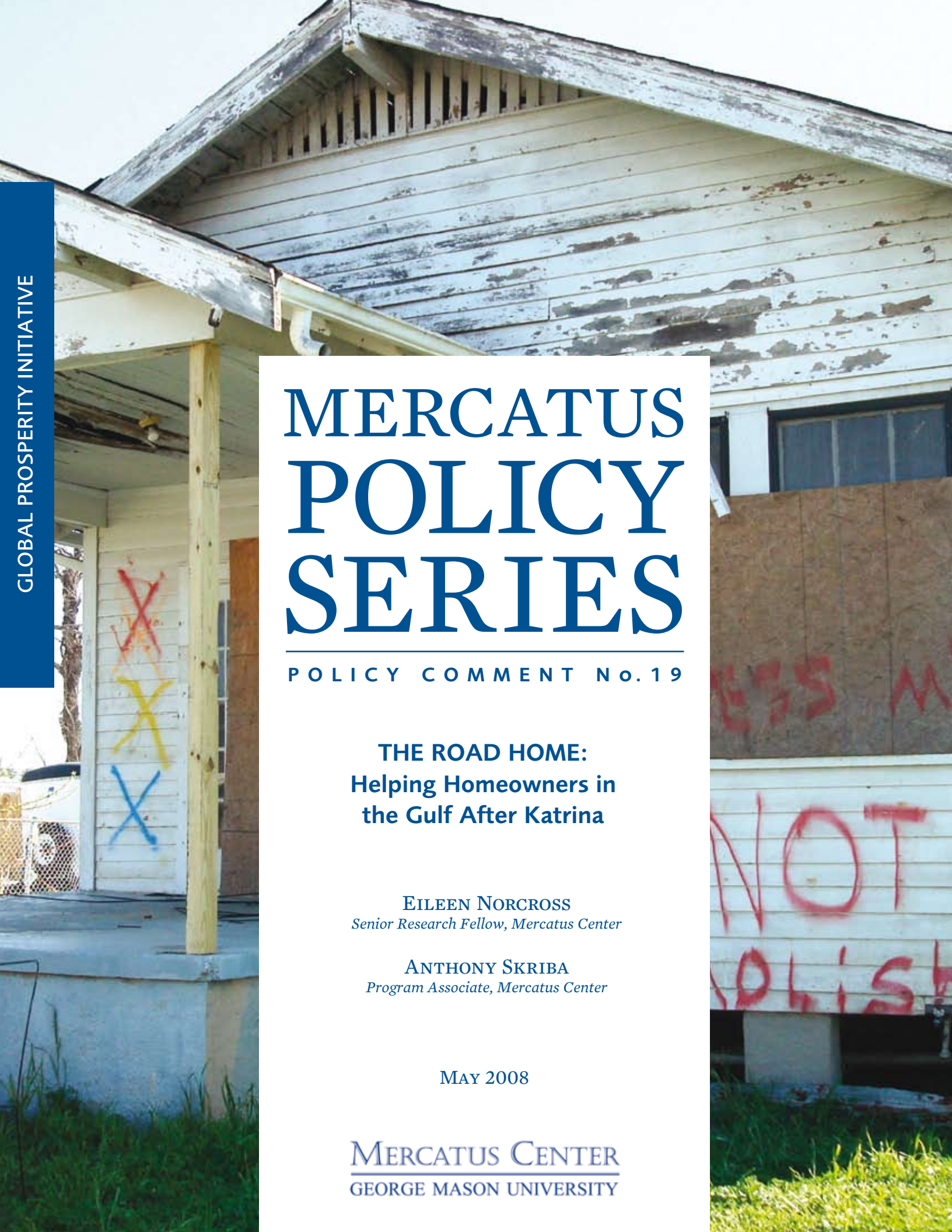

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THE ROAD HOME: Helping Homeowners in the Gulf After Katrina

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THE ROAD HOME:
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Eileen Norcross
Anthony Skriba

EXECUTIVE SUMMARY

Following the destruction wrought by the 2005 Gulf Coast Hurricanes, Louisiana and Mississippi instituted disaster recovery programs for homeowners. Louisiana's disaster recovery program, the Road Home program, is "the largest single housing recovery project in U.S. history." It is also mired in controversy with a record of slow payouts, confusing and conflicting policies and goals, and extremely frustrated applicants.

This comment explores Road Home's policy goals and design, placing them in the context of the destruction wrought by the hurricanes and the role of insurance and government before and after a disaster. It then contrasts Road Home's goals and design with the policy goals and design of Mississippi's Homeowner Assistance Program.

Mississippi's clearer eligibility criteria and the prioritization of applicants allowed for faster progress than in Louisiana. Louisiana's decision to distribute funds widely (both geographically and temporally) and without regard to the severity of damage has contributed to a slower recovery in neighborhoods that experienced the full force of flooding. Furthermore, Louisiana's decision to use Road Home as a community development program by assigning exit penalties to those who do not return to their former homes has limited the personal autonomy of those most affected by the storms and may lock them into highly detrimental situations.

Clearly defining culpability and determining eligibility is vital in structuring disaster assistance. Road Home's failure to do this could be catastrophic for the long-term recovery of both Louisiana and the evacuees.

For more information about the Mercatus Center's Crisis and Response in the Wake of Hurricane Katrina ,
visit us online, www.mercatus.org/globalprosperity, or contact Daniel Rothschild,
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THE ROAD HOME:
Helping Homeowners in the Gulf After Katrina

INTRODUCTION

The 2005 Gulf Hurricanes destroyed or damaged more than 300,000 homes in five states.[1] Entire communities were abandoned, and the storms left many homes unsalvageable. Because damage in Louisiana was particularly acute, helping homeowners became an early recovery policy goal. Acting through the newly established Louisiana Recovery Authority (LRA),[2] the Office of the Governor directed $6.9 of $10.4 billion in federal Community Development Block Grant (CDBG) funds to create the Road Home program, "the largest single housing recovery program in U.S. history."[3]

After the Department of Housing and Urban Development (HUD) and the Louisiana legislature approved Road Home, LRA awarded a private firm ICF International a $756 million contract to manage the Road Home program. Road Home began accepting applications in August 2006, one year after Hurricane Katrina hit Louisiana.[4] This amount was later increased to $912 million in the final weeks of Governor Kathleen Blanco's administration.[5]

Road Home was designed to serve as more than a disaster compensation program; it was designed to function as both planning and housing policy. The program aimed to simultaneously compensate victims, re-create existing neighborhoods by awarding larger sums to those choosing to stay in Louisiana, and develop affordable housing options. The program targeted a broad population, extending eligibility to those who suffered wind damage (an event typically covered by homeowners insurance).[6]

The program's efficacy has been widely criticized. By August 2007, only 23 percent of applicants had received grants. Applicants have expressed frustration at the program's complex application process, inequitable design, confusing policies, erroneous calculations, and slow payout rates. Recovery authorities and state legislators blame overly rigid federal regulations, insufficient congressional allocations, mismanagement by ICF International, and miscommunication with the federal government.

1. U.S. Government Accountability Office, *Preliminary Information on Gulf Coast Rebuilding*, GAO-07-809R (Washington, D.C.: GAO, June 29, 2007), http://www.gao.gov/new.items/d07809r.pdf.
2. The LRA comprises 33 state and national leaders appointed by Governor Kathleen Blanco.
3. The Road Home program, "About Us," http:www.road2la.org/about-us/default.htm (accessed December 2007).
4. Though the Road Home program operates through the LRA, the Office of Community Development—located in the Office of the Governor—is officially responsible for Road Home's performance.
5. David Hammer, "Blanco Administration Quietly Gave Raise to Road Home Operator," *The Times-Picayune*, March 13, 2008.
6. This Policy Comment focuses on the homeowner's portion of the Road Home program. Of the $10.4 billion in CDBG monies allocated to Louisiana, $6.9 billion was put into the homeowner's grant portion. The remainder of the grant was put into code enforcement ($11 million), land assembly ($2 million), Small Rental Property Repair grants ($866 million), low-income housing development incentives ($581 million), and other planning and small grant programs.

1 The 2005 Gulf Coast Hurricanes and Their Consequences

In the early morning of August 29, 2005, Hurricane Katrina made landfall in Buras-Triumph, Louisiana. As it moved over southeastern Louisiana, the eye of the storm headed directly for New Orleans, bringing with it record winds of 120 miles per hour and dropping as much as 13.6 inches of rain within 24 hours.[7] These events alone were enough to bring property destruction and death to the communities in the path of the storm. However, it was not Katrina's wind or rain that delivered the most devastating consequences to New Orleans. The worst damage was wrought by Katrina's powerful storm surges, some of which rose as high as 12 feet above sea level in the canal entrances of Lake Pontchartrain.[8] Storm surges coursed through New Orleans' low-lying parish neighborhoods of St. Bernard, St. Tammany, Jefferson, and Plaquemines, and in more than 50 locations water breached and overtopped the levees and floodwalls built to protect residents around Lake Pontchartrain and Lake Borgne.[9] (See Map 1). The multiple levee failures during the day resulted in 80 percent of New Orleans being submerged in up to 10 feet of water. Storm surges pushed floodwaters into neighborhoods in surrounding parishes throughout the day. Pumping stations designed to remove rising waters failed to work, leaving communities submerged for days.[10] It is estimated that the flood caused by levee and pumping station failures killed 800 of the 1,300 people who died died during Hurricane Katrina.[11]

Southeastern Louisiana was not the only region to sustain severe hurricane damage. Katrina's effects along Mississippi's Gulf Coast were total and devastating. The hurricane shoved barges, boats, and debris into neighborhoods, killing 236 people. Entire communities were leveled. Hancock, Harrison, and Jackson counties were those most affected.

However, Katrina was only one of two major hurricanes to hit the Gulf Coast in fall 2005. On September 24, Hurricane Rita hit southwestern Louisiana and Texas, producing rainfall that breached Katrina-damaged levees in New Orleans; flooding Gentilly and the Lower Ninth Ward a second time; and destroying several communities in Cameron, Calcasieu, and Beauregard parishes. Indeed, Cameron Parish was nearly obliterated.

