find a permanent housing unit. For example, unlike the 2007 FEMA Gulf Coast Recovery Office Housing Action Plan, the annex does not specify HUD's role in transitioning families to permanent housing.

Additionally, neither the Strategy nor the Annex address the cost of helping households transition to permanent housing, the staffing resources needed to complete this task, the type of training that should be provided to staff, or the source of resources necessary to achieve FEMA's goal of closing group sites and transitioning families to permanent housing. This is a step backwards from the efforts made by FEMA's Transitional Recovery Offices in Mississippi and Louisiana to develop housing plans that discussed the resources needed for transitioning from group sites. Finally, the Strategy does not describe or anticipate the challenges associated with helping people find permanent housing after a natural disaster.

³¹ US Government Accountability Office, GAO-09-796, "Disaster Housing: FEMA Needs More Detailed Guidance and Performance Measures to Help Ensure Effective Assistance after Major Disasters," August 2009.

The absence of detailed information in the Strategy and its annex on the partnerships that FEMA needs to form, the resources it needs, and the mechanisms that FEMA is to use to address the challenges specific to a disaster when closing group sites and transitioning households to permanent housing can lead to delays in helping disaster victims return to more stable and conventional living arrangements.³²

³² US Government Accountability Office, GAO-09-796, “Disaster Housing: FEMA Needs More Detailed Guidance and Performance Measures to Help Ensure Effective Assistance after Major Disasters,” August 2009.

Chapter #5: Designing alternatives to existing models to improve the sustainability, affordability, desirability, and quality of housing rebuilt in the event of future natural disasters

Findings

In the wake of recent natural disasters, among the many lessons learned is the need for more effective and extensive pre-disaster mitigation measures, including housing practices to help reduce the likelihood of property damage and loss of life. A study by the Multi-Hazard Mitigation Council (MMC) for FEMA found that every \$1 spent on loss prevention saves taxpayers an average of \$4 in future reduced losses.³³ Coming up with disaster resistant housing models before the next high-impact disaster occurs has become a key priority. Additionally, creating innovative design strategies to create disaster resistant homes includes looking to thinking outside the box, to incorporate best practices in the field of energy efficiency and sustainability.

WAYS TO MAKE HOMES MORE RESISTANT TO DISASTERS

1. Promote and support smarter and safer construction practices and home improvements, particularly measures that increase the structural integrity of homes and protect them from water intrusion.
2. Utilize technologies and other practices that can mitigate flood damages.
 - *Dry floodproofing*: help create waterproof or water-resistant seals around the exterior of the home.
 - *Wet floodproofing*: serves to make uninhabited parts of the home (garages, unfinished basements) resistant to flood damage.
 - *Elevation*: raising major home appliances and the electrical system (electric panel board, service lines, wiring, outlets, etc.).
3. Promote measures and products for mitigating severe wind and rain³⁴:
 - Wind-resistance for the envelope of the home include the installation and reinforcement of thicker, sturdier roof coverings, installation of secondary water barriers beneath the roof covering, use of pressure resisting windows, use of a pressure resisting garage door, and installation of storm shutters.
 - Measures to provide wind-resistance for the uplift load path include roof deck connection to framing and connectors for continuous load path from roof to foundation.
 - Wind-resistant measures for the Lateral Load Path include sheathing for shear walls and anchorage for shear and overturning.

³³ Multi-Hazard Mitigation Council of the National Institute of Building Sciences, “Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities,” December 2005.

³⁴ Hurricane Risk Mitigation Leadership Forum Series, “Presentations - Texas Risk Mitigation Leadership Forum” <http://www.mitigationleadership.com/newsite/presentations.cfm?f=TRM>

4. Develop and enforce better building codes, zoning ordinances, and land use planning strategies at the local level. FEMA only updates floodplain maps periodically and new developments built in and around floodplains can increase the area at risk of flooding (increasing impervious surfaces).
 - Utilize ‘Code Plus Programs,’ such as IBHS (Fortified for Safer Living & Fortified for Existing Homes) or FLASH (Blueprint for Safety).
 - Implement continual updates to statewide residential building codes. The Texas Legislature mandated municipalities adopt the 2006 International Residential Code (IRC) and International Building Code (IBC).

HOW PRIVATE INDUSTRY CAN HELP CREATE DISASTER RESISTANT HOUSING

1. Develop cost-effective products and construction methods
2. Work with designers to utilize cost-effective techniques
3. Work with builders
4. Develop construction aids – Document to allow construction of affordable housing without having to hire an engineer (example - Simpson Strong Tie’s *High Wind Framing Connection Guide*).
5. Work to incorporate new technology into building codes
6. Work with retailers
7. Educate consumers
8. Partner with non-profit organizations with similar interests

LINKING EFFORTS TO IMPROVE DISASTER RESISTANCE & ENERGY EFFICIENCY

Solutions in Action

*Soldiers Grove, Wisconsin.*³⁵ After enduring repeated flooding of the Kickapoo River, the village worked with the Army Corps of Engineers to relocate its downtown using federal disaster recovery funds. Originally, the Army Corps proposed constructing a levee however the levee would have cost \$3.5 million more than the total assess value of all property in the floodplain. Therefore, the city chose to relocate 24 apartments, 10 houses, and 30 businesses and built the new downtown as a solar village, with all buildings heated by solar energy. Additionally, several homes in the flood-prone area were raised above the 100 year floodplain and the floodway was converted to a riverside park and recreation area. The total relocation cost was roughly \$7 million, compared to the \$8 million projected cost for the proposed levee.

*Greensburg, Kansas.*³⁶ After a tornado struck the town in May 2007, Greensburg developed a reconstruction plan that incorporated both disaster resistant and energy efficient elements into new homes. The non-profit group Greensburg GreenTown set up the “Chain of Eco-Homes Competition” in 2009. Besides incorporating disaster resistant and eco-friendly elements, applicants were required to keep the buildable design cost under \$110 per square foot. Over 250 teams from 38 states and 13 countries entered designs and 12 eco-homes were chosen and have initiated construction. These 12 homes feature a variety of building techniques, prices, sizes,

³⁵ David Salvesen, Emergency Management Institute. Federal Emergency Management Agency “Breaking the Disaster Cycle: Future Directions in Natural Hazard Mitigation” 2003.

³⁶ HousingPolicy.org “Linking Disaster Resistance and Energy Efficiency,”
http://www.housingpolicy.org/toolbox/strategy/policies/distrest_energeff.html?tierid=113297

energy efficiency features, and green living products and services. One design, the Silo Eco-Home³⁷, has been completed and two more, the Meadowlark House³⁸ and the Eco-Homestead³⁹, are in progress.

*Chesapeake, Virginia.*⁴⁰ The 1998 FEMA-sponsored Wind Summit inspired a public/private partnership to create a hurricane resistant home called the Hurricane House. Created by Jack Jackson, it is a display home at the Estates Carriage House (single family community) in Chesapeake, Virginia. Built with wood frame construction and has insulation values that are higher than is typical in the region (R-15 walls, R-19 floors, R-30 in the roof). Hurricane House also includes numerous additional features to increase hurricane resistance and energy-efficiency, including: wind-resistant doors, double-glazed, laminated windows, a 12-inch thick reinforced-concrete ceiling but to withstand 250 mph winds, and a "safe room" that doubles as a walk-in closet. Finally, Hurricane House also incorporates some alternative construction wall assemblies can provide substantial strength for hurricane resistance while also delivering inherent energy efficiency gains.

Gautier, Mississippi. In October 2005, Habitat for Humanity International launched the demonstration phase of its "home in a box" initiative, as part of Operation Home Delivery. This initiative sought to mobilize partners across the country to build house frames, package the frames in shipping containers, and send them into Hurricane Katrina affected areas.⁴¹ One of the demonstration models, called ecoMOD, was a partnership between the University of Virginia and the Habitat for Humanity of the Mississippi Gulf Coast. The ecoMOD team designed an energy efficient and environmentally sustainable prefabricated home, with an emphasis on natural ventilation, thermal efficiency, and cost-savings strategies for materials.⁴² The prototype is built from an innovative steel and foam panel system that is highly insulated and resists hurricane –force winds and mold. Besides placing the roof and windows in a way that encourages natural ventilation, the house also incorporates a photovoltaic solar panel array for hot water and a heat pump/heat recovery system for heating and air conditioning. The 1,087 square foot, three bedroom home, built with sweat equity, cost approximately \$65 per square foot.

STATE DISASTER MITIGATION FINANCING – BEST PRACTICES

My Safe Florida Home Program⁴³ - My Safe Florida Home Program was established in 2006 through a \$250 million appropriation by the state. It was administered by the Department of Financial Services, which oversees activities and allocates funding. The program provided free hurricane mitigation inspections for single-family homes and grants to households to fund mitigation retrofits. It targets low- and moderate-income households, providing grants only to

³⁷ Greensburg GreenTown, "Silo Eco-Home," <http://www.greensburggreentown.org/silo-eco-home/>

³⁸ Greensburg GreenTown, "Meadowlark House," <http://www.greensburggreentown.org/meadowlark-house/>

³⁹ Greensburg GreenTown, "Homestead House," <http://www.greensburggreentown.org/homestead-house/>

⁴⁰ Christina B. Farnsworth, "Building for Disaster Mitigation," *Home Energy Magazine*, January/February 2000.

⁴¹ Habitat for Humanity, "Hurricane Response: Habitat receives unprecedented help in an unprecedented effort," <http://www.habitat.ca/hurricanekatrinasponsec54.php>

⁴² John Quale and Kristina Iverson, "A Sustainable Housing Response to Hurricane Katrina," *Cityscape: A Journal of Policy Development and Research*, Vol. 10, No. 3, 2008.

⁴³ My Safe Florida Home, "About the My Safe Florida Home Program," <http://www.mysafefloridahome.com/abouttheprogram.asp>

homes with insured values under \$300,000. From 2006 to 2009, the program has provided free inspections to more than 400,000 homeowners and has funded retrofits for nearly 33,000 homes. However, due to budget constraints, the program expired on June 30, 2009.

South Carolina Hurricane Damage Mitigation Program (SC Safe Home Program)⁴⁴ - Established by the Omnibus Insurance Reform Act of 2007, the SC Safe Home Program offers grants to residents for making their homes more resistant to the damaging effects of high winds from hurricanes and severe storms. The program is operated by the South Carolina Department of Insurance, the Program provides grant dollars to individual homeowners to make their property more resistant to hurricane and wind damage.