2 Who Pays?

Total damage from Hurricane Katrina is estimated at over $100 billion, making it the costliest Atlantic hurricane in history. Approximately 65 percent of the area's 147,000 residential properties were flooded, with 50 percent sustaining severe damage.[12]

When Katrina hit, many residents in Louisiana's hardest-hit areas were either uninsured or underinsured against flooding. The disastrous consequences brought to the fore of public discourse the argument that people should not settle in areas located below sea level.[13] Furthermore, should they choose to settle in these higher-risk areas and fail to insure, or to insure adequately, they should bear the cost of the decision to live in high-risk areas. However prevalent this argument may have been in the weeks and months following Katrina and Rita, a closer look at the situation indicates that incentives and information underlying residents' decisions—such as where to locate and whether or not to insure—were distorted not only by decades of federal intervention, but also by state and local policies. Thus many residents made location and insurance decisions using incomplete or inaccurate information. To the extent that such information provided the basis for decision-making, government—

7. Christine F. Anderson, Jurjen A. Battjes, David E. Daniel et al., *The New Orleans Hurricane Protection System: What Went Wrong and Why* (Reston, VA: American Society of Civil Engineers, 2007), http://www.asce.org/files/pdf/ERPreport.pdf.
8. Ibid., 16.
9. Ibid., 25.
10. Ibid., 60. Anderson et al. report that nearly all the pump stations in Jefferson and St. Bernard parishes were evacuated because they couldn't withstand hurricane forces and "without operators the pump stations lay idle." The loss of electricity rendered the pumps useless. The stations themselves flooded, causing damage and failure. Even if the stations had worked, they "would not have been able to pump the huge amount of water that flooded into New Orleans because of overtopping and breaching."
11. Patricia Grossi and Robert Muir-Wood, *Flood Risk in New Orleans: Implications for Future Management and Insurability* (Newark, CA: Risk Management Solutions, 2006), 9, http://www.rms.com/Publications/NO_FloodRisk.pdf.
12. Grossi and Muir-Wood, *Flood Risk in New Orleans*, 9. According to one estimate, the damage to residential structures is between $8 and $10 billion, with the National Flood Insurance Program providing between $4 and $5 billion. The remainder of the damage is uninsured.
13. Jack Shafer, "Don't Refloat: The Case Against Rebuilding the Sunken City of New Orleans," *Slate.com*, September 7, 2005, http://www.slate.com/?id=2125810&nav=tap1/.

THE NEW ORLEANS LEVEES

The federal government assumed responsibility for levee and floodwall construction with the Flood Act of 1936 and the Flood Control Act of 1965. In partnership with state and local governments, the U.S. Army Corps of Engineers (USACE) designed and built most of the levees in New Orleans between the 1920s and the present day.[1] Local levee boards own and operate the levees, retaining responsibility for maintenance.

In 1965, the effects of Hurricane Betsy prompted enhancements to the New Orleans levees. The enhancements were eventually abandoned, following a court ruling against USACE.[2] In the mid-1980s another levee improvement project, the High Level Plan, was started. However, execution of the plan was incomplete and, some argue, the plan itself was still inadequately designed at the time that Hurricane Katrina hit.[3] In addition to protection offered by floodwalls and levees, New Orleans relied on a series of pumping stations located throughout the city. Installation of this system began in the early twentieth century as a means of removing floodwaters and reclaiming marshland. The development of flood protection systems and draining of marshlands encouraged developers to build near the levees. Paradoxically, those systems designed to prevent disaster also encouraged development in areas of high flood risk, a trend that invited disaster.

According to the American Society of Civil Engineers (ASCE), nearly 169 of 284 miles of federal levees and floodwalls were damaged as a result of Katrina.[4] In some places, levees collapsed due to their design. Engineers had failed to account for the soft soil or the existence of a water-filled gap that developed behind the concrete I-walls. In other areas, levees were overtopped. They were not protected against soil erosion, "an engineering choice of catastrophic consequence,"[5] which allowed soil to be scoured and water to pour into the city. In hindsight, it is evident that New Orleans' hurricane protection system was piecemeal in design and relied on incorrect elevation data that neglected to take into account the fact that New Orleans is sinking as much as one inch per year. Government management decisions, congressional pork-barrel spending politics that plagued USACE funds,[6] and local levee boards' diversion of millions of tax dollars from public infrastructure improvements toward "bloated contracts and political patronage" magnified poor engineering choices.[7]

Flooding in New Orleans was not inevitable, but rather the result of extensive infrastructure failure.[8] This catastrophic failure of man-made systems—levees, floodwalls, and pumping stations—designed to protect the city actually contributed to two-thirds of its death toll and damage.[9] The ASCE estimated that less than half the actual property losses in New Orleans would have occurred had the levees and pumping stations not failed.

No single entity is responsible for the engineering-related failures. The USACE began construction of New Orleans' levee system in the late 1800s; but four levee district boards, which included state and local appointees, maintained and operated the levees. The city's water and sewer boards operated the pumping stations. Many of the levee fractures "resulted from unclear lines of authority and insufficient coordination amongst the various agencies having jurisdiction over the levee system."[10] In this sense, Hurricane Katrina's impact on New Orleans was both an act of God (rains, high winds) and an act of man (failure of infrastructure designed to protect against such an event).

1. The three main USACE units are Lake Pontchartrain, Louisiana and Vicinity Protection project; West Bank and Vicinity New Orleans, Louisiana, Hurricane Protection project; and New Orleans to Venice, Louisiana, Hurricane Protection project.
2. Grossi and Muir-Wood, *Flood Risk in New Orleans*, 6. The Flood Control Act of 1965 authorized improvements to the Lake Pontchartrain and Vicinity project. Over the course of the 13 year project, arguments over design and environmental concerns led to a 1977 federal court decision that barred the USACE from constructing improved barriers.
3. Ibid., 5–6. These projects did not use risk analysis to design these new defenses. Instead they were based on Hurricane Betsy's impact. The "standard hurricane project" was chosen to represent the most severe meteorological conditions characteristic to the region. "In other words, the design was based on an engineer's judgment as to a "reasonable" level of protection, instead of being designed to provide protection to some assigned level of probability."
4. Anderson et al., *The New Orleans Hurricane Protection System*, v–vi.
5. Ibid.
6. William F. Shughart II, "Katrinanomics: The Politics and Economics of Disaster Relief," *Public Choice* 127 (2006): 10.
7. Ibid., 10.
8. Anderson et al., *The New Orleans Hurricane Protection System*, 16.
9. Ibid., 39.
10. Shughart, *Public Choice*, 35.

not residents—bears responsibility for at least some of the storm-related damage.

In hindsight, it is clear that communities flooded by Katrina were located in floodplains and that residents there should have insured against flooding. Yet only 40 percent of residents in Orleans Parish, and 57.7 of those in St. Bernard Parish, for example, carried flood insurance.[14] Several factors contributed to the relatively low rate of residents carrying flood insurance in the Gulf—particularly in southeastern Louisiana.

Ideally, it is individuals who insure against disaster. Standard homeowners insurance covers wind-related damage, but generally excludes water-related damage that results from flooding.[15] Because private insurance companies seldom offer flood insurance, the federal government developed the National Flood Insurance

14. Howard Kunreuther and Mark Pauly, "Rules Rather than Discretion: Lessons from Hurricane Katrina," *Journal of Risk and Uncertainty* 33 (2006): 103.
15. Rawle O. King, *Post-Katrina Insurance Issues Surrounding Water Damage Exclusions in Homeowners Insurance Policies*, Order Code RL33892 (Washington, D.C.: Congressional Research Service, 2007), 4, http://www.cnie.org/NLE/CRSreports/07March/RL33892.pdf. A 1983 court decision forced insurance companies to pay flood-related claims for which they believed themselves not responsible. As a result the industry revised policy language to include water-damage exclusions. Today almost all homeowners policies contain a water-damage exclusion, with language making it clear that insurance companies are not responsible for damage related to the failure of dams or levees.

Program (NFIP),[16] which subsidizes flood insurance to homeowners located in special flood areas.[17]

The NFIP uses Flood Insurance Rate Maps (FIRMs) produced by the Federal Emergency Management Agency (FEMA) to price premiums. The coverage is then sold to eligible homeowners through private insurance companies in a policy separate from homeowners insurance. The 100-year flood, or a 1 percent annual chance that flooding will occur, is the standard used to map and manage flood hazards. (See "The National Flood Insurance Program.")[18] FEMA's maps are based on the assumption that the levees could withstand the 1 percent chance of severe annual flood.

Neither the NFIP nor Louisiana's state and local policy makers distinguish between 100-year flood protection provided by an artificial levee and 100-year flood protection offered by natural topography. In fact, NFIP is structured around the implicit assumption that levees will hold. This assumption, one also held by many New Orleans residents, resulted in fewer homeowners purchasing flood insurance.[19] Approximately 35,000 of the flooded homes in New Orleans were not covered by flood insurance,[20] often because lenders told owners that they did not need it.[21] In particular, residents of the Lower Ninth Ward and St. Bernard Parish were told they were not located in a special flood hazard zone. However, the presence of levees does not eliminate risk; levees are always at risk of breaching.

The scope of flooding in these areas indicates that FEMA's flood maps did not correctly capture the actual chance of a flood occurring. This is true in Mississippi as well. Residents in both states were living in areas not designated as 100-year floodplains. Many in these areas decided not to insure based on inaccurate advice derived from government-generated maps, and thus they were uninsured or underinsured against water-related damage caused by flooding.

Some floodplain residents, however, carried maximum coverage—homeowners policies through private insurers and flood insurance through NFIP. Though these individuals took every possible measure available to insure against hurricane-related damage, they were, in effect, not fully insured against levee failure because NFIP did not price this residual risk (i.e., the risk associated with the levees breaking). This oversight rendered the NFIP flood insurance policy an incomplete one.

Some who lived in designated flood plains were advised to carry flood insurance, but they chose not to. Those living in hazard-prone areas may have elected not to insure against flood because they erroneously believed that homeowners insurance would suffice, because they failed to fully appreciate the risk associated with their location, or because they believed that, should a disaster occur, government disaster relief would compensate them after the fact.[22]

3 Program Intent and Design

After Katrina and Rita hit the Gulf Coast, both Mississippi and Louisiana grappled with the question of how government should compensate homeowners for property losses in cases where the cost of repair exceeded what insurance would provide. Each state experienced unique recovery problems stemming from the different types of storm damage done to each state.

In Louisiana, much of the damage (in terms of population concentration) occurred in the southeastern portion

16. The NFIP is the only source of insurance that residents in the Gulf Coast can obtain for policies under property coverage of $250,000 and contents coverage of $125,000. In instances where coverage exceeds these amounts, insurance companies may write their own policies.
17. A homeowner may purchase an NFIP policy through FEMA or through a private insurance company. Part of the premium collected is retained by the private insurer to pay for administering the policy. The remainder is deposited in the U.S. Treasury. Claims paid by the insurance company are reimbursed by the federal government. When insurance is sold this way, it is routine for the insurance agent (acting as an agent of the federal government) who markets NFIP to inform homeowners that they do not need flood protection because they live outside the flood plain.
18. Nicole T. Carter, *Flood Risk Management: Federal Role in Infrastructure*, Order Code RL33129 (Washington, D.C.: Congressional Research Service, 2005), 4, http://fpc.state.gov/documents/organization/56095.pdf.
19. Ibid., 5.
20. Grossi and Muir-Wood, *Flood Risk in New Orleans*, 9.
21. Peter Whoriskey, "Risk Estimate Led to Few Flood Policies," *Washington Post*, October 17, 2005, A01.
22. Howard Kunreuther, "Has the Time Come for Comprehensive Natural Disaster Insurance?" in *On Risk and Disaster: Lessons from Hurricane Katrina*, eds. Roland J. Daniels and Donald F. Kettl (Philadelphia, PA: University of Pennsylvania Press, 2006), 175.

THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

In the mid-twentieth century, private insurance companies ceased to offer flood insurance in the United States, claiming they could not provide profitable coverage at an affordable price.[1] The companies cited the inability to accurately calculate risk and a lack of adequate financial tools (e.g., portfolio diversification) to help replenish capital.[2] Their reluctance to offer flood policies was also prompted by the high correlation of losses that follow a disaster. That is, damage suffered during natural disasters is generally geographically concentrated and results in a high number of claims, making it difficult to pool risk. Insurers face a greater risk of financial insolvency in disasters if that year's premiums are not sufficient to cover a sudden spike in claims.[3]

After Hurricane Betsy flooded New Orleans in 1965, Congress created the National Flood Insurance Program (NFIP), administered by FEMA. To participate, a community must agree to undertake flood mitigation measures based, at minimum, on federal flood construction standards. As part of the program, FEMA developed Flood Insurance Rate Maps (FIRMs) that established the boundaries of floodplains. To encourage communities to participate, NFIP initially offered subsidized rates to those who had established residence in floodplains prior to the issuance of the flood maps. In the intervening years, the number of subsidized residents has declined to 26 percent.[4]

Several criticisms of NFIP have been raised, among them the accuracy of FIRMs used to define "Special Flood Hazard Areas." These hazard areas are places that have a 1 percent chance of being flooded each year (known as the 100-year flood). The 100-year flood test is the standard used to determine whether a resident needs flood insurance. It is based on a judgment made by experts in the 1960s about what represented "a reasonable probability of [flood] occurrence and loss worth protecting against."[5] In this sense, the 100-year flood is a vulnerability, not a risk standard. When Katrina hit in 2005, the maps had not incorporated the latest information on regional risk, which included the finding that sea levels were rising; New Orleans was sinking—a process known as subsidence—at a rate of up to one inch a year; and hurricane activity in the 1990s was increasing.[6] Because this information had not been incorporated into the FIRMs, the 2005 hurricanes destroyed areas of the Gulf extending "well beyond" areas that the maps indicated were 100-year flood plains and that required residents to carry flood insurance.

In addition to relying on outdated FIRMs and assuming inaccurate levels of risk, NFIP did not account for the residual risk associated with possible infrastructure failure. NFIP implicitly assumed that levees would provide sufficient protection to those residing near them. This assumption led lenders to advise residents near the levees to not purchase flood coverage.

Others criticize NFIP because the premiums it charges to insure homes in high-risk areas are kept low by subsidies and by a congressionally mandated annual limit on premium increases. Subsidized rates convey inaccurate information to policyholders about the real level of risk they face. Moreover, subsidies contribute to NFIP's insufficient cash reserves that preclude it from paying claims. Due to this shortage, it must borrow from the U.S. Treasury to pay claims and repay the borrowed amount with interest. In fact, the borrowing limit for NFIP, set at $1 billion and unchanged since 1968, was raised to $20.8 billion after Hurricane Katrina.[7]

Observers also point out that repetitive loss properties, those repaired multiple times with insurance dollars, account for almost 30 percent of NFIP claims. That is, the federal government subsidizes homeowners, through NFIP, to rebuild in high-risk areas. These homeowners, however, do not bear the true expense of their decision to do so, because insurance premiums remain artificially low.

From an actuarial standpoint, advances in risk analysis that permit more accurate pricing of policies, as well as progress in financial markets that allows insurers to quickly restock capital reserves have transformed floods and other catastrophes into insurable events.[8] Policy recommendations to improve NFIP include pricing policies at an actuarially fair level (based on the best available risk information) and ensuring the program has sufficient reserves. These recommendations imply "a well-designed public catastrophe insurance program mimics as far as possible the procedures of an equivalent competitive private market."[9] In other words, if risks can be priced to yield a profit, and financial markets can provide sufficient capital to fund losses, "there is no obvious reason why private insurance markets should not be able to provide catastrophe insurance."[10]

1. Carter, *Flood Risk Management*, 3.
2. Grossi and Muir-Wood, *Flood Risk in New Orleans*, 22.
3. Daniel Sutter, *Ensuring Disaster: State Insurance Regulation, Coastal Development, and Hurricanes*, Mercatus Policy Series, Policy Comment No. 14 (Arlington, VA: Mercatus Center, 2007): 3, http://mercatus.org/publications/pubid.4329/pub_detail.asp.
4. Ibid., 22. These subsidized residents are charged 40 percent of the technical rate.
5. Carter, *Flood Risk Management*, 4.
6. Grossi and Muir-Wood, *Flood Risk in New Orleans*, 16; Carter, Flood Risk Management, 4.
7. Grossi and Muir-Wood, *Flood Risk in New Orleans*, 23.
8. Dwight Jaffee and Thomas Russell, "Should Governments Provide Catastrophe Insurance?" (Working Paper 296, Fisher Center Working Paper, Fisher Center for Real Estate & Urban Economics, University of California, Berkeley, 2005), 2.
9. Ibid., 5.
10. Ibid., 3.

of the state. In greater New Orleans, damage was variable. Flood waters had washed away some units and left others intact. For example, in Central City New Orleans some buildings experienced ten feet or more of flooding, while several blocks away very little flooding occurred. This "jack-o-lantern" effect made designing a rebuilding policy based on traditional boundaries much more difficult and required Louisiana to establish policies for rebuilding "what was not totally destroyed."[23] In Mississippi, damage caused by the storm surge was total, completely erasing many houses along the coast. The homogeneity of destruction provided a clearer starting point for identifying damage and structuring subsequent compensation policy.

Both states directed the majority of early allocations to programs designed to assist homeowners, and both received approval for their plans from the Department

23. Michael Chriszt (Director of International and Regional Analysis, Federal Reserve Bank of Atlanta) speaking in the Southeastern Economic Perspective Podcast, "The Gulf Coast: Two Years After Katrina," July 2007, transcript available at http://www.frbatlanta.org/invoke.cfm?objectid=1CCABC77-5056-9F12-1227BFA0415EF017&method=display_body.

of Housing and Urban Development.[24] However, Louisiana has experienced ongoing conflict with the federal government regarding the design of Road Home and the state's planned use of FEMA Hazard Mitigation dollars. Figure 2 shows how each state used its allocation.

Mississippi's Homeowner Assistance program was designed by the Mississippi Development Authority, located in the governor's office, to award compensation grants of up to $150,000 to homeowners located outside the 100-year flood plain who experienced damage due to hurricane-related floods.

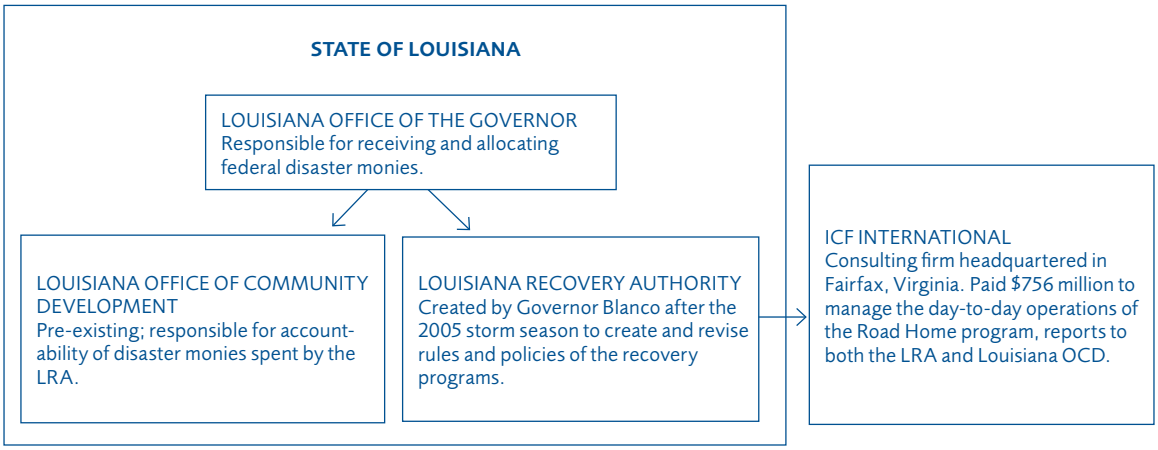
Louisiana's Road Home program was more ambitious in terms of eligibility and goals than was Mississippi's Homeowner Assistance program. After Katrina, more than 300,000 people evacuated to areas other than Louisiana cities. Alarmed by the rate of out-migration, the state wanted as many residents as possible to return, in order to "restore Louisiana's impacted communities." Program designers and federal officials feared that "devastated communities [would] be blighted by abandoned homes, clouded land titles, and disinvestments if a large portion of the financial assistance [was] not provided to homeowners as compensation for their losses and as incentive for homeowners to remain in affected areas."[25]

Road Home was designed with two interrelated goals in mind. First, it would help residents return to Louisiana. Second, it would encourage them to repair their properties. Designers hoped that this approach would prompt the rebuilding of pre-existing communities and salvage damaged housing stock. In these ambitious aims, Road Home departed from Mississippi's more concrete compensation-for-losses approach.

While Mississippi's Homeowner Assistance program covered only flood-related damage, Louisiana's Road Home program extended eligibility to residents sustaining wind damage, an event typically covered by homeowners insurance. (As discussed earlier, residents subscribed at a much higher rate to homeowners insurance than to NFIP-provided flood insurance.) This decision contributed to a higher than anticipated number of Road Home applicants and the program's ensuing budget shortfall of $3 to $6 billion.