SC Safe Home Program is funded through a percentage of the premiums collected from the state's Wind Pool, which is an association of insurance companies which makes disaster insurance available to homeowners in the coastal area who are not able to buy it through the standard insurance market. Funds can be used for the following mitigation improvements/retrofits including: roof deck attachment, secondary water barrier, roof covering, bracing gable ends, reinforcement of roof-to-wall connections, opening protection, exterior doors, including garage doors, tie downs, problems associated with weakened trusses, studs and other structural components, and repair or replacement of manufactured home piers, anchors and tie-down straps.

Similar to the My Safe Florida Home Program, the SC Safe Home program provides grants only to low- and moderate-income households and to homes with insured values under \$300,000. To date, the program had provided 600 grants to homeowners in the state totaling \$3 million. Homeowners completing mitigation projects funded through the program have reported savings of up to 24 percent in their property insurance premiums.

⁴⁴South Carolina Department of Insurance, "About SC Safe Home," <http://www.scsafehome.sc.gov/About/>

Chapter #6: Encouraging the participation, coordination, and involvement of appropriate federal organizations

UTILIZING FEDERAL RESOURCES TO MAKE HOMES MORE RESISTANT TO NATURAL DISASTERS

Pre-Disaster Mitigation (PDM) Program (FEMA)⁴⁵

The Pre-Disaster Mitigation Program provides cost-effective investments before disasters occur to reduce the vulnerability of communities in the future. The range of eligible projects includes retrofitting public buildings, acquiring and relocating properties out of a flood plain, elevating structures, flood-proofing public buildings, developing mitigation plans, etc. However, PDM can only be used for mitigation projects, not disaster preparedness. A 2007 CBO report on PDM noted a proportional cost savings benefiting two FEMA programs: its disaster relief programs and its National Flood Insurance Program

In FY2008 Congress appropriated \$114 million to 149 grantees, 79% of which were planning grants.

State and local cost share is 25% of the grant. Then, starting in FY2009, Congress directed FEMA to implement a state minimum of \$500,000 for eligible projects, making PDM both a competitive and formula-driven program. Additionally, Congress gives out directed grants (earmarks) through PDM, which accounted for 27% of the total PDM appropriation for FY2009.

Projects undertaken with PDM funds⁴⁶:

Bay Area Rapid Transit (BART) District Mitigation Project. Used grant to raze the above ground portion of BART's Train Operations Center and move the operations underground to mitigate earthquake damage

Barry County, Michigan Hazard Mitigation Plan. County developed an inventory of natural hazards affects its communities and created a mitigation plan to identify natural hazards, assess vulnerability, and develop methods to eliminate effect of hazards.

Mid-Columbia & Southeast Oregon Hazard Mitigation Planning Initiative. Planning process engaged communities to identify risks and develop mitigation actions that address infrastructure and service needs, specific land uses, engineering standards, and building codes.

San Francisco Medical Center Seismic Saw-Cut Project. Used grant to install a seismic expansion joint between the Medical Center and the Medical Science Building.

Pima, Arizona, Canada del Oro Acquisition Project. Grant funded the voluntary acquisition of 50 single family homes, mobile homes, and commercial properties in the Canada del Oro Valley floodplain to be converted into permanent open space.

⁴⁵ Francis X. McCarthy and Natalie Keegan, Congressional Research Office, CRS Report 7-5700, "FEMA's Pre-Disaster Mitigation Program: Overview and Issues," July 10, 2009.

⁴⁶ Federal Emergency Management Agency. "In Action -- The Pre-Disaster Mitigation Grant Program." 2006.

Darlington, Wisconsin Plan and Acquisition Project. From 2002 to 2006, grants funded flood proofing of 19 commercial buildings, and the acquisition and removal of 14 buildings situated in a floodplain.

Hazard Mitigation Grant Program (HMGP)(FEMA)

The Hazard Mitigation Grant Program provides funding specifically after a disaster to implement mitigation measures to help reduce damages to public or private property from future disasters. FEMA can offer states up to 15% of the total disaster recover grants it has awarded them and can fund up to 75 percent of the eligible costs of each project. States or local grantees must provide a 25 percent match, which, as with the PDM Program, can come from non-federal sources or CDBG program funds. Eligible uses are similar to those under the PDM program.

Flood Mitigation Assistance (FMA) Program (FEMA)

The Flood Mitigation Assistance Program provides funds for projects that reduce or eliminate the long-term risk of flood damage to buildings, homes, and other structures that are insured under the National Flood Insurance Program (NFIP). Similar to the PDM and HMGP, FEMA provides 75 percent of the funding for eligible costs, and the grantee is responsible for the other 25 percent.

Disaster Recovery Enhancement Fund (HUD)⁴⁷

In June 2009, HUD announced the \$312 million Disaster Recovery Enhancement Fund (DREF), created to encourage states to undertake long-term disaster strategies that focus on reducing the risk of damage from future natural disasters. This fund is reserved for states that spend their CDBG funds on specific disaster recovery activities likely to reduce the extent of damage in the future.

These projects may include: Buyout payments for homeowners living in high-risk areas; optional relocation payments to encourage residents to move to safer locations; home improvement grants to reduce damage risks (property elevation, reinforced garage doors and windows, etc.); improving and enforcing building codes; and developing forward-thinking land-use plans that reduce development in high-risk areas.

To be eligible for DREF, the individual mitigation measure must mitigate and/or reduce risk beyond the pre-disaster condition. DREF funds cannot be used as a substitute or match for FEMA HMGP funds and can only be used in counties officially covered by a disaster declaration in 2008.

POSSIBLE FUTURE FEDERAL FINANCING SOLUTIONS

Weatherization Assistance Program⁴⁸ - During the current Congressional session, Senator LeMieux introduced S.2818 which would amend the Energy Conservation and Production Act

⁴⁷ US Department of Housing & Urban Development, News Release, "DONOVAN ANNOUNCES \$64 MILLION IN DISASTER ASSISTANCE TO FLORIDA: \$312 million available to encourage States to reduce damages from future disasters" June 10, 2009.

⁴⁸ Open Congress, "S.2818 - A bill to amend the Energy Conservation and Production Act to improve weatherization for low-income persons, and for other purposes," http://www.opencongress.org/bill/111-s2818/show#bill_list

(ECPA) to allow incentives for energy-related home retrofitting activities that are hazard mitigation home improvements. The bill would increase the amount of allowable expenditures to low income homeowners from \$6,500 to \$8,500, for retrofit projects which would result in both disaster resistance and energy efficiency improvements.

HOME STAR Program (Cash for Caulkers)⁴⁹ - Introduced by the White House in March and passed by the House in May, the Home Star bill would use rebates and tax incentives to spur more Americans to make their homes energy efficient. It would also improve home resistance to natural disasters. “Silver Star Rebates,” provide up to \$1,500 per household for upgrades to insulation, duct sealing, water heaters, HVAC units, windows, roofing, and doors. “Gold Star Rebates,” provide up to \$3,000 per household for a whole home energy audit and subsequent retrofit tailored to achieve 20% energy savings.

Predisaster Hazard Mitigation Enhancement Program⁵⁰ - Introduced in June 2009 by Representative Bennie Thompson, H.R. 3027 purpose is to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act, to provide grants to eligible entities to assist hazard mitigation strategies that save lives, improve the structural integrity of property affected by natural disasters.

Hazard Mitigation For All⁵¹ - Introduced in June 2009 by Representative Bennie Thompson, H.R. 3026 purpose is to amend the United States Public Housing Act of 1937 to establish a predisaster mitigation program to benefit public and assisted housing residents, improving the resilience of resident-inhabited residential structures to withstand storms and other natural disasters, through restoration, reconstruction, replacement, or retrofit initiatives in advance of such storms and disasters. Additionally, this program is to be used only for residents of assisted housing whose family incomes do not exceed 80 percent of area median income.

⁴⁹ The White House, Office of the Press Secretary, “Fact Sheet: Homestar Energy Efficiency Retrofit Program,” <http://www.whitehouse.gov/the-press-office/fact-sheet-homestar-energy-efficiency-retrofit-program>

⁵⁰ Open Congress, “H.R.3027 - Predisaster Hazard Mitigation Enhancement Program Act of 2009,” <http://www.opencongress.org/bill/111-h3027/text>

⁵¹ Open Congress, “H.R.3026 - Hazard Mitigation For All Act of 2009,” <http://www.opencongress.org/bill/111-h3026/text>

Chapter #7: Recommendations for the rapid and efficient large-scale production of temporary and permanent replacement housing following a natural disaster

In preparing this Plan, the Natural Disaster Housing Reconstruction Advisory Committee (the “Advisory Committee” or the “Committee”) organized its recommendations in two main categories: recommendations for policies and practices to be established before a natural disaster strikes and recommendations for immediate and long-term recovery following a natural disaster. The Advisory Committee acknowledged the pitfalls of previous attempts to bifurcate post-disaster recommendations into temporary housing and permanent housing proposals and instead chose to address them as part of a single process in the long-term recovery of disaster victims. Additionally, the Advisory Committee agreed that the implementation of these recommendations requires extensive involvement at the local administrative level, focused chiefly through Councils of Governments (COGs).

Pre-Disaster Recommendations

Overarching Recommendations

Currently, the federal authorities, as well as the funding allocations for immediate disaster recovery versus long-term disaster recovery, are on separate trajectories. Immediate response to a natural disaster is primarily administered by and coordinated through FEMA at the federal level, and the Department of Public Safety’s Division of Emergency Management (DEM) at the state level. The local levels of government chosen by DEM and FEMA to allocate this funding and undertake pre-disaster planning are the city and county governments. These city and county governments create Local Emergency Management Plans (LEMPs), which must be approved by both FEMA and DEM in order for that jurisdiction to receive disaster funding.

In contrast, the long-term housing rebuilding effort undertaken after a natural disaster is primarily administered and coordinated through HUD at the federal level and, as designated by the Governor, the Texas Department of Housing and Community Affairs (TDHCA) and the Texas Department of Rural Affairs (TDRA) at the state level. The local level of government designated by the Governor, included in the development of an Action Plan by TDHCA and TDRA, and approved by HUD to allocate this long-term funding and undertake long-term housing reconstruction planning is the COGs. The affected COGs develop, in a public participation-driven process, Methods of Distribution (MODs), which must be approved by TDHCA and HUD for housing projects in order for that COG and/or the subrecipients it has designated to receive CDBG disaster funding.⁵² This entire process is informed by the State of Texas analysis of impediments to fair housing choice (the “AI”).

These two processes, one for immediate recovery and the other for long-term rebuilding, have yet to be coordinated in a cohesive manner. The Committee believes that in order to prepare effectively for and respond to a natural disaster, local entities must work together to create a continuum of

⁵² Texas Department of Rural Affairs & Texas Department of Housing & Community Affairs, *Plan for Disaster Recovery – Revised Amendment No. 1*, Revised May 25, 2010.

assistance from pre-emergency mitigation planning to long-term housing reconstruction, with strong linkage and open channels of thoughtful communication at all stages of the recovery effort. Thus, the Committee's overarching recommendations are in large part directed towards recommendations that will create stronger connections between these interrelated disaster recovery efforts at the local level, ensuring more efficient and effective communication and partnership between local city and county jurisdictions and their respective COG.

1.A. Extend existing Local Emergency Management Plans to include long-term housing reconstruction policies and guidelines.

Instead of these local jurisdictions undertaking a completely new planning effort, which could be costly and time consuming, the Advisory Committee decided that their recommendations should be programmed into existing local planning efforts. Particularly, the Advisory Committee saw an opportunity to insert the recommended policies found within this chapter into the existing LEMPs required by the Texas Department of Public Safety's DEM.⁵³ This would extend the LEMPs to address the full continuum of pre-emergency to long-term housing planning and procedures.

The components of these long-term housing plans are discussed further in Recommendations #2-6.

1.B. COGs should provide technical assistance to local jurisdictions in the creation of the long-term housing reconstruction portion of their LEMPs. COGs should also be required to show that they have utilized these LEMPs when creating their Methods of Distribution (MODs) or applying for funding under competitive state and federal disaster programs.

The Committee recognizes that cities and counties may not have the staff capacity or the technical expertise to complete long-term reconstruction planning on their own. Additionally, the Committee recognizes the cost of preparing such plans and the need to provide a financial incentive for them to expand their LEMPs to include such long-term housing reconstruction solutions. Therefore, the Committee recommends that COGs should take the lead in orchestrating technical and financial assistance to local jurisdictions in their development of long-term housing reconstruction plans. Furthermore, each COG will produce an Emergency Housing Procedures Manual to serve as a standardized set of procedures that jurisdictions can turn to when implementing their LEMPs after natural disasters. The components of this Manual are discussed further in Recommendation #7.

As a financial tool to provide incentives to undertake this process, the Committee recommends utilizing the state's annual CDBG allocation (separate from CDBG disaster recovery funding), particularly through the creation of a \$1 million annual set-aside within the Planning and Capacity Building Fund⁵⁴ for 'Disaster Housing Reconstruction Planning.' Through a phased process, each year four COGs would receive \$250,000 each to allocate toward Local Emergency Management Planning efforts as well as the creation and maintenance of the Emergency Housing Procedures Manual.

⁵³ Texas Department of Public Safety, Texas Division of Emergency Management, "Local Emergency Management Plan and Annexes" <http://www.txdps.state.tx.us/dem/pages/downloadableforms.htm#annexindex>

⁵⁴ Texas Department of Rural Affairs, "Planning Fund," <http://www.tdra.state.tx.us/TxDRA/programs/TxCDBGhomepage/txcdbgGrants/pcb.aspx>

Finally, in order to ensure that the planning efforts conducted by local city and county jurisdictions are recognized and considered by the appropriate COG when that COG is applying for state and federal disaster funding, the Committee recommends that COGs be required to show how their Methods of Distribution (or other application) reflect and adhere to the vision and intent of the local jurisdictions, as laid out in their LEMP's housing reconstruction plans.

Implementing Overarching Recommendations

2. As part of the long-term housing planning effort, risk assessment and cost benefit analysis of mitigation approaches should be undertaken at the local level.

The Advisory Committee acknowledged that prior to Hurricanes Katrina and Rita, at-risk communities in Texas were largely unaware of how vulnerable their housing stock was to damage or complete destruction by a natural disaster. Although substandard housing conditions had become prevalent in many local jurisdictions, these entities had not conducted a risk assessment of their housing stock.

“But one of the key points that she [Chula Sanchez] left out that they really should be applauded for was in cooperation with the city they actually really pushed for hazard mitigation and elevating these homes to two foot above the base foot elevation. But that actually needed a lot of community buy in. So that even though the City Council didn't necessarily adopt the two foot above base foot elevation, all these homes that are to be reconstructed within the City of Galveston and furthermore, any homes to be elevated within the City of Galveston will be elevated to two foot above base foot elevation.” –*Matthew Erchull, CMD, City of Galveston*

The Advisory Committee recommends that communities incorporate pre-disaster assessment and mitigation efforts in their LEMPs. The first step in the assessment would be extensive data gathering on the number of owner-occupied, rental, and accessible units for special needs populations that are substandard or otherwise at risk of damage from a natural disaster. This should include an exposure assessment, using information from the Texas Department of Insurance to identify and establish an inventory of those households in areas prone to flood and windstorm damage that are uninsured. Additionally, part of this data gathering process would include calculating the value of losses to the residential stock.

Some COGs have already gathered some of this data through their Mitigation Action Plans. A FEMA-approved Mitigation Action Plan is required for eligibility for grant funding through FEMA's pre-disaster grant programs (discussed in Recommendation #3). Local jurisdictions are encouraged to incorporate their region's Mitigation Action Plan into the risk assessment portion of their LEMPs.

Additionally, upon assessing those housing units at greatest risk of damage, the Committee recommends that the local entities create a referral process to connect households to the Texas Windstorm Insurance Association to assess wind and hail insurance. The Advisory Committee wants to ensure that this risk assessment process not have the unintended consequence of triggering code enforcement activity in a manner that could result in the loss of housing for many individuals and families, predominantly families of lower income.

3. Local jurisdictions should be encouraged to apply for federal mitigation grants.

The Advisory Committee discussed several federal funding sources for disaster mitigation that could be obtained by local communities, including:⁵⁵

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)
- Repetitive Flood Claims (RFC)
- Severe Repetitive Loss (SRL)

Table 1: Eligible Activities by Program⁵⁶

Eligible Activities	HMGP	PDM	FMA	RFC	SRL
1. Mitigation Projects	√	√	√	√	√
Property Acquisition and Structure Demolition	√	√	√	√	√
Property Acquisition and Structure Relocation	√	√	√	√	√
Structure Elevation	√	√	√	√	√
Mitigation Reconstruction					√
Dry Floodproofing of Historic Residential Structures	√	√	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√	√	
Minor Localized Flood Reduction Projects	√	√	√	√	√
Structural Retrofitting of Existing Buildings	√	√			
Non-structural Retrofitting of Existing Buildings and Facilities	√	√			
Safe Room Construction	√	√			
Infrastructure Retrofit	√	√			
Soil Stabilization	√	√			
Wildfire Mitigation	√	√			
Post-Disaster Code Enforcement	√				
5% Initiative Projects	√				
2. Hazard Mitigation Planning	√	√	√		
3. Management Costs	√	√	√	√	√

First, the Hazard Mitigation Grant Program (HMGP) provides funding following a Presidential major disaster declaration to prevent or reduce future losses to lives and property through the identification

⁵⁵ US Department of Homeland Security, Federal Emergency Management Agency, “FY 2011 Hazard Mitigation Assistance (HMA) Unified Guidance,” <http://www.fema.gov/library/viewRecord.do?id=4225>

⁵⁶ US Department of Homeland Security, Federal Emergency Management Agency, “FY 2011 Hazard Mitigation Assistance (HMA) Unified Guidance,” <http://www.fema.gov/library/viewRecord.do?id=4225>

and funding of cost-effective mitigation measures and the minimizing of costs of future disaster response and recovery. This program is administered at the state level by the Texas Department of Public Safety.

Second, the Pre-Disaster Mitigation (PDM) program provides funding for mitigation projects that produce a sustainable reduction in risk to people and property from natural hazard events or for planning activities that deliver a FEMA-approved local mitigation plan. PDM grants are awarded annually, and small impoverished communities may be eligible for up to a 90 percent Federal cost share. Third, the Flood Mitigation Act program was created to assist States and communities implement measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insured under the National Flood Insurance Program.

Fourth, the Repetitive Flood Claims (RFC) program has a goal of reducing flood damages to individual properties for which one or more claim payments for losses have been made under flood insurance coverage and that will result in the greatest savings to the National Flood Insurance Fund (NFIF) in the shortest period of time. Finally, the Severe Repetitive Loss (SRL) program has a goal of reducing flood damages to residential properties that have experienced severe repetitive losses under flood insurance coverage. SRL is potentially the most useful of the mitigation grants as regards housing, as it allows housing replacement, similar to the CDBG Owner Occupied program. SRL and FMA are managed by the Texas Water Development Board.

A mitigation project that consistently ranks highly in the State mitigation grants are property acquisition/demolition projects; commonly known as 'buyouts'. Counter-intuitively, the buyouts, which destroy houses, are actually a housing assistance program, and are the assistance that is available soonest after the event. Affected citizens receive pre-flood market value for their damaged house, and take those funds to quickly move on, purchasing or renting existing vacant housing in the area.

The Advisory Committee encourages local jurisdictions to apply for these relevant funding sources. The Committee also recommends that the Texas Department of Public Safety and the Texas Water Development Board conduct outreach to disaster-prone areas, to educate local public officials on the availability of these five funding opportunities. The Texas Department of Public Safety's applicant briefings on the availability of HMGP funding can be a model for this outreach.

4. Local jurisdictions should be required to have a contingency plan for pre-approval of third-party entities to conduct expedited permitting and inspections.

Public input received during the community roundtable process revealed that one of the biggest obstacles to the rapid housing reconstruction after a natural disaster was the lengthy process of obtaining the initial building permit and then once the home was completed, having it inspected and approved for occupancy. Many jurisdictions are not able to operate at full capacity immediately following a disaster and are overwhelmed by the volume of permitting and inspections requests received by homeowners seeking to rebuild their properties.