Why did the framers of Road Home choose such broad eligibility criteria? Difficulties in determining the exact source of damage (wind vs. water) have been cited. However, limiting eligibility based upon levee failures and previous flood maps would have greatly simplified and better targeted the program. The broad criteria might

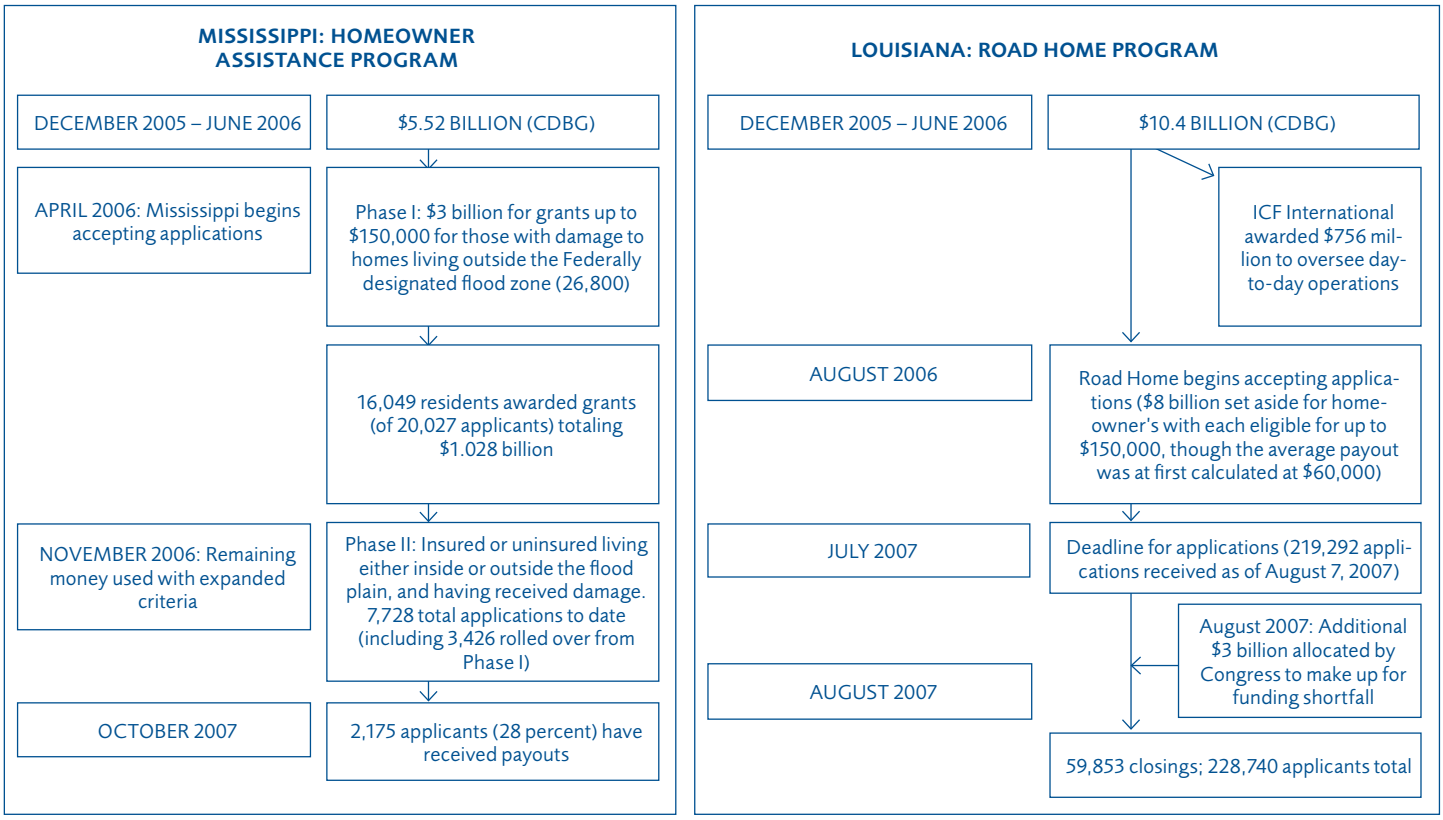
FIGURE 1: THE STATE OF LOUISIANA'S GOVERNANCE AND MANAGEMENT STRUCTURES FOR THE ADMINISTRATION OF THE ROAD HOME PROGRAM



24. The federal government provided assistance to Louisiana and Mississippi through the Community Development Block Grant (CDBG) under the Department of Housing and Urban Development (HUD) and through FEMA's Hazard Mitigation Grant Program (HMGP). These programs operate under different pieces of legislation, follow different funding models, and are governed by different regulations.

25. U.S. Department of Housing and Urban Development Disaster Recovery Initiative, *Proposed Action Plan Amendment 14 (First Allocation)—Road Home Homeowner's Compensation Plan*, Docket No. FR–5051–N–01, *Federal Register* Volume 71, Number 29 (Washington, D.C.: U.S. Department of Housing and Urban Development, April 16, 2007), 2, http://www.doa.louisiana.gov/cdbg/dr/plans/Amend14-Homeowner-Compensation_HUD-version_07-05-14.pdf.

FIGURE 2: ROAD HOME'S DESIGN COMPARED TO THAT OF MISSISSIPPI'S HOMEOWNER ASSISTANCE PROGRAM



also be attributed to the best of intentions—helping as many people as possible. It is also possible that state and local policy makers may have acted to deflect responsibility from the state and local government infrastructure policies contributing to levee failure and onto "external events" (i.e., the overwhelming effects of an historic weather event). Had eligibility criteria been more tightly defined, the program may have drawn attention to the inadequacy of federal flood insurance.

Some of Road Home's policies were designed to serve a larger development goal of rebuilding destroyed neighborhoods. However, on the program's first anniversary, two years post-Katrina, only 23 percent of eligible grantees had received funds, delaying reconstruction plans and frustrating those residents who had based their decisions to stay in Louisiana on the expectation of timely Road Home payouts. Some of these individuals found themselves waiting up to a year for the first responses from the program.[26]

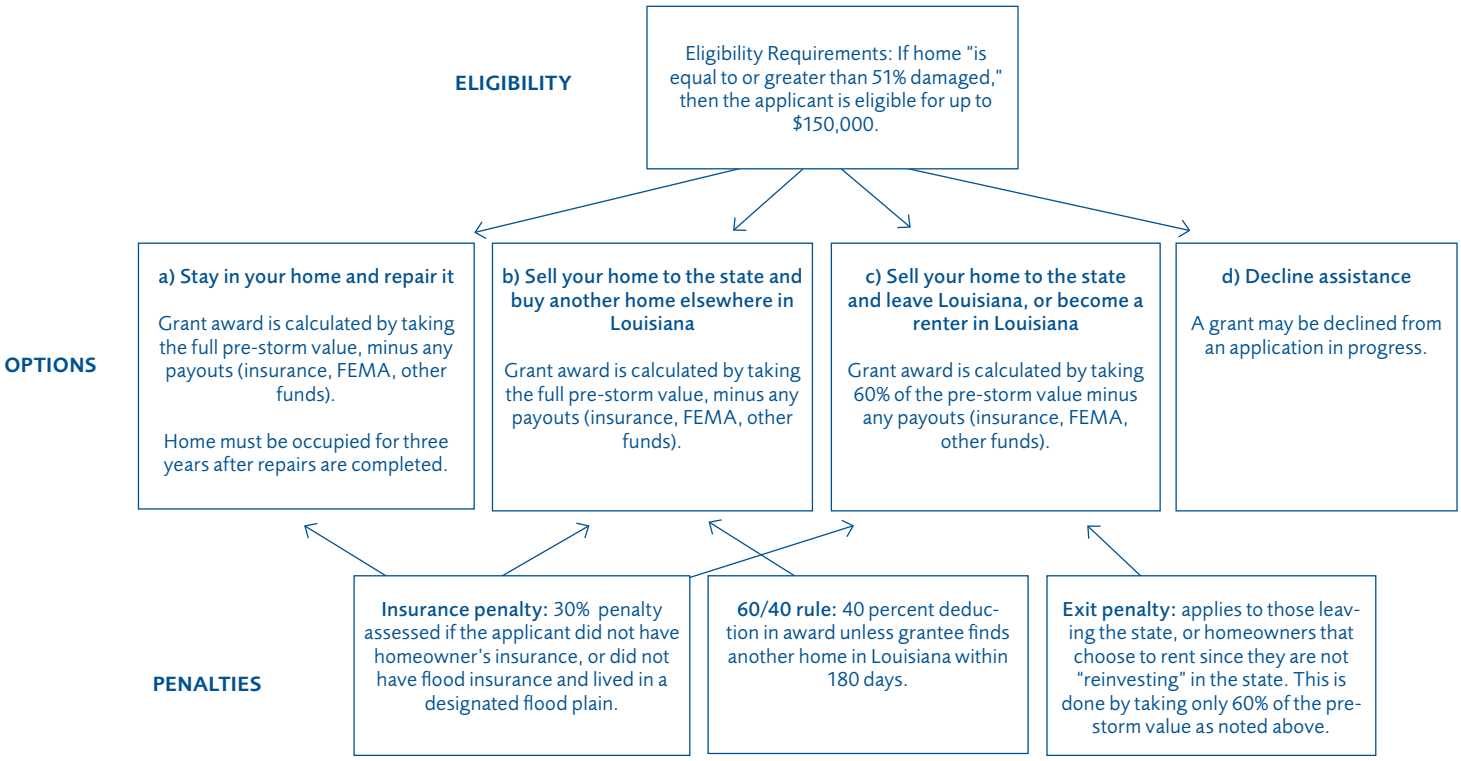
4 The Road Home: Design and Policy Features

Road Home generates an applicant's preliminary grant figure by calculating the dollar value of damage incurred to the pre-storm value of the home. From this, Road Home subtracts any insurance payouts that the applicant has already received to yield the total. The grantee must then make one of four choices, detailed in figure 3, all of which affect the final amount of the Road Home grant.

The numerous penalties and adjustments to which the grant calculation may be subject make it difficult for an applicant to forecast the final payout. For example, though insurance payouts were subtracted from the initial calculation, an applicant without homeowner's insurance (or flood insurance if located in a flood plain) is assessed a 30 percent penalty against the final award.

26. Residents interviewed by the authors observed that wait periods of nearly a year before receiving the first acceptance letter were not uncommon and that most applications required more than two years to complete the process.

FIGURE 3: CHOICES AVAILABLE TO ROAD HOME GRANTEES



This formula adheres to the program framers' intent to avoid awarding a Road Home grant on top of insurance payouts. It also avoids the moral hazard that may stem from "bailing out" property owners who choose not carry insurance but live in high-risk areas.[27]

Applicant difficulty in forecasting the payout amount has been compounded by many of Road Home's other features, including broad eligibility criteria, an exit penalty applied to those leaving the state, and frequent administrative changes. We analyze below the program's most significant policy features for their potential impact on resident choices and rebuilding.