"I think we also have a lot of challenges with local ordinances and permitting processes and getting that streamlined before a disaster so that we know that after a disaster something different is in place if that's needed. A good example would be just the timing for the permit process for some of the repairs, having an expedited process...And I think along with that,

more efficient systems for rebuilding and new homes that need to be brought in in a recovery situation and making sure that process is expedited for permitting.” *Amanda Timm, Executive Director, Local Initiative Support Corporation*

“And our suggestions are some -- and one -- for example, there are residential inspectors in place, licensed by the State of Texas. After an emergency hits, the community should be able to use them.” – *Sunny K. Philip, City Manager, City of La Feria & Representative of South Texas Collaborative for Housing Development*

Therefore, the Committee first recommends that jurisdictions create a pre-approved set of criteria that a housing design must meet in order to receive a permit, as mentioned in Recommendation #2. Second, the Committee recommends that the jurisdiction pre-qualify professionally certified inspectors to act on behalf of the jurisdiction. This can be accomplished through an intergovernmental agreement with another city, to supplement government staff working on permitting and inspections in the event of a disaster. An alternative would be to subcontract with private inspectors, entering into pre-positioned contracts for private inspectors to fulfill the responsibilities or permitting and inspections for a set time frame following a disaster. Either option ensures that, in the event of a disaster, qualified personnel would have already been selected and would be able to take immediate action.

Alternatively, in large disaster events that result in a federal declaration, stricken communities can request code enforcement support from the State through the Public Works Response Teams (PWRTs). These PWRTs are coordinated and deployed by the state but use local public works personnel that make themselves available outside their normal jurisdictions under state control.

5. Local jurisdictions should create an agreement with Texas Historical Commission to pre-approve an expedited historical clearance for repair and rehabilitation of historic properties.

Under the Antiquities Code of Texas, project sponsors are required to obtain permits from the Texas Historical Commission (THC) for work proposed on designated historic buildings. Additionally, state and federal historic preservation laws require that qualified professionals be employed on historic preservation projects. Property owners and project sponsors have legal responsibilities when:

- A project involves federal funds, licenses, permits, or approval;
- Project land is owned or controlled by a state agency or an political subdivision of the state; and
- A historical designation or covenant requires review of proposed work.⁵⁷

The Advisory Committee recommends that local jurisdictions create an agreement with the THC that if certain historic property is damaged beyond an identified threshold (40-50%), then the local jurisdiction has the authority to automatically demolish and reconstruct the property. Those properties meeting an exceptional historic standard, such as a property on the Federal Historic Register, would be exempt from this agreement and would still go through review by the THC.

⁵⁷ Texas Historical Commission, “Finding & Hiring Qualified Historic Preservation Consultants,” <http://www.thc.state.tx.us/publications/guidelines/HiringPresConsul.pdf>

6. Local jurisdictions and COGs should adopt the “Hurricanes Ike and Dolly Round 2 Housing Guidelines” as the pre-approved, clear, standardized set of procedures for case managers to use to direct homeowners through each step of the rebuilding process.

Housing reconstruction can be a lengthy and confusing process, with many mandatory rules and regulations to follow. Additionally, case managers are not always versed in the rebuilding process and are forced to learn as they go. Furthermore, if these regulations changes midway through the rebuilding process, it leads to frustration and delay.

“Another issue that was touched on earlier that we have seen affect the recovery dramatically is the issue of heirship and clear title and property tax issues. They are extremely prohibitive in low income communities to the recovery process. And I know that we really see a major hurricane preparedness initiative in helping families resolve their estate issues and getting folks on payment plans for property taxes because that's what holds the system up, and when they're dealing with a lot of other stressors that come after a storm, it is very difficult to work through that process. One of our rough figures is, just from our home repair process, about 50 percent of the houses that applied for assistance could not get assistance through the public sector resources that were available because of proof of ownership issues, tax issues, clear title, things like that.” - *Amanda Timm, Executive Director, Local Initiative Support Corporation*

“It takes too long to get the word out. It takes too long to let the people know what the resources are. After a while, you don't even know who is out there that still needs help... So we need to find a better way to disseminate that information when funds become available.” - *Lina Mendez-Romero, Administrator, Brownsville Housing Authority*

“And there needs to be some understanding at the State level, a guidebook saying that if the community wanted to take the step further, and help out their own residents, these are the things you need to follow.” - *Sunny K. Philip, City Manager, City of La Feria & Representative of South Texas Collaborative for Housing Development*

“A lot of the people that we're dealing with, whether it be a mobile home unit or now with the Galveston County or City of Galveston or Harris County program, they really are over their heads. I guess there's a better way of saying it. They do need some training, they need some assistance. You were talking about the case management. They need some case management.” - *William Sullivan, Sullivan Interests, Ltd*

“But if there's one issue that I would like to hit: there's so many agencies and it's almost like it takes forever to get anything done. And I know the homeowner says that. But I can say, as somebody who's been involved with all the agencies, that it's kind of crazy...Whatever you do, please try to put it in clear terms so that when it goes down people will understand it.” -*Jim Hall, Nehemiah's Vision*

In order to educate both the case manager and the displaced homeowner, the Committee recommends that local jurisdictions and COGs adopt the “Hurricanes Ike and Dolly Round 2 Housing Guidelines,” developed through the Conciliation Agreement process, as a uniform set of

guidelines outlining each step in the rebuilding process.⁵⁸ These Guidelines include information on: qualifications and eligibility for federal funding, damage assessment of home, timeline for rebuilding, title/deed requirements, legal referral, permitting process, elevation requirements, choices for housing models, inspection processes, etc.

The Committee recommends that these Guidelines be agreed upon/approved by the local jurisdiction as the definitive protocol in the instance of a disaster. Additionally, these guidelines should be translated into multiple languages.

7. COGs should create an Emergency Housing Procedures Manual, to be used by local jurisdictions for the implementation of housing rebuilding programs. As part of the Emergency Housing Procedures Manual, COGs should work with local architects to pre-permit a set number of housing designs and pre-bid the winning designs to contractors.

Moving beyond the local planning efforts, the Committee saw a need for a standardized set of procedures that jurisdictions can turn to when implementing a housing rebuilding program. Therefore, they recommended that each COG create an Emergency Housing Procedures Manual to serve as these uniform guidelines.

As part of the Procedures Manual, the Committee wants to ensure that the construction of homes following a disaster is efficient, but also meets the community's standards concerning quality and aesthetic. Therefore, the Committee recommends that prior to a disaster, COGs release a Request for Qualifications (RFQ) to local architects for housing reconstruction designs. These designs would be required to meet essential engineering and aesthetic specifications. Once these designs had been vetted through a public input process and the governing entity had chosen a set of housing designs and layouts (1 bedroom, 2 bedroom, etc.), they could be reviewed for advanced permitting and windstorm approval by the Texas Department of Insurance.

Upon permitting, these designs can then be submitted to contractors for bidding. These bids would serve as a basis for contingency contracts for a five year period and could be renewed. The Advisory Committee found that pre-bid contracts would be more cost effective than post-disaster bidding, when jurisdictions are less able to negotiate and more susceptible to the price demands of developers. However, the Committee acknowledged that supply costs are subject to change following a disaster and may have to be renegotiated, or a separate third-party supplier contract entered into.

“We can gear up housing faster than any industry, quicker than any industry because we can utilize so many plants, you know, across Texas, Louisiana, Alabama, wherever. We can always tap product from somewhere. Knowing that a disaster is coming in if we have pre-qualified specs then we can already have those houses built.” - *Tommy Blanchard, World Wide Homes*

In some arenas, use of pre-procured contractors has proven successful. Prior to Hurricane Ike, the Houston-Galveston Area Council (H-GAC) was able to pre-negotiate contracts for debris removal through a cooperative purchasing program. Each local jurisdiction within the H-GAC was able to pick a contractor from a pre-qualified list. The contracts were then tested during the 2008 hurricane season, and the process was found to be very successful.

⁵⁸ Texas Department of Housing & Community Affairs, CDBG Disaster Recovery, “DRAFT Round 2 Housing Guidelines,” <http://www.tdhca.state.tx.us/cdbg/ike-and-dolly/index.htm>

Pre-Disaster Recommendations Requiring Legislative Action

8. County governments should be granted the authority to enforce residential housing codes for disaster purposes in wind zone, storm surge, and floodplain areas.

Residential housing codes create a high standard for the durability of housing stock and help to ensure that homes are resistant to natural disasters. Without the ability to enforce building codes, jurisdictions are left vulnerable to the creation of housing stock that is built to lower standards and is more likely to suffer damage in a natural disaster than other homes, built to building codes, could generally withstand.

“You have the reverse problem, you have no codes to enforce also in the unincorporated areas, so anything can get built.” –*Carol Borrego, Fort Bend County Community Development*

“And in your choosing, if you have not done that yet, what's specifically geared toward a project that is rural? Because rural - there are more rural in Texas than there are metropolitan areas. And the rules are different...Codes set aside, in most, no, in every part of 1,000 square miles of Polk County you can bring a manufactured home and drop it anywhere you want to.” - *Larry Shine, President of Texas Voluntary Organizations Active in Disaster*

Currently, county governments are not required to adopt residential housing codes, such as the International Residential Code (IRC). The IRC was adopted as the municipal residential building code for the state of Texas in 2002, setting design and construction standards for one- and two-family dwellings. The Advisory Committee recommends that the IRC standards be enforced at the county level in regions identified as floodplains, wind zones, and storm surge areas.

It should be noted that while counties (less than 250,000) in population do not themselves have code enforcement authority, they may enter into an inter-local agreement to allow member incorporated communities to enforce their local building codes within the 1.7 mile extraterritorial jurisdiction boundary. This can partially reduce the amount of unregulated space in a county.

9. The Texas State Data Center should undertake a statewide Geographic Information Systems (GIS) planning effort, to pull together variables useful for disaster housing reconstruction planning.

Many local jurisdictions do not have the financial capability or expertise to consolidate multiple data sources on the effects of a disaster and the damage caused or to map these variables. Therefore, the Committee recommends utilizing the Texas State Data Center to map this information. Particularly, looking at historical data on the number of owner-occupied, rental, and accessible units for special needs populations that were damaged or destroyed by previous natural disasters, the vulnerable geographic areas identified by FEMA and DPS, FEMA damage claim data, Texas Department of Insurance and Texas Windstorm Insurance Association data on insured and uninsured homeowners, and Census data on the demographic characteristics of low income households and those living in substandard housing.