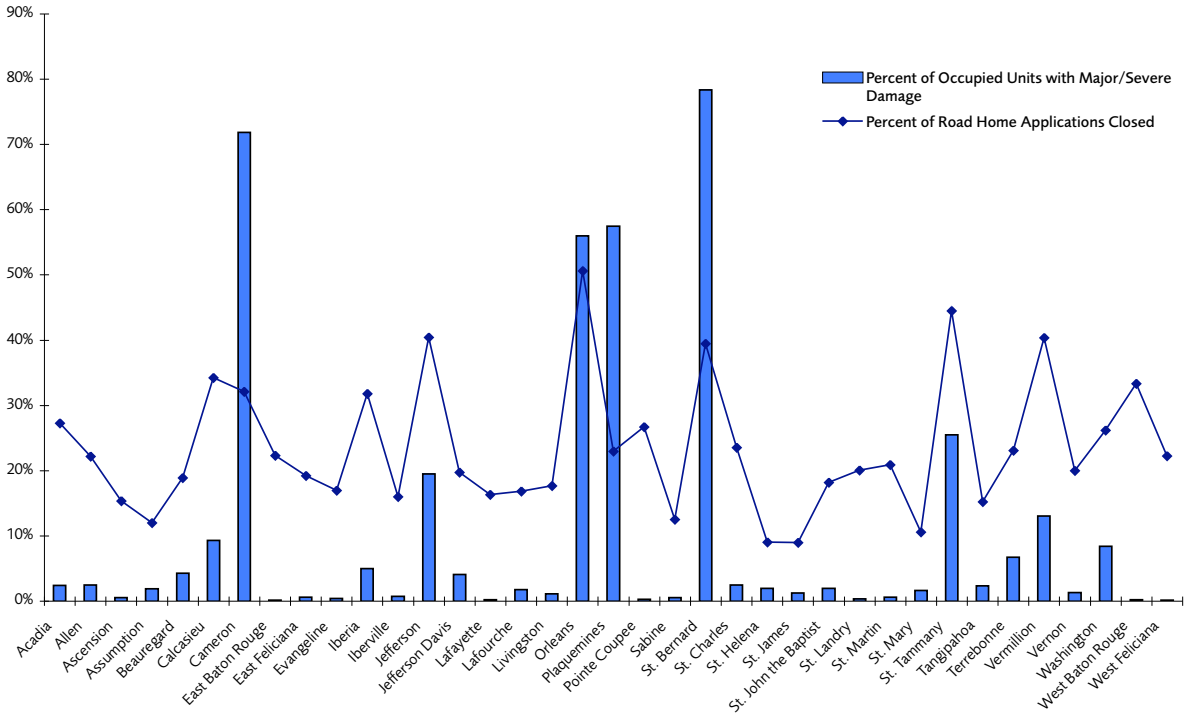
4.A: Broad Eligibility

Early in negotiations the federal government advised Louisiana and all hurricane-affected states to compensate for water-related damage only. The Louisiana Recovery Authority ignored this advice and permitted Road Home to cover wind damage and to extend eligibility to residents who carried homeowners insurance as well as those who did not. (Program planners cited the difficulty of distinguishing between different types of home damage as the reason for broad eligibility criteria). As a consequence, grant eligibility was extended to residents in areas where flood damage was sporadic and minimal. It may be that policy makers and politicians, overwhelmed by the extent of the damage in New Orleans, acted impulsively, promising compensation to everyone affected. Andy Kopplin, the Louisiana Recovery Authority's executive director, defended the state's choice noting that, "When President Bush said he would do what it takes he didn't say, 'except if you had wind damage.'"[28]

This decision to extend eligibility added approximately 43,000 homes to the list of those eligible for assistance and added $2.6 billion to Road Home's budget and ensuing shortfall. It also created three other problems. First, it offered *ex-post* assistance to homeowners suffering wind-related damage regardless of the homeowner responsibility to insure against such a possibility. This provides residents an incentive to underinsure against future disaster and sends a signal to insurers that the state's generosity will pick up the tab for other wind-related claims. Additionally, this decision cast a wide geographic net, offering grants to residents located all

27. Moral hazard is the incentive an individual has to assume more risk because he is insured. In this case the presumption that a bailout will arrive may cause individuals not to insure against disaster.
28. Terry O'Connor, "Commentary: Andy Kopplin Emerges as Unsung Recovery Champion," *New Orleans City Business*, June 8, 2007.

GRAPH 1: PERCENTAGE OF UNITS WITH SEVERE OR MAJOR DAMAGE COMPARED TO PERCENTAGE OF ROAD HOME CLOSINGS, BY PARISH



over the state, rather than concentrating dollars in the areas hit by the failure of infrastructure or in the inaccuracy of federal flood maps. Finally, the program's broad eligibility criteria also resulted in a subsequent increase in applicants may have diverted resources toward application processing and slowed the payout rate. It is also possible that those suffering only wind-related damage may have received funds more quickly because key documentation was not destroyed in the flood, making their program application much easier. [29]

Graph 1 shows the percent of housing units that experienced major-to-severe damage by parish, and the percent of Road Home applicants in those parishes who had received an award by November 2007. For example, in St. Bernard Parish, 78 percent of homes (a total of 19,686 houses) experienced major or severe damage from the floods produced by the breaching of the Mississippi River–Gulf Outlet Canal (MR-GO) and the Industrial Canal. As of January 2008, 39 percent of St. Bernard Parish applicants have received a Road Home award, but the remainder of applicants are still waiting. In East Baton Rouge Parish, on the other hand, Road Home payouts exceed the number of homes suffering severe damage. By covering wind damage, Louisiana dispersed funds to a much wider area, awarding payouts without establishing the underlying reason for improper protection. The areas that were the hardest hit suffered as a result of infrastructure failure and erroneous government advice. Thus, there are clear reasons to compensate many residents in the communities closest to the levees. Had Road Home concentrated funds in this manner, the program would likely have promoted efficient rebuilding in the areas that suffered the most severe damage. However, covering wind damage has scattered program funds, diluted the impact of compensation dollars, and rewarded those who neglected to carry appropriate insurance.

Road Home's decision to implement broad eligibility requirements has slowed recovery considerably in the neighborhoods hit with the full force of the storm *and* the government's failures in insurance policy and levee design and maintenance. A resident of Gentilly, New Orleans who suffered 10 feet of flooding in his home and the destruction of its contents, describes this disparity in payout speeds:

> We didn't get a response back from Road Home one-and-a-half years later. I know a guy who lives on the North Shore. He had wind damage. He

29. Important documents included verification of ownership and occupancy, most easily accomplished by producing a previously filed state tax exemption and acceptable form of identification.

> applied a year later [than I did]. I applied a year ahead. In six months, he got $70,000 in damage that he thought cost about $15,000 . . . he added on a room to his house, remodeled his house, with the extra money. They were giving out money on the outer outskirts. . . . You give it out here to people who had minor damage. . . . What about the people in the center who lost everything—the epicenter or whatever you want to call it . . . why aren't they getting any money to rebuild . . . that's why a lot of people were frustrated.[30]

4.B: The Exit Penalty

Road Home was designed to function as more than simply a compensation program. "It's not just about helping people—it's about restoring neighborhoods and cultures through the redevelopment of housing . . . entire parishes, entire cultures were devastated."[31]

Because one of Road Home's inherent goals is the restoration of preexisting communities, only those residents who return to their damaged homes and rebuild (or buy elsewhere in Louisiana) are eligible to receive a full Road Home grant. Program creators argue that assessing a penalty for out-migration rewards those "who make the effort and take the risks to move back and reoccupy housing in Louisiana."[32] Those who opt to leave Louisiana or to move from owning to renting within the state are subject to a 40 percent reduction in grant amount.

> This provision is critical to the rebirth of Louisiana. And since we provide all Road Home participants with a choice of all options—including ones that do provide full market value if they return home—we believe there is no inequity in the program. People can make choices on an equal basis.[33]

Does the exit penalty provide the intended incentive? After Katrina, a high percentage of Louisianans expressed a desire to rebuild their properties and neighborhoods. This is unsurprising, given the high nativity rates in Louisiana (80 percent) and particularly in New Orleans (77 percent).[34] It is possible that the bulk of returnees would have opted to return even without Road Home's incentives. It is also possible that a faster payout would have encouraged more residents to return to their homes or relocate within Louisiana. But faced with uncertainty, many may have committed to a job and invested in housing outside Louisiana. A much larger analysis is required to demonstrate the latter effect, a task that will be possible only when more data become available.

TABLE 1: OPTION SELECTIONS (AS OF DECEMBER 2007)[35]

Option	Count	Percentage
Keep your home	109,511	84.3
Sell, but stay in Louisiana	9,733	7.4
Sell, and move out of Louisiana	2,679	2.1
Decline benefits	1,356	1.1
Delay benefits	4,511	3.5
Unable to determine selection	490	<0.1
Total	129,918	100

Table 1 summarizes the statewide totals of Road Home applicants who have selected one of the four options the program offers as detailed in Figure 3. Those electing to sell their properties are concentrated in St. Bernard, Orleans, Jefferson, and St. Tammany parishes. Buyouts are particularly acute in St. Bernard Parish, where nearly 40 percent of applicants have decided to sell and another 21 percent remain undecided. In addition to the flooding caused by levee failures, St. Bernard was hit with a hurricane-related oil spill during the flooding, caused by a dislodged above-ground storage tank belonging to the Murphy Oil Company and affecting about 1,700 homes in Chalmette and Meraux.[36] A class action lawsuit with Murphy Oil was settled in September 2006 for $330 million to be distributed among residents and homeowners whose properties were damaged.

30. Interview conducted in New Orleans, LA, November 28th, 2007. Name withheld to protect confidentiality.
31. Walter C. Leger, Testimony, Subcommittee on Response and Recovery, 110th Cong., 1st sess, January 29, 2007, 9–10.
32. HUD Disaster Recovery Initiative, *Proposed Action Plan Amendment 14 (First Allocation)—Road Home Homeowner's Compensation Plan*, 2.
33. Walter C. Leger, Testimony, 9–10.
34. U.S. Census Bureau, Geographical Mobility/Migration Web site, http://www.census.gov/population/www/socdemo/migrate.html, (accessed December 7, 2007).
35. Road Home Program, *The Road Home Week 77 Situation and Pipeline Report* (New Orleans, LA: December 2007), 3, http://www.road2la.org/Docs/pipeline/Week_77_Combined_Report.pdf. Counts are cumulative totals as of December 26, 2007.
36. U.S. Environmental Protection Agency, "Response to 2005 Hurricanes: Murphy Oil Spill," http://www.epa.gov/katrina/testresults/murphy.

At 74 percent, Orleans Parish has the highest percentage of Road Home applicants who are avoiding the exit penalty by choosing to rebuild in pre-storm locations. Many of these homeowners are located near levees in areas that suffered significant levee-related flooding. Thus, Road Home's goal of encouraging people to return to their pre-storm neighborhoods may succeed, but it may also place residents of Orleans Parish and similar locations in harm's way, absent improved mitigation measures or accurately priced and mandatory flood insurance policies. While Road Home attempts to communicate the risk of living in a flood zone by conditioning grant approval on the purchase of flood insurance, the NFIP premiums remain subsidized and do not accurately reflect the level of risk.

Road Home, a disaster compensation program, endeavors to operate as a community development program even though new flood maps have not yet been generated nor public infrastructure improved. At the same time, the program precludes individuals from making community development choices by penalizing their Road Home payout should they choose to leave the state.

The program may function more efficiently, and thus encourage more applicants to choose to stay in the state, if it simply compensated individuals for losses suffered as a result of inaccurate government information or a dereliction of responsibility on the part of the government for maintaining flood protection systems.