Post-Disaster Recommendations

10. **Encourage local jurisdictions to engage in partnerships with organizations that can provide immediate assessment of damage and housing need, such as the faith based community and the architecture community.**

As identified in the testimony given during the community roundtables, many volunteers are strategically positioned following a natural disaster to aid the government through a rapid needs assessment. Following Hurricane Ike, the Texas chapter of the American Institute of Architects immediately set up a temporary office to field requests to help with damage assessments.

“Just within two months after the storm Mario's on the sea wall opened and it was the only meeting room. And a group of architects from Houston came to me because I was displaced in Houston, and said, Chula, what can we do to help. Three of those architects had projects in Biloxi with the program there so they knew about design build, getting it built on budget on time. And then we came and this is exactly what they wanted to talk about, rebuilding fast, efficient, culturally appropriate, all those things...And so from that and the involvement with those architects at the University of Houston Architecture School, and then later, the University of Texas San Antonio Architecture Department came here. And over the course of the past almost two years they have catalogued existing conditions, they've designed homes very specific to the program. We've presented those for the Recovery Program.” –*Chula Sanchez, Architect, Chair of the U.S. Green Building Council for Galveston County*

Similarly, faith based groups organized through the Southern Baptist Convention, Southeast Texas Interfaith Organization (SETIO), and Voluntary Organizations Active in Disaster (VOAD) conducted a widespread needs assessment and started case management services within days of the disaster.

“What works very well is working very well through VOAD is that there are groups that do case management. There are groups that do assessments. There are groups that do the actual rebuild part. And when we work in concert together, what happens is, you have the assessments coming in with the names, addresses, phone numbers and all of that. Then you have the people such as United Methodists who do a great job with the case management. Then they start working the case management aspect of it. And then when it comes out to the other side, they say, okay. We have this family, this family, this family. They are ready for a house...So there is a whole process there; we are able to work through VOAD to make it a concert. And that is our goal, is to bring everybody together.” - *Jim Richardson, Disaster Relief Director, Southern Baptists of Texas Convention*

“As a long-term recovery organization we begin to solicit applications immediately. We'll put an outpost in the affected area. We'll put signs all over the community, in the business places and the churches, so that people know that they can come and sign up to get help. By the time the first FEMA officials are ready to start talking, we've already gathered 4- to 500 applications for assistance. Our crews are already on the ground.” – *Bob Williamson, Southeast Texas Interfaith Organization*

“If you really want to find out, you know, what the communities want you've got to pass the incident management part of recovery directly into the hands of the communities, the nonprofits, the CDCs. FEMA has been working diligently to wash their hands and get out of the housing business. They're not an agency that is in housing. If you look at their mission, they don't that's not what they're there for. But the communities, the grassroots organizations know what each community needs. They know most of them want to move back into what they lost. The second thing the nonprofits can help with is they can prioritize very easily where from a case management point of view who needs what first.” – *Michael Morgan, President/CEO, Critical Response Networks*

The Advisory Committee recommends utilizing these organizations to quickly triage the damages to the community's housing stock, identify which units can be salvaged, and identify which individuals and families have been displaced.

11. Local jurisdictions should work with FEMA's case management contractors to ensure a continuity of case management services.

Quality case management is key to ensuring that a displaced family understands the housing options available to them and is able to obtain that housing. However, previous disaster recovery efforts have been hampered by fragmented case management. Faith based organizations provide case management immediately following a disaster. Once the Social Services Block Grant (SSBG) is allocated to local jurisdictions, case management services are turned over to FEMA's contractors, typically local non-profit organizations.

“You know, today you go to talk to people and you say, ‘You need to talk to your case management.’ And the response is, ‘Which one?’ Is it the DHAP? Is it the housing? Is it Catholic Charities? Is it ICNA? Is it Jesse Tree? So that's the first starting point. And so empowering those organizations with funds to gear up on case managers that remain in the community once again, that are here from the community that's been impacted and provide jobs, as well to additional people is my recommendation of the highest priority in this area.” – *Joe Compian, Gulf Coast Interfaith and Catholic Campaign for Human Development*

“And my last comment, I think, is that please in the future planning make sure that case management lasts as long as the housing program does. We're in a bind because the RISE program and the SSBG funds are about to stop, and my one and only housing case manager is freaking out.” – *Joanne Callahan Ducharme, Director, Montgomery County Community Development*

“The case management is critical and activating that more quickly is essential...And I think dealing with the case management issue and having some sort of bridge funding that's pre-approved and we know we can activate immediately after a storm can help us identify things more quickly.” – *Amanda Timm, Executive Director, Local Initiative Support Corporation*

“In case management right now, we can't take any new cases because our project is closing, and just Galveston alone we have over 500 homeowners that we've case-managed, we've done all that we can for them, and they're sitting there waiting to find out if they're going to be eligible for CDBG money, they're in the process. And we're going to be leaving, next month, them to their own means, and they're not going to know. And SSBG is another one. The SSBG money stops this month and yet these people are waiting for that money. And it's all a matter of

synchronization, and synchronization, I think, has to do with long-range planning, and so if you can keep the planning going on how we can synchronize all these resources and these events and continue to work on that, that would be great.” – *William Sullivan, Sullivan Interests, Ltd*

In order to minimize confusion amongst displaced families, local jurisdictions should coordinate and facilitate a transition process, by which the faith based case manager and the SSBG case manager are engaged in ongoing communication with each other, to hand over case management processes successfully.

12. The Texas Department of Housing & Community Affairs and Texas Health and Humans Services Commission should convene Hurricane Ike and Dolly case managers to develop standards and procedures for case management following a disaster.

Following a natural disaster, many case managers are unprepared to provide the types of assistance that displaced families will require in order to locate emergency housing and maintain housing stability. Case managers may not know who the housing experts are or how to gain the knowledge they need to pass on to their clients. As a consequence, households are often left to figure it out on their own, passed from one person to the next.

Having just provided assistance following Hurricanes Ike and Dolly, local case managers contracted through SSBG and CDBG funding have the experience and knowledge regarding the best practices in helping a displaced family receive assistance and rebuild their home. The Committee sees the opportunity to convene these individuals in order to create a set of case management procedures for future disasters.

13. Local jurisdictions should utilize the state’s network of modular and manufactured housing developers to rapidly construct and deliver homes immediately following a natural disaster. These homes can also be utilized as permanent housing solutions in the future.

Following a natural disaster, the most rapid means of housing displaced individuals and families (other than travel trailers, which are rapidly deployed but have unacceptable problems when used on an extended basis) is through the use of manufactured or modular housing. As stated in testimony given by manufactured housing developers, local production facilities would be able to ramp up production and delivery in a matter of weeks.

“So with the industry in Texas, we can produce 10 to 15 homes a day out of the factories that we're doing without giving up our existing business. If we were to concentrate solely on it, you could double that, 30 to 50 houses a day, easily...If we were going to concentrate on the International Residential Code, it would limit it to the factories that are capable of doing that. If you're going to go with the Manufactured Housing Code, then it would probably triple that amount, easily triple that amount that was available.” - *Keith Alexander, President of Southwest Manufacturing, Palm Harbor Homes*

“We have two manufacturing facilities in Texas and both of them are Energy Star certified and both of them are certified under a certified Green Program. We have the capacity to build both short-term and long-term housing. We could build up to 50 homes a week after ramping up for 30 days to ship into the disaster area. That's temporary housing. We'd easily build 40 permanent houses, also each week following that. Today if we had a disaster today we could

provide up to 200 homes immediately to the disaster area right from our own inventory.” – *Ronnie Richards, American Home Star/Oak Creek Homes*

Additionally, all homes go through full inspection prior to delivery and modular homes are built to IRC Code, while manufactured homes are built to HUD code. TDHCA guidelines require Windstorm II rated manufactured homes in Coastal counties. Another factor in favor of manufactured and modular homes is that they can be built to match the specific design characteristics and overall aesthetic of a neighborhood. Finally, these homes can be quickly installed as temporary housing structures and then transitioned to permanent structures over time. They can also be expanded upon, for households seeking to add to the core unit.

“And we have to have a Texas Department of Insurance type inspection to our plant when the home's being built, because there's different requirements to put them down here on the coast. So there's a third-party engineering firm that seals those and goes and actually inspects them. Then when the home is delivered there's inspecting the foundations and all the other parts of that, too, and the way they're installed... Then we have to have another if it's coming down here, we have to have a third-party engineer that's a Texas professional engineer come in and watch to make sure that the right numbers of nails are going in, that they're using all galvanized strapping and galvanized tacks and all that kind of stuff. So they have to be they do an inspection in the plant. It's pretty substantial.” – *Ronnie Richards, American Home Star/Oak Creek Homes*

“We're absolutely capable of producing any home that's acceptable in any economic area or any architectural desired area. For example, our industry has placed houses -- we've got some houses in Tarrytown, we've got houses in the historical architectural areas of New Orleans. So it all comes down to what are the specifications that TDHCA or FEMA or whomever would want in that area and we can provide that.” - *Keith Alexander, President of Southwest Manufacturing, Palm Harbor Homes*

Currently, many local jurisdictions affected by Hurricanes Rita and Ike are contracting with manufactured housing developers. Testimony revealed that not only these developers more efficient in economies of scale, but it is also easier for the local jurisdiction to deal with just one prime contractor, that takes care of all site preparation, inspections, delivery, and installation. Jurisdictions found that using one contractor made bidding quicker, easier, and required less staffing on the part of the jurisdiction.

“Montgomery County went with 100 percent modular housing for replacement housing. We did that for several reasons. We went with it because we believed that was going to be more efficient in economy of scale...We sold it to our commissioners by pointing out that it's a vast improvement over the housing that our low income people were living in in the first place. So whatever concerns people have with modular housing, it is still a vast improvement...We went with modular housing because it's a whole lot easier to deal with one prime contractor. Our prime contractor, who is M-Space and is one on their list, he takes care of getting the slab dropped and all the inspections and making sure the tie-downs are correct, and he coordinates the delivery, and it allows me to have fewer staff. So in the long run, all these offsets to my square footage costs are paying off.” –*Joanne Callahan Ducharme, Director, Montgomery County Community Development*

The Committee recommends that local jurisdictions contract with manufactured housing developers to provide modular and manufactured homes immediately following a natural disaster. Particularly, the Committee encourages that these contracts be pre-bid contracts, as mentioned earlier.