Though the Road Home exit penalty aims to encourage community development, it fails to acknowledge that some people might be better off if they do not rebuild in their pre-storm locations, but instead pursue opportunities elsewhere. By penalizing applicants for choosing to leave the state, Road Home limits personal autonomy. Indeed, it may compel applicants to choose to stay in order to receive a higher payout, thereby locking them into a situation that is ultimately harder to change once their savings have been sunk into housing repairs in areas with dubious protection against future storms. The long-term consequences of this path are still unknown and will only become clear once a detailed analysis of recovery in the region is possible.

4.C: The Promise of Additional Money for Elevation and Mitigation

In addition to the CDBG allocations to cover Road Home rebuilding grants, Louisiana was allocated $1.2 billion in FEMA Hazard Mitigation Grant Program (HMGP) funds. Governments may use HMGP funds to purchase repetitive loss properties—properties that are repeatedly flooded—and convert them into green space. Alternately, local governments can use these funds for homeowner grants that will help homeowners elevate their properties or undertake measures to protect against future storm damage. In October 2006, shortly after the Road Home program began, Louisiana, through Road Home, offered eligible homeowners up to $30,000 to undertake elevation work and up to $7,500 for mitigation projects (such as installing storm windows).

In March 2007, FEMA informed Louisiana that its plan for HMGP funds conflicted with federal regulations—the most serious being FEMA's requirement for cost-benefit, environmental, engineering, and historical analyses before elevation or mitigation work commences.[37] Consequently, Road Home placed a hold on HMGP funds in April 2007. At that time, about 22 percent of Road Home grantees had accepted—and were anticipating—elevation grants.

In October 2007, FEMA agreed to release funds to homeowners who had not yet elevated their homes, but the agency could not guarantee awards for nearly 29,000 Road Home grantees who had already begun or completed elevation work. After several weeks of negotiation, FEMA agreed to release elevation money to these "rebuilding pioneers" after an inspection of completed work. The conflict between state and federal government over the appropriate use of HMGP funds was ultimately resolved nearly six months after the controversy halted disbursal of funds. In February 2008, FEMA agreed to change the rules of its program, permitting those who began elevating their homes to be eligible for HGMP dollars as long as work was undertaken after the disaster declaration date of August 29, 2005 and before March 16, 2008.[38] Work that commences after March 16, 2008 is subject to approval by FEMA inspectors. In addition to

37. FEMA asserted that Road Home did not treat all applicants equally since it waived the 40 percent exit penalty for the elderly but applied a 30 percent penalty for failure to carry insurance. Moreover in capping awards at $150,000, Road Home operated under different criteria than the HMGP, which funds projects under a test of cost-effectiveness, not a strict cap. FEMA also said that it instructed Louisiana to identify properties it intended to convert into green space before buying them.

38. Federal Emergency Management Agency, "Hazard Mitigation Grant Program Exception: Work in Progress Guidelines," http://www.fema.gov/media/fact_sheets/wip_guidelines.shtm.

the release of HMGP funds, Louisiana, through the Road Home program, is supporting elevation grants with its extra allocation of CDBG funds.

Though ultimately resolved, the months of red tape regarding appropriate use of HMGP funds penalized early rebuilders and, perhaps, discouraged other residents from undertaking mitigation and elevation work. The lingering conflict points to at least two possible systemic problems. Either the complex regulations associated with the HMGP program make it an unsuitable form of relief in certain types of disasters, or Louisiana's intent for HMGP funds indicates that the state made incorrect assumptions about how it could apply the funds. Regardless of the cause of the controversy, it resulted in confusion among homeowners attempting to decide whether and how to rebuild their homes. A better understanding of how and when to apply HGMP dollars on the part of policy makers, or regulatory reform of the program itself, should be considered before it is deployed in future disaster-relief settings.

4.D: Administrative Uncertainty

Some view the rapid policy and rule changes within the Road Home program—only a few of which are detailed in this Policy Comment—as a sign of responsiveness and willingness to improve performance on the part of Road Home administration. However, frequent rule changes have also added to the massive confusion and uncertainty already facing program applicants. For example, The Louisiana State Auditor reviewed 83 of 124 recommended policy changes made since May 2007 and was unable to determine exactly which had been implemented.[39] Many such recommendations and administrative revisions stemmed from the program's complex design and broad scope.

One prevalent criticism among applicants was the difficulty of obtaining valid pre-storm home values. The nuances of New Orleans' real estate market prevented typical appraisal systems from estimating pre-storm values, as home prices varied considerably—not only from neighborhood to neighborhood, but also from lot to lot—throughout much of the city. By the end of 2006, with disbursement of funds stalled at approximately 100 grant closings, Road Home allowed applicants to use post-storm appraisals and began to accept pre-storm appraisals from a much larger pool of potential sources. Even then, the acceptability of certain kinds of documents remained unclear.[40]

These changes not only affected applicants, but also program administrators and file reviewers who, "do not always have time to check the Road Home portal for policy updates . . . policies change so frequently in the program that it is hard to comprehend and implement a policy before it changes again."[41] Not only must employees be retrained each time policies change, but changes must also be made to forms and information systems and applicants must resubmit paperwork, further resulting in delays and lost time.[42]

4.E: The 60/40 rule

Many administrative uncertainties, among them rule and policy changes, were hidden even from the program designers. The most egregious example came when the first grantees came to the closing table in spring 2007, when grantees learned that they had only 90 days to buy a new house or else they would be assessed a 40 percent deduction in their overall grant award.[43]

The LRA disowned the rule, though the governor's Office of Community Development claimed that the LRA had earlier signed off on it. For now the rule remains, though the deadline to purchase a new house has been extended to 180 days. The exact purpose of the rule is unclear. However, whether intended or not, it penalizes residents who are unable to quickly find and purchase another house in Louisiana.

39. Legislative Auditor State of Louisiana, *Road Home Program: Review of Policy Change Approval Process*, Performance Audit (Baton Rouge, LA: Legislative Auditor State of Louisiana, June 13, 2007), 1, http://app1.lla.state.la.us/PublicReports.nsf/97D7D2F86F9DDAAB862572FA005815F7/$FILE/0000117A.pdf.
40. Jennifer Pike, *Spending Federal Disaster Aid: Comparing the Process and Priorities in Louisiana and Mississippi in the Wake of Hurricanes Katrina and Rita*, Gulf Gov Reports (Baton Rouge, LA and Albany, NY: Public Affairs Research Council of Louisiana and The Nelson A. Rockefeller Institute of Government, September 2007), 11–12, http://www.rockinst.org/publications/disaster_homeland/gulfgov/default.aspx?id=342.
41. Ibid.
42. Ibid., 2.
43. David Hammer, "Road Home Throws a Curveball: Some Lose Chase Unless New Home Bought Fast," *The Times-Picayune*, May 10, 2007.

4.F: The Escrow Account

Initially, Road Home grants were held in escrow for recipients. The intent was to ensure that grantees spent money on home repairs and to verify that they did not use the money to pay mortgages. Grantees cited the escrow account as the primary reason that repair progress had been so slow. The presence of escrow accounts also prompted HUD to classify Road Home as a "rebuilding" and not a "compensation" program (though the LRA claimed HUD had previously approved inclusion of the escrow policy in the program design). The March 2007 HUD ruling made Road Home subject to review under federal environmental, fair wage, and housing laws. The HUD ruling and its consequences prompted Road Home to eliminate the escrow account and shift the funding mechanism to a lump-sum payment model in April 2007. The switch to lump-sum payment amounts did prompt an increase in the rate of grant closings.

4.G: Funding Shortfalls

Road Home discovered a budget shortfall of $3 to $6 billion soon after it began. This shortfall stemmed from incorrect damage estimates and the expanded eligibility criteria that allowed more residents to apply than initially projected. The state of Louisiana petitioned Congress, which awarded an additional $3 billion appropriation in November 2007.

The state and federal governments offer different reasons for Road Home's funding shortfall. Federal Gulf Coast Administrator Donald Powell claims that, in early negotiations, representatives from the LRA agreed to fund 106,000 homeowners who suffered only flood-related damage. The LRA estimated the average grant at $72,000, for a total cost of $7.6 billion. The federal government assumed responsibility for levee-related damage only. The state argued that Road Home's representatives never agreed to exclude claims that resulted only from wind damage. For its part, the LRA asserts that responsibility for the shortfall lies with FEMA's inaccurate damage estimates, homeowners' inadequate insurance coverage, and lower-than-expected insurance payouts.

In addition to detracting from the recovery effort, ongoing news of Road Home's large funding shortfall alarmed and confused applicants throughout 2007. During one-

on-one interviews with our research team, applicants said that this fear discouraged some from applying.

4.H: Buyouts

As recovery needs in Louisiana evolve, Road Home faces emerging problems. For example, what should be done with the properties that thousands of homeowners elected to sell to the state rather than repair?[44] Currently, the Louisiana Land Trust owns 7,000 such properties. Some of the remaining 60,000 Road Home applicants who have not yet selected a Road Home option (see Figure 2) may also sell their homes to the state, so the number of state-owned properties is likely to rise.

The Louisiana Land Trust plans to put 240 units on the market, sell another 240 to affordable housing developers, turn 100 properties into green space, and put 75 lots into the Lot Next Door program (an initiative that allows residents to purchase vacant lots adjacent to their properties). Current estimates suggest that this process of unloading properties will take ten years and cost taxpayers $15 million per year.[45]

The Times-Picayune reports that the Louisiana Land Trust planning board wishes to avoid flooding the real estate market for fear that it will lead to a decline in property values.[46] However, one member of the same planning board argues that "soaring construction costs and homeowners insurance premiums have driven the price of housing so high that it has limited demand and hindered affordability."[47]

As housing costs and rents in New Orleans and across Louisiana rise, it may be wise to increase the supply of housing. Storm-damaged properties could be sold at a low price (e.g., the value of the land, a deeply reduced price, or a special "affordable housing" rate of $1), leaving the new homeowner with the cost of building or repairing the residence, plus the cost of insuring the property. The precedent for such an option took place recently in December 2007 when New Orleans sponsored its second Internet tax sale of pre-Katrina delinquent properties. At this writing, nearly 2,000 properties had been sold to buyers who agreed to pay overdue taxes, penalties, and interest on the properties.[48]

Placing Road Home buyouts in a similar sale would provide an opportunity for many lower-income individuals to buy a property and contribute significantly to Road Home's goal of affordable housing development. Rapid implementation of such a process could speed redevelopment and permit housing to be reclaimed by New Orleans' residents.