14. Immediately post-disaster, where a widespread contiguous geographic area is affected, local jurisdiction should hold neighborhood design forums, where architects are commissioned to conduct a design consultation for all homeowners.

In order to ensure resident buy-in, local jurisdictions must present opportunities to provide input and to choose which housing designs best fit their neighborhood aesthetic. Design details such as the paint color, materials used, height of the home, pitch of the roof, and character of the façade are all key elements.

“I think, related to the types of housing being discussed, we want to emphasize, because of the character of neighborhoods and because of what communities are built of, that the local context is taken into consideration regarding appearance.” - *Amanda Timm, Executive Director, Local Initiative Support Corporation*

“People need choices. That's a really big part of going back to people. They really need to be able to go and say, you know, not just is it pink or blue. People when they have a choice they buy in to where they're living. They take care of it. They love it. And a building will only last as long as it's loved.” - *Chula Sanchez, Architect, Chair of the U.S. Green Building Council for Galveston County*

“If you give the people choices they feel like they've bought into something. And I think that is probably the biggest thing, because we do that in southeast Texas. If you'd talk to your city and you get the city or your local officials behind you and working and that could be you all getting you getting in and working with the nonprofits, it makes it go a lot easier. I mean, it really does...But it does give you an opening to get in there and to speak. And the people in Port Arthur, when they had a choice it moved so much easier and so much faster.” – *Jonnye Williamson, Southeast Texas Interfaith Organization*

The Committee recommends that, in addition to procedures found in the “Hurricanes Ike and Dolly Round 2 Housing Guidelines,” local jurisdictions should commission architects in advance to lead community forums. At these forums, homeowners would see a selection of site plans from which to choose. The architects would engage residents in a neighborhood design process, explaining specific design specifications and answering questions, ultimately moving to help community support coalesce around a menu of acceptable designs.

15. Local jurisdictions should enter into a three party construction agreement with the household and the builder for the ownership of the home.

Currently, for those homes being reconstructed with CDBG funding awarded for areas affected by Hurricanes Rita, Ike, and Dolly, the local jurisdiction (city, county, or COG) will enter into a construction agreement with both the developer and the applicant household when transferring ownership. This three party process is beneficial to the homeowner for multiple reasons. Many times households do not have experience communicating with builders; so the local jurisdiction is able to provide their expertise. Additionally, after the household moves in, should something go wrong with

the home, the households are provided comfort in knowing that the local jurisdiction will be involved in holding the builder accountable for maintenance and repairs.

16. The State should convene an advisory body of engineers, design experts, and insurance risk assessors to undertake an Economic and Design study, evaluating the cost-benefit tradeoffs between insurance provision and construction of hardened structures.

The costs of maintaining flood insurance, windstorm insurance, and hazard insurance are prohibitive to low income families. Those households who are unable to afford insurance on their government funded, reconstructed home will likely decide to forgo insuring their home, making their home susceptible to destruction and making the family susceptible to displacement following the next natural disaster. This is an inefficient use of taxpayer dollars. The Committee discussed the possibility of lengthening the time that the State provides insurance coverage on a reconstructed home from one year to five years; however this expense would likely reduce the total number of homes that could be reconstructed following a disaster.

“Another incident we have, of course, is the insurance. Our typical client, homes have been given through the Rita Program that are valued at about \$85,000, that's typical on the tax rolls. With our tax structure in Jasper and the homes, those folks are typically paying about \$1,400 a year. Then we start dealing with them on the insurance, and many of these have poor credit which results in a high insurance rate.” – *McNeal Adams, Lone Star Youth Council, Inc.*

Given that many reconstructed homes will likely remain uninsured, an alternative solution proposed by the Committee would be to create hardened structures, resistant to a natural disaster. These homes would include thicker cement board siding, steel insulated doors, shuttered windows, and a thicker non-shingled roof structure. However, hardening a structure can add up to 20% to the cost of constructing the home, again causing a reduction in the total number of homes that could be reconstructed by the State. Additionally, in the past hardened structures have been met with community resistance, as the design elements are deemed aesthetically incompatible with the surrounding neighborhood.

Thus, the Committee recommends that the Texas Department of Housing & Community Affairs form an advisory body, consisting of design experts, engineers, and insurance risk assessors, to evaluate the cost-benefit tradeoffs between a lengthened state provision of insurance and the construction of hardened structures. The body would be required to deliver its findings to TDHCA in an Economic and Design Study.

17. Following a disaster, the Office of Public Insurance Counsel (OPIC) and the State Bar of Texas should provide education and outreach to low income households regarding insurance protection for homes that have been reconstructed.

Many homeowners are inexperienced in negotiating insurance rates and filing insurance claims. The Office of Public Insurance Counsel (OPIC) represents the interests of consumers as a class in insurance matters, advocating for consumers in rate, form, and rule proceedings primarily at the Texas Department of Insurance (TDI). To accomplish its mission, OPIC’s responsibilities include: reviewing rate and policy form filings, and working with TDI and insurance companies to negotiate

changes advantageous to consumers; and providing information to consumers regarding insurance coverage and markets.⁵⁹

Additionally, the State Bar of Texas provides pro-bono legal advice and assistance to consumers on disaster-related issues, such as insurance. The Hurricane Ike Legal Task Force created a Resource Manual for volunteer attorneys and case managers fielding legal questions from those affected by Hurricane Ike.⁶⁰

The Committee recommends that the OPIC and the State Bar of Texas conduct extensive outreach to low income consumers following a disaster, holding educational meetings to advise households on insurance costs, legal requirements, and the consequences of not maintaining insurance. Additionally, these organizations should make consumers aware of the possibility of relocation, which can be financed through FEMA’s Hazard Mitigation Grant Program.

18. The state should establish an advisory committee of architects and engineers, to develop a set of solutions to issues of visitability in reconstructed housing following a natural disaster.

According to Texas Government Code, Section 2306.514, “If a person is awarded state or federal funds by the department to construct single family affordable housing for individuals and families of low and very low income, the affordable housing identified on the person's funding application must be constructed so that:(1) at least one entrance door, whether located at the front, side, or back of the building:(A) is on an accessible route served by a ramp or no-step entrance.”⁶¹ This statutory requirement is more commonly known as the state’s visitability law.

As noted in previous chapters, when reconstructing housing following a disaster, the current cost of making a property visitable for persons with disabilities is quite high, particularly in areas with elevation requirements. Additionally, there are many obstacles to the creation and maintenance of ramps or lifts on the exterior of a property. Many lots in more dense locations, such as Galveston, are not large enough to provide ramps which extend from the ground to the entrance of the housing unit, which may be fourteen feet in the air. Additionally, in coastal locations along the Gulf, the salt and moisture in the air can quickly rust the metal components of a lift, making the lift unusable and the cost of maintenance prohibitive to some low income households.

“And that also, the one that you're going to see today has a lift that was like, \$15 or \$20,000 on it for, you know, handicapped use...We're using lifts and it is expensive. The cost of those ramps is significant, though, too.” *Ronnie Richards, American Home Star/Oak Creek Homes*

“If you have to elevate a home, we do pier and beam construction. But we have to elevate it. And we have the standards TDHCA has, where you have to have at least one zero step

⁵⁹ Texas Sunset Advisory Commission, Commission Decisions – Office of Public Insurance Counsel, *Agency at a Glance* (April 2010) http://www.sunset.state.tx.us/82ndreports/tdi/tdi_dec.pdf

⁶⁰ Hurricane Ike Legal Task Force, *Resource Materials for Responding to Legal Questions from those Affected by Hurricane Ike* (September 26, 2008) <http://www.texasbar.com/Content/NavigationMenu/ForThePublic/DisasterReliefResources/HurricaneIkeDisasterLegalResourcesManual.pdf>

⁶¹ Texas Government Code, Title 10, Subtitle G, Section 2306.514. *Construction Requirements for Single Family Affordable Housing* <http://www.statutes.legis.state.tx.us/Docs/GV/htm/GV.2306.htm>

entrance. Which means, we have had to put in a lot of ramps for people who have no one who is disabled. Which is more time, and people don't like it. Those take a lot of time, and keep us from being able to respond quickly.” - *Ann Williams-Cass, Executive Director, Proyecto Azteca & Equal Voice Network*

“But a lot of the houses in Sabine Pass were we needed handicapped ramp and we need ramps. And I've seen some around here going up. They look like a zig-zag going. It's a huge issue. And when you get a 70 or 80 year old little lady that, you know, wants to get back in her house and she you know, we have a little old lady in Bridge City that's 90 years old and she just wants to get in her house before she dies. I mean, you know. And you see these [ramps] they're, I'm sorry. They're ugly.” – *Jonnye Williamson, Southeast Texas Interfaith Organization*

“I hear everybody saying that elevators or lifts are the way to go. But I have concerns about them in Galveston with the salt air. I live out in the west end of the island. And I have neighbors who are quite affluent and still complain about how much it costs to maintain them. And I'm worrying about low-income people maintaining them.” - *Laura Murrell, Galveston Recovery Housing and Outreach and Gulf Coast Interfaith*

Therefore, the Committee recommends that the Texas Department of Housing & Community Affairs form an advisory committee, bringing together architects and engineers, particularly those who have expertise in accessibility modifications, to discuss and make recommended solutions regarding issues of visitability for reconstructed housing following a natural disaster.

19. To ensure both the durability and sustainability of reconstructed housing, rebuilt homes should be required to include disaster resistant building materials as well as meet ENERGY STAR rating standards.

As mentioned in Recommendation #1, many of the households displaced after Hurricanes Rita, Ike, and Dolly were living in substandard housing units that were susceptible to substantial damage from a natural disaster. Additionally, substandard homes are unable to provide sufficient heating and cooling to a home, often causing low income households to be strapped with high energy bills that they cannot afford. In order to ensure that these households are protected from future displacement, the Committee strongly encourages investment in high quality, durable housing materials and design that also add to the energy efficiency of the home.