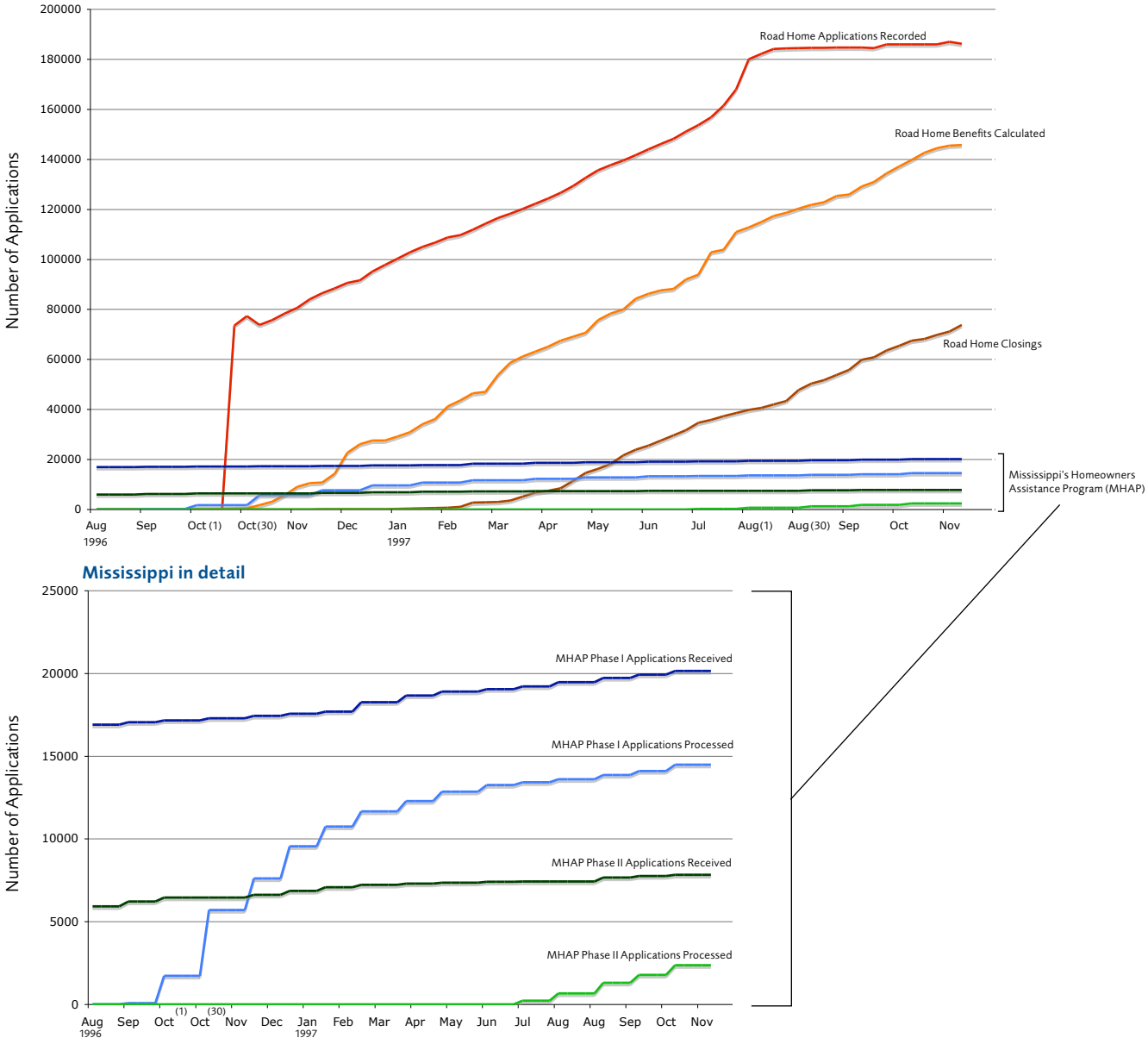
5 Mississippi in Contrast

Congress allocated the Mississippi Development Authority (MDA), an agency located in the Office of the Governor, $5 billion in CDBG funds to assist with post-hurricane recovery. The MDA used $3 billion to create the Homeowner Assistance program, an initiative that assists homeowners who "experienced flooding outside the flood plain, having relied to their detriment on the NFIP guidelines on the need to carry flood insurance."[49] In the first phase of the program, the MDA identified roughly 31,000 homeowners living outside the flood zone who maintained property insurance—and in some cases flood insurance—but in insufficient amounts. It offered these homeowners a maximum of $150,000 based on damage estimates and less insurance payouts or other government funding. In the second phase, the program extended eligibility to all homeowners in Harrison, Hancock, Jackson, or Pearl River counties who suffered Katrina-related flood damage, regardless of whether they carried the appropriate amount of insurance. Second-phase grantees were offered a maximum of $100,000, based on damage estimates minus payments from insurance or other government programs. Grantees were not required to spend the money on home repairs. But, if choosing to rebuild, owners were required to sign a covenant agreeing to carry the appropriate insurance on the property and adhere to building codes.

Though not without complications, the design of Mississippi's Homeowner Assistance program differs sharply from that of Road Home. For example, though Mississippi used a similar formula to calculate payouts (ascertain the amount of damage based on pre-storm value and subtract insurance payouts from the grant total), the program's

44. Road Home created the Louisiana Land Trust to handle the acquisition, maintenance, and management of properties.
45. David Hammer, "N.O. Airs Plans for Road Home Lots: 10-year Strategy May Cost Millions," *The Times-Picayune*, November 28, 2007.
46. Ibid.
47. Ibid.
48. *The Times-Picayune* Updates Online, "City's second Internet tax sale in progress," *The Times-Picayune*, December 12, 2007.
49. Mississippi Development Authority, *Homeowner Assistance Program Partial Action Plan* (Jackson, MS:MDA, 2006).

GRAPH 2: PROGRAM APPLICATIONS
Comparing Road Home and Mississippi's Homeowner Assistance Program



eligibility requirements were far more stringent. As mentioned earlier, Mississippi initially limited eligibility to residents who experienced only flood damage and lived outside the flood plain, but later expanded eligibility for the program as resources became available.

Mississippi and Louisiana's programs were not only conceptually different; they also faced enormous variances in scale. As graph 2 indicates, Louisiana's Road Home program received nearly six times as many applicants as did Mississippi's Homeowner Assistance program. This was due in part to the broad eligibility criteria established by Road Home, but also to the fact that densely populated parts of southeastern Louisiana received significant damage. When considering the hurricanes' impact, framers of Louisiana's Road Home program may have felt compelled to implement a broad program design. Regardless of intensity of storm damage, the disparity in program scale could have been avoided had Road Home framers opted for the strict eligibility established in the Mississippi program. This course of action might also have promoted Road Home payouts that matched the speed of the Homeowner Assistance payouts.

Mississippi's Homeowner Assistance program did not penalize applicants electing to leave the state or shift from owning to renting, thus avoiding any attempt to influence homeowners' decisions. (The program does require flood insurance to be held in perpetuity on rebuilt properties.) Mississippi also avoided the problems associated with Road Home's escrow account by awarding grants directly from the outset. Though the grant award practice, together with many other Road Home policies, was later simplified, Road Home's initial complex design nevertheless confused and discouraged early applicants—precisely the people Louisiana needed to return in order to assure effective long-term recovery.

Road Home's initial complex design nevertheless confused and discouraged early applicants—precisely the people Louisiana needed to return in order to assure effective long-term recovery.

To be sure, Mississippi's Homeowner Assistance program has faced its own set of complications. It has come under heavy criticism for awarding contracts to three state legislators. Road Home has been free of corruption allegations and appears to have effectively prevented egregious applicant fraud, though the program has achieved accuracy at the expense of speed, a tradeoff explored later in this Policy Comment.

Like applicants in Louisiana's Road Home program, applicants to Mississippi's Homeowner Assistance program have complained about low home value estimates. These complaints spurred policy changes, implemented in October 2006, that allow more appraisal methods to be used when determining award amounts. However, policy changes in the Mississippi program were neither as frequent nor as comprehensive as those within Road Home. Because Mississippi's intent and scope were concrete and measurable and clarified in the program's design stage, the MDA had less difficulty revising and dealing with vagaries as they arose. We acknowledge that conditions (both pre- and post-storm) were markedly different in Louisiana and Mississippi, but the short-term experience, at this writing, indicates that the benefits of Road Home's specificity are far outweighed by Mississippi's gains of simplicity and speed.

6 Case Study: Stay or Go

Prior to Hurricane Katrina, Roger Walker and his family lived in northern Gentilly, a neighborhood of New Orleans.[50] He worked at a used car dealership 15 minutes from his home. Two days before Katrina made landfall, he and his family evacuated to the home of relatives in Texas, packing only enough clothing and supplies for a weekend stay. In their absence, their home was flooded with nearly 10 feet of water, completely ruining the property and its contents. The Walker family now faces the same decision as thousands of other displaced residents across Louisiana, but especially in New Orleans: Is it more beneficial to return or to resettle? We explore below several factors that influence the deliberations of evacuees.

Thomas Schelling describes post-Katrina resettlement as an acute problem of coordinated expectations, asserting that for one household—such as the Walker family—to find it beneficial to return, other households must also return.[51] The few early returnees bear the burden of rehabilitating the entire city, despite diminished access to everyday public infrastructure that does not yet function at pre-storm capacity.

Road Home framers attempted to address the threat of out-migration by penalizing the decision to leave and incentivizing the decision to return, thus attracting enough returnees to remove the strong disincentives for not returning. While this effort may have succeeded to some extent, the effect was muted by the slow payout rate and applicant confusion, counteracting any possible gains. Rather than attempting to shape evacuee decisions, program framers could have exchanged control for simplicity, a programmatic tradeoff that may have enabled residents to more easily coordinate with one another and perhaps more easily finalize decisions to return or relocate.

For evacuees from New Orleans living temporarily in another state and trying to determine whether to

50. The Walker family is fictional but is based on an interview conducted on November 29, 2007 by the authors in New Orleans with a family that returned to the city in July 2007.

51. Thomas Schelling interviewed in Peter Gosselin, "On Their Own in Battered New Orleans," *Los Angeles Times*, December 4, 2005.

return, the choices available to them can be thought of as an investment whose reward is partially dependent on the choices of others. They must consider many factors simultaneously, among them neighborhood safety and access to quality employment, schools, and public services. Fundamentally, evacuees must use limited information to extrapolate what the neighborhood and city will be like long-term.

Schelling's assertion that for one household to benefit from returning other households must return as well is corroborated by empirical findings in New Orleans. An examination of block-level return patterns using postal data suggests a strong tendency for neighborhoods to become either clusters of activity or deserted ghost towns.[52] This is unsurprising, since the sole returnee in an empty neighborhood faces not only the problems described above, but also confronts both the potential depreciation of property values as nearby homes fall into decay and the risk that their homes will be deemed "green-space" and subsequently bulldozed.

The Walkers face a great deal of uncertainty about the exact reward amount if they do return to New Orleans. Mr. Walker reasons that the eventual Road Home payout, the equity in his home, and income from a job comparable to what he had before the storm would all be worth $50,000 to $90,000—depending largely on the amount of the Road Home grant and his property's value (which depends, in part, on how many neighbors return).