“You have fewer people with emergency housing needs, if you have more people living in quality housing to begin with. Because the houses stand up to a storm better...If everybody's houses are in better shape, fewer people are going to need emergency assistance.” - *Emily Rickers, Texas Rio Grande Legal Aid*

“We're talking about families that typically, in our program, the typical family probably makes about \$700 a month. So utilities, this is another area that we have to work with families on because, again, most of them this month their utility bills were around \$300 a month.” - *McNeal Adams, Lone Star Youth Council, Inc.*

“And sustainability is about the whole neighborhood as well and paying attention to that, but also emphasizing the importance of addressing air quality inside the home, the indoor air quality.” - *Amanda Timm, Executive Director, Local Initiative Support Corporation*

Certain materials and building technologies provide greater resilience in the face of severe storms while simultaneously making the home more energy-efficient.⁶² The expanded use of such materials could provide a more cost-effective way for new and existing homes to be more resistant to disasters and more energy efficient.

“But the one that the most important one that did make it is to build to 145 miles an hour. I think that's critical for rebuild, because if it doesn't stay put we lose our tax base. I forgot to mention all the debris, the building debris that goes in landfills. And we're all paying for that. I mean, it's life cycle it's huge life cycle. So upping the wind code for me is really paramount to all of it. Durability and maintenance is number one for sustainability...And so I think when you start writing your specs for rebuild on these 60 homes those specs are key. It's just it's the bible to rebuild...And it goes into durability, energy efficiency and air quality, because most of these a lot of these recovery homes are for families with children and older people.” - *Chula Sanchez, Architect, Chair of the U.S. Green Building Council for Galveston County*

ENERGY STAR is a joint program of the US Environmental Protection Agency and the US Department of Energy, created to save money and protect the environment through energy efficient products and practices.⁶³ To earn the ENERGY STAR, a home must meet strict guidelines for energy efficiency, making them 20–30% more efficient than standard homes. Homes achieve this level of performance through a combination of energy-efficient improvements, including:

- Effective Insulation Systems
- High-Performance Windows
- Tight Construction and Ducts
- Efficient Heating and Cooling Equipment
- Qualified Lighting and Appliances

The Advisory Committee recommends that the ENERGY STAR rating standard be adopted by local jurisdictions as a requirement for all homes reconstructed following a natural disaster, to provide better protection and prevent displacement in the event of future disasters.

20. Local jurisdictions should develop standards for the potential expansion of reconstructed housing units over the long-term.

During the immediate disaster recovery phase, many homes will be placed that serve as a temporary or interim housing structure. Households may later choose to expand upon these original units, adding extra rooms onto the building.

“For the size of the homes, we are looking at setting them up fast, having them long term, eventually transitioning to permanent structures.” - *Martin Medina, Director of Strategic Initiatives, Affordable Homes of South Texas, Inc.*

⁶² Center for Housing Policy & National Housing Conference, *Make Homes More Resistant to Natural Disasters: Incorporate Materials and Technologies that Provide Both Disaster Resistance and Energy Efficiency*
http://www.housingpolicy.org/toolbox/strategy/policies/distrest_energeff.html?tierid=113299

⁶³ U.S. Environmental Protection Agency & U.S. Department of Energy, *How New Homes Earn the ENERGY STAR*,
http://www.energystar.gov/index.cfm?c=new_homes.nh_verification_process

The Committee recommends that as part of their housing reconstructions planning effort, local jurisdictions include guidelines, for architects and builders, for those instances of housing expansion. These guidelines should require that housing additions meet the same building codes and permitting requirements that the original structure was required to meet.

21. Local jurisdictions should partner with local non-profit organizations or local financial institutions to provide financial literacy and homebuyer education to households receiving reconstructed homes.

Many households receiving a reconstructed home are not knowledgeable about the financial responsibilities involved in becoming a homeowner. Possible consequences of not understanding these responsibilities include foreclosure and displacement.

“People that are going to get reconstructed homes need those home ownership classes probably even more. It's a hard sell in our community to provide a lot of money because basically we're putting in more money than the homeowner has equity, so they're upside down. And again, it's tough to do, especially now when times are bad. We couldn't do it when times were good so it's really difficult to do when times are bad...It's part of the provider infrastructure. What's missing, I think, is someone to be able to go in and provide it. Because it's not coming from us, so they're not so suspicious, oh, you're just telling me that. It needs to be from another source that they trust and can answer all their questions away from us.” - *Carol Borrego, Fort Bend County Community Development*

The Committee recommends that local jurisdictions require applicant households to attend in-person financial literacy training and homebuyer education classes prior to receiving their home. The household's case manager would provide information about the classes and assist the family in becoming enrolled.

Good financial literacy training and planning can be provided through Neighborhood Housing Services of America. Additionally, groups such as Habitat for Humanity have created partnerships with local banks to provide this education.

“We provide our homeowners financial literacy and budgeting classes through Capital One Bank and they do it for free. There's some type of ordinance where banks are supposed to do some type of community outreach. So we just set the classes up and we set them all together and we give them some equity hours for going to the classes, and we find that real valuable for them.” – *Natalie Ainsworth, Bay Area Habitat for Humanity*

Post-Disaster Recommendations Requiring Legislative Action

22. Following a disaster, tax appraisal districts should automatically freeze property taxes to the pre-disaster value of properties owned by low income households and allow for a gradual increase up to the value of the reconstructed home.

Of all the barriers to permanent housing for low income victims of natural disasters mentioned at the community roundtables, the issue most frequently discussed was property taxes. After the rebuilding efforts following Hurricane Rita, many low income households are struggling to afford the increase in

property taxes on their reconstructed homes. This potential increase to their property taxes has also made families weary of accepting government assistance for Hurricanes Ike and Dolly.

“My biggest barrier in my program, the thing that is pulling people out of my program right and left at this point, at this late hour, is that they're realizing that we're vastly improving their living conditions and their tax burden, and the increased taxes on the properties are not being offset by our predictions of improved electrical bills. And the ones that are worried about paying their taxes are pulling out of my program and I can't get them to stop. So we are hemorrhaging eligible clients right now on that issue alone...And we have talked to our tax assessor-collector and there ain't going to be no freezing of the taxes and there ain't going to be no exemptions or waivers or nothing for anybody except the seniors on the rolls.” –*Joanne Callaban Ducharme, Director, Montgomery County Community Development*

“Where you put a family in an \$80,000 home, but they can't afford a mortgage. They can only do a \$40,000 home. So you write down with soft money. You get grants or whatever. But appraisal districts are going to charge. They are going to assess the property at \$80,000. And they are going to charge your taxes at that. Next year, it might be 90 or 100. And everybody knows that the incomes of low-income families do not grow in proportion to inflation or the way expenses are.” –*Apolonio Flores, Consultant, Rio Grande Valley Housing Authorities*

“In Fort Bend County we are rapidly growing, so our property taxes are killing everyone. I've kind of personally been appalled with the fact that if we do reconstruct a house, I have one right now that's probably on the tax rolls for maybe \$15,000, that's the improvement of the property, and we build a home that's going to be about \$60,000, their taxes are probably going to go up about four times, the person probably cannot afford it. With all our other HUD programs that we administer, we always do some underwriting. We look that those people should not pay more than 30 percent of their income for all housing costs which include payment, taxes and insurance. We're setting up to fail because you're looking at ratios of maybe 40 percent, 50 percent.” –*Carol Borrego, Fort Bend County Community Development*

“The other thing is one of the problems that we ran into in the with the government efforts to rehouse initially was taxes. There's a family of moderate income that's living in a \$30,000 house and you come in there and build them a \$100,000 house and now all of sudden their tax bill is high.” –*Bob Williamson, Southeast Texas Interfaith Organization*

During the 81st legislature, HB 770 became law amending the Texas Tax Code for appraisal values on disaster damaged homes. The Committee recommends that new legislation further amends the new rules, and low income households that are either damaged or destroyed be exempt from all increased property taxes for a set period of time following the reconstruction of their home. After this time frame, the tax appraisal district would gradually increase the portion of the total valuation paid by the household over time by an amount not greater than five percent annually. This critical stabilization would help to ensure that over time households that had been hit by natural disasters would restore themselves to stable home owners capable of meeting the obligations that go with that home ownership.

23. Encourage the state to prevent the stripping of disaster loans and issue a five year prohibition on cash out home equity loans for government funded reconstructed homes, allowing exceptions approved by the state for *bona fide* emergencies.

In previous instances, after the provision of zero percent interest government loans to households, subprime lenders have approached these homeowners to offer them cash out refinancing at high interest rates. Households who took out one of these home equity loans defaulted, as they could not afford the loan they were offered, and the lender repossessed their home. To prevent this predatory practice, the state legislature passed Texas Finance Code, Section 343.101, stating that “A lender may not replace or consolidate a low-rate home loan directly made by a government or nonprofit lender before the seventh anniversary of the date of the loan unless the new or consolidated loan has a lower interest rate and requires payment of a lesser amount of points and fees than the original loan or is a restructure to avoid foreclosure.”⁶⁴

In order to prevent this predatory practice from happening to natural disaster victims who received government funding for housing reconstruction, the Committee recommends that Section 343.101 be expanded to include government issued deferred forgivable loans.

Additionally, the Committee sees the need for increased monitoring of the deferred forgivable loans issues for housing reconstruction after natural disasters. These loans act as grants, with no repayment to the state, as long as the household remains in the home for ten years. However, because there is no lien placed on the property by the state, and the property is not filed in the county courthouse, it becomes very difficult for the state to monitor these households, to ensure their residence in the home. Therefore, in order to ensure that the households themselves do not cash out on their government funded reconstructed property, the Committee recommends that the state require a five year prohibition on home equity refinancing, with ability to obtain exception approval for *bona fide* emergencies.

⁶⁴ Texas Finance Code, Title 4, Subtitle B, Section 343.101 - Refinancing
<http://www.statutes.legis.state.tx.us/Docs/FI/htm/FI.343.htm#343.105>

Conclusion

NEXT STEPS

In coordination with TDHCA, the Natural Disaster Housing Reconstruction Advisory Committee is currently using the findings and recommendations found in the Housing Reconstruction Plan to develop guidelines for the implementation of the Housing Reconstruction Demonstration Pilot Program. As directed in statute, this Pilot Program should test the feasibility of implementing the plan for the large-scale production of replacement housing for victims of federally declared natural disasters. In accordance with the Conciliation Agreement and the *State of Texas Plan for Disaster Recovery – Revised Amendment No. 1*, funds for the Pilot Program will be awarded in the following jurisdictions: Harris County, Galveston County, and the Lower Rio Grande Valley Development Council region.

Based upon the Housing Reconstruction Plan, the Advisory Committee has brainstormed ideas for the implementation of the Pilot Program, specifically looking at the following categories: Project Administration, Housing Design, Housing Production and Delivery, and Client Support Services.

Appendix A: The Heston Home Project and Why it Did Not Work for Texas

In connection with FEMA's efforts to identify and test possible alternatives to the FEMA trailer FEMA issued a Notice of Funding for the Alternative Housing Pilot Program (AHPP). TDHCA submitted six proposals; FEMA selected one and funded TDHCA to carry out the program for the State of Texas. The solution selected to be tested under this program was the "Heston Home," a panelized, containerized housing unit. The company that manufactured the units was located in Italy, but an affiliated company in the United States, Heston LLC ("Heston"), was selected as a sole source provider to oversee the deployment of this unique product under the test conditions required by FEMA.

The goal of the Texas AHPP was to provide between 40 and 50 permanent homes in the East Texas region and an estimated 20 units for a group site to be placed in the City of Houston/Harris County. Heston was to construct these homes in East Texas and the group site for the City of Houston to determine if the product could be used as a travel trailer substitute, if the product could be mobilized and deployed quickly and whether the technology was appropriate in a disaster response situation.

Despite Heston's expressed application representations regarding capacity, the company ultimately proved ill-equipped to perform as required. After various issues had been identified by TDHCA (lack of ability to adapt to changing program circumstances, lack of production, staffing issues, and failure to address concerns that were raised during monitoring) and Heston was advised of needed corrections however formal notice of a default and opportunity to cure was given when Heston failed to address the issues. The agreement was formally terminated on July 31, 2009.

In assessing Heston's activities in order to address their final draw under the contract, a number of concerns were identified, including:

- Significant costs that had been submitted for reimbursement which, upon review, did not appear to be adequately documented to support payment;
- Submitted requests for reimbursement of ineligible costs;
- Apparently duplicative costs for services procured in connection with the installation of homes; and
- Defective installation and/or damaged homes.

In addition, Heston had a record of incurring costs which, although they might be for allowable activities, were so excessive as to indicate imprudence. Upon further scrutiny, some of these costs appear to have been duplicative, not allowable, and/or possibly fraudulent. Other costs were supported by statements or invoices, but were not reimbursed without adequate support. . TDHCA identified Heston failed to appropriately pay subcontractors for invoices paid by TDHCA. These matters are being investigated, and no final payment will be made to Heston until and unless these issues are resolved and appropriately documented.

Examples of defective installation and/or damaged homes are as follows:

Electrical Wiring— The homes have been shown to be at risk of electrical failure. Master electricians spent days in several of the units attempting to follow the wiring system and determine what was causing the problems. In one unit, none of the outlets worked correctly. Two of the homes appear

to have been wired opposite of what they should have been; when lights were turned on in one room it blew the fuses in other parts of the home.

Plumbing - Problems such as poor drainage, lack of capacity to handle constant use, leaks and other problems have plagued three of the units but most specifically the unit in Port Arthur. Additionally, the sewer drains in two houses drained toward the home, not away from it.

Air Conditioning Units - A/C units in three of the homes have shorted out repeatedly and constantly cycle causing the homes to overheat or become too cold. In one of the homes the A/C units only worked briefly or did not work at all. The A/C units installed in the AHPP homes are not typical wall units seen in homes but instead are typical of the wall units found in hotels and motels. Servicing of them has been difficult due to the unconventional model type and the unavailability of repair companies in the area that are familiar with the model type.

Poor Quality of Materials - Due to possible leaks at the seams where the units were put together, as well as a missing A/C sleeve, water is able to intrude after running down exterior walls causing failure of the sub-floor in one unit in particular. Floors have become mushy and buckled within days of heavy rain leaving room for mold intrusion. In three of the homes, light could be seen at points where the home was put together, around the windows, and air conditioning units.

Energy Efficiency - Despite claims that the units would be energy efficient, homeowners have reported that their electrical bills have actually increased during the winter months. Due to the lack of industry typical insulation, when the heat was on, the hot air went to the ceiling causing it to be very warm, but the floor area was ice cold. One homeowner registered a 20+ degree difference from floor to ceiling.

Repairs were necessary to correct these deficiencies.

As a result of the Heston contract termination, the Department posted a Request for Proposal (RFP) for a contractor to complete the remaining portion of the program (the Houston group site and maintenance on existing East Texas units). The response deadline for the RFP was March 1, 2010 in order to allow time to coordinate with the City of Houston (the City) with regard to the logistics of the group site.

However, following an extended negotiation and planning period with the City, the City and TDHCA decided not to pursue the group site application of AHPP any further due to the difficulty the City encountered with locating the funding necessary for the group site. Due to the complications that arose in trying to finalize a group site and the decision to remove the City from the program, the previously posted Request for Proposals (RFP) to solicit the participation of a replacement contractor for the Heston Group to install the AHPP units on the group site was cancelled.

On Tuesday, June 8, 2010, TDHCA staff held a conference call with FEMA HQ to discuss next steps for the program in light of the decision made regarding the Houston group site. FEMA and TDHCA both agreed that it would be appropriate at this point to begin grant close out activities, bringing the Houston group site planning and the Texas AHPP as a whole to an end.

Appendix B: Evaluating Permanent Manufactured Housing Costs

Shifting away from federal policymaking and funding resources, this chapter of the Plan looks at the costs to deploy manufactured homes that can be transitioned from temporary to permanent housing.

COMPARISON OF HUD, MODULAR, AND SITE-BUILT HOMES

HUD Code Home. The cost breakdown for a HUD built manufactured home that comes closest to what a site-built includes (100% drywall, stainless or rubbed bronze with glass fixtures, cement-type siding, etc.) is as follows:⁶⁵

Item	Cost
3 bedroom, 2 bath, 1,984 sq. ft, HUD Code manufactured home, comparable to a site-built home	\$50,000-\$70,000 (\$25-\$35 a sq ft)
Site and delivery costs, freight, AC, set-up & skirting, and profit for the manufacturer	\$24,000-\$30,000 (\$12-\$15 a sq ft)
Site improvements (water well, septic, driveways, etc.) and cost of land	\$30,000-\$50,000 (\$15-25 a sq ft)
Total Cost	\$120,000 to \$148,000 (\$60-\$75 a sq. ft.)

Given the assumption that site-built home prices range from \$100 to \$115 a square foot, a HUD built homes is priced at 60%-75% of a site-built home. Smaller and lesser priced HUD homes can cost as little as 50% of a site-built home.

⁶⁵ Estimates given by Keith Alexander of Palm Harbor Plant, Austin, TX. NOTE: Cost factors added into this analysis include the cost of the land.

Modular Home. The cost breakdown for a Modular home that comes closest to what a site-built includes (100% drywall, stainless or rubbed bronze with glass fixtures, cement-type siding, etc.) is as follows:⁶⁶

Item	Cost
3 bedroom, 2 bath, 1,984 sq. ft, HUD Code manufactured home, comparable to a site-built home	\$50,000-\$70,000 (\$25 to \$35 a sq ft)
Manufacturers transition a HUD home to a Modular (on-frame) home	\$4,000 to \$6,000 (\$2-\$3 a sq ft)
Transition unit to off-frame	\$1,000 to \$2,000 (\$0.5 to \$1 a sq ft)
Residential 6/12 pitch roof	\$2,000 to \$3,500 (\$1 to \$1.75 a sq ft)
Site and delivery costs, with freight, AC, delivery, set-up & skirting, and a profit for the store	\$30,000 to \$40,000 (\$15-\$20 a sq ft)
Pour a pier and beam stem wall foundation system and for a crane to pick up and set the home	\$8,000 (\$4 a sq ft)
Site improvements (water well, septic, driveways, etc.) and cost of land	\$50,000-\$60,000 (\$25-\$30 a sq. ft.)
Total Cost	\$145,000 to \$189,000 (\$72-\$95 a sq. ft.)

Given the assumption that \$100-\$115 a sq. ft. is reasonable for a site-built home price, a modular home only has a 10%-15% price advantage over site built. In today's market, with so many site-builders cutting their costs and giving away construction to keep their employees and sub-contractors from leaving, manufacturers are seeing almost no price advantage when comparing modular to site built, with most deals somewhere between 0% - 7% advantage. The biggest thing manufacturer's offer right now is stability and a 60-120 day time frame for construction and move-in, as compared to 6-12 months for a site-built home.

ELEVATION COSTS

The Advisory Committee sought estimates regarding the added cost to manufactured and modular housing for coastal homes to be elevated above minimum Base Flood Elevation (BFE). According to FEMA, "The BFE refers to the elevation associated with the 100-year flood, or it is a flood with a 1 percent chance of occurrence in any given year."⁶⁷ American Homestar, a manufactured housing producer which completed elevation projects in Sabine Pass following Hurricane Rita, gave

⁶⁶ Estimates given by Keith Alexander of Palm Harbor Plant, Austin, TX. NOTE: Cost factors added into this analysis include the cost of the land.

⁶⁷ Federal Emergency Management Agency, "Managing Floodplain Development Through The National Flood Insurance Program," http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/base_flood_elevation.shtm

estimated elevation costs. American Homestar placed modular homes and HUD homes on the elevated foundations 12 feet above BFE.

The total cost to elevate a 30 x 42 double section was approximately \$60,000. The breakdown of this total includes: ramps and decks - \$15,000; piling and banding - \$20,000; crane and set - \$6,000 to \$10,000; and lifts - \$20,000.

Appendix C: Community Roundtable Public Participation

Harlingen Roundtable – August 25th, 2010

Apolonio Flores
Martin Medina
Lina Mendez-Romero
Sonny Philip
Jim Richardson
Emily Rickers
Ann Williams-Cass

Houston Roundtable – August 31st, 2010

Natalie Aimsforth
Keith Alexander
Carol Borrego
P.K. Carlton
Tanya Debose
Joanne Ducharme
Gordon Knight
Don McCann
Rick Patino
Jennifer Post
Victor Rivera
Billy Sullivan
Amanda Timm

Galveston Roundtable – September 2nd, 2010

Bilal Abdullah
Tommy Blanchard
Joe Compian
Matthew Erchull
James Hall
Michael Morgan
Laura Murrell
Ronnie Richards
Chula Sanchez
Larry Shine
Bob Williamson
Jonnye Williamson