If the Walkers return but are the sole family on the block, they risk rapid depreciation of their home as neighborhood blight increases. If this scenario develops, Mr. Walker estimates the monetary value of his property, income stream, and Road Home grant at $30,000 to $40,000, with the potential for further decrease over time. If the Walkers remain in Texas, they still risk rapid depreciation, but they are certain of being able to take a buyout from the state—albeit below market value—and of securing a job with an estimated value of $60,000 a year. These values are constant regardless of what choices their neighbors make. Thus, while the Walkers would rather return to New Orleans, they recognize that leaving is the "safer" option since the neighbors' choices cannot be foreseen.

It is possible to examine the choices faced by evacuees such as the Walkers through the lens of game theory. Table 2 describes the choices available to the Walker family, summarizing potential dollar amounts based upon the family's choices and the choices of their immediate neighbors. Each day that passes without a return-or-relocate decision costs the Walkers missed opportunity, regardless of whether they elect to return to New Orleans or stay in Texas.

TABLE 2: INCENTIVES FACING THE WALKER FAMILY

	Walker Family		
		Return	Leave
Other six families on their block	Return	$50,000 - $90,000	$60,000
	Leave	$30,000 - $40,000	$60,000

Further, the Walkers are not unusual in this regard. Many of their neighbors face approximately the same incentives. Most are unable to make reasonable guesses about the likelihood of more than a few others returning based upon extremely limited information as to the size of the Road Home payout. In the absence of perfect information and complete communication, achieving coordination in such a scenario is extremely difficult.[53]

The best way to improve coordination in such a situation is to reduce the amount of uncertainty—or provide as much of a commitment to the payout figure as possible—across the entire community. This would allow residents to better extrapolate not only their own incentives, but also those of their neighbors. The main difficulty of achieving coordination arises when evacuees begin guessing—about the Road Home payout amount, the choices of close neighbors, and the long-term viability of the neighborhood. The earlier residents are made aware of the actual value of choices available to them, the less difficulty they will have in making life-altering decisions.

7 Policy Recommendations

Louisiana is nearly two-and-a-half years into recovery, and while the state will recover, few people are certain of New Orleans' future. Drastically revising the Road Home program would be unwise, since many of the city's former residents have based plans and expectations

52. Amy Liu and Allison Plier, *The New Orleans Index: Tracking Recovery of New Orleans and the Metro Area* (Washington, D.C.: The Brookings Institution, January 15, 2008), http://www.gnocdc.org/NOLAIndex/ESNOLAIndex.pdf.

53. See Hans Carlsson and Eric van Damme, "Global Games and Equilibrium Selection," *Econometrica* 61, no. 5 (1993): 989–1018, for a further discussion of the difficulties of coordination in situations featuring complementarities and noisy payoffs.

upon commitments made by the program. Restructuring might aid long-term recovery, but it would also heighten applicant confusion.

There are, however, small improvements that could be made to existing policies on both federal and state levels without introducing additional confusion.

7.A: Recommendations for Road Home: What Can Be Done Today

1. Release HMGP funding. FEMA should relax the regulatory requirements surrounding elevation grant dollars. Those Road Home grantees who began elevation work based on the promise of future funds should not be denied grants. Instead, regulatory bodies should inspect work to ensure that elevation projects are completed according to code and should suspend requirements for environmental, cost-benefit, engineering, and historical preservation rules governing the traditional HMGP program.

2. Put buyouts on the market. The Louisiana Land Trust should sell some currently held buyout properties on the open real estate market rather than maintaining them for an indeterminate period of time. These homes could be sold at auction or on a first-available basis. Rising home prices and rents in New Orleans are in part due to the reduction in decent housing stock available since Hurricane Katrina.[54] This upward pressure on home prices could be alleviated by placing selected properties on the market. However, the state may wish to maintain, with the intent of converting to green space, repetitive-loss properties or those located in high-risk areas.

7.B: Recommendations for the Future: Designing Ex-Post Disaster Policies

Ex-post disaster relief is not effective compensation policy. Such policies generally fail to distribute funds accurately and efficiently, and they may contribute to moral hazard if they encourage homeowners not to insure against disaster.[55] In the case of Road Home, the state contributes to this hazard by subsidizing residents who relocate to high-risk areas before improvements to hurricane protection systems are made. Government at all levels could more efficiently invest in such *ex-ante* policies as mitigation measures (improved engineering, responsible maintenance) that may reduce the scope of disaster and accurately priced insurance policies that convey the risk facing residents choosing to live in a floodplain. Absent accurately priced NFIP premiums, which themselves hinge on accurate federal flood maps, individuals will operate under a clouded picture of risk and may thus fail to protect against future disaster.

The situation facing New Orleans stems from an institutional environment shaped by decades of government policy and social trends, as well as the interplay of federal and state regulations governing disaster relief. Because the institutional environment is not likely to change significantly, any future recovery program on a similar scale will operate in a similar environment. As such, we offer pragmatic recommendations for disaster recovery policy within such a context.

1. Establish a clear rationale for relief. Katrina's worst damage resulted from infrastructure failure. The levees' structural integrity was assumed, both by individuals and by the NFIP. The residual risk of living near these levees was not properly incorporated into insurance policies, which relied on FEMA maps. The U.S. Army Corps of Engineers, in partnership with state and local governments, was responsible for maintaining and assessing the ability of the levees to withstand a category three hurricane. Therefore, government, one can convincingly argue, is liable for the flood damage not adequately covered by insurance. In constructing a homeowner relief policy, policy makers should start from this point. Figure 4 summarizes funding priorities.

a) Award grants to eligible homeowners who lived outside of the designated flood plains and were

54. Another reason for higher home prices in New Orleans is that taxpayer-provided disaster relief eliminates the downward pressure on housing prices by eliminating the risk of living in a dangerous area. Houses should be cheaper in New Orleans because it is a higher-risk location relative to, for example, Memphis, Tennessee. But the government subsidies for housing replacement causes New Orleans' housing prices to rise as the financial risk of living there is eliminated. Memphis residents see their housing prices drop as people are no longer willing to pay a premium to live in a less risky location. The result, as housing prices in both cities approach similar levels, is that consumers become apathetic regarding the difference between the locations. See Steven Landsburg, "No Relief," *Slate.com*, September 7, 2005.

55. James Buchanan, "The Samaritan's Dilemma," in *Altruism, Morality and Economic Theory*, ed. E.S. Phelps (New York, NY: The Russell Sage Foundation, 1975), 71–85. Government-provided disaster relief, while well intended, establishes perverse incentive, because victims expect assistance and do not undertake measures to protect themselves against future disaster.

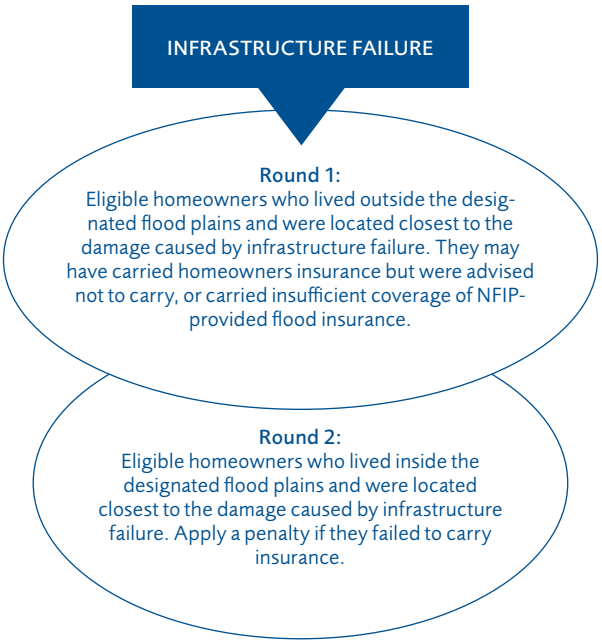
located closest to the damage caused by infrastructure failure. These homeowners may have carried homeowners insurance, but they were advised either to carry no NFIP-provided flood insurance or an insufficient coverage thereof. Apply penalties to those who did not carry homeowners insurance. Award grants to compensate homeowners who were told not to carry flood insurance but rather to rely on the levees as protection.

b) Expand eligibility to those who were located in flood plains, whether insured or uninsured. Apply a penalty if they failed to carry homeowners and/or flood insurance. Exclude wind damage-only claims. Wind damage should be covered by homeowners policies. Penalize those not carrying homeowners insurance by not awarding them grants.

2. Determine whether accuracy or speed is more important. Analysis provided in Sections 5 and 6 of this paper indicates that coordination of plans soon after a disaster is critical to long-term rebuilding. The earlier evacuees are aware of their own circumstances and can plan around the circumstances of others, the faster rebuilding will occur. This process resembles, in some ways, a "tipping point"—as soon as evacuees witness their neighborhood returning to a normal state, they are much more likely to return. Unfortunately, early returnees are faced with very high "first mover" costs. Allowing those who are willing to move back early to do so as soon as possible is extremely important and provides a justification for streamlining the speed of compensation programs, even if this reduces accuracy in awarding funds.

3. Adopt a "Homeowners Know Best" approach. Do not reduce grants based on where residents decide to live or how they intend to use their grants. Road Home's attempt to engineer lives and recreate neighborhoods is one of the program's fundamental flaws. Post-disaster, it is an area's residents who best understand their financial and personal constraints. It may be that some are better off taking an opportunity elsewhere, or they may have planned an out-of-state move prior to the disaster. Such residents are, in effect, penalized for making autonomous decisions. Governments should focus on compensating individuals for property losses suffered as a result of government failure, and not on forcing individuals to repair their homes or return to their pre-disaster city or state.

FIGURE 4: POLICY RECOMMENDATION: PRIORITIZATION OF AVAILABLE FUNDS



4. Keep the policy goals simple. Disaster relief policies should remain policies that offer relief following a disaster. They should not address other issues, such as affordable housing and housing stock redevelopment. While these may be important goals, including them in a disaster relief program dilutes funds and confuses intents.

5. Keep the program simple. Road Home's complex rules, regulations, and application process were in part intended to minimize fraud. Program designers are to be commended for careful stewarding of federal dollars, though careful stewardship may also have been achieved by restricting program eligibility to a more carefully defined group. Limited eligibility would also reduce the number of applicants, thus freeing resources to police potential fraud.

6. Let markets provide flood insurance. The main justification for the National Flood Insurance Program (NFIP) is that it provides affordable insurance to those otherwise unable to afford it. However, one consequence of government provision of flood insurance is that no market alternatives have developed. This permits NFIP policies to continue relying on outdated flood maps and avoid pricing the residual risk associated with collapse of flood protection systems. Also, by subsidizing premiums, NFIP leaves its policyholders with an inaccurate picture of risk, which may encourage people to live in more risk-prone areas or fail to undertake flood mitigation measures.

Because advances in risk modeling enable insurers to more accurately price risk and financial instruments help restock post-disaster capital reserves, private provision of insurance is both feasible and profitable. Policy makers should eliminate public provision of insurance altogether or, failing that, price risk as accurately as possible by requiring state insurance programs to purchase reinsurance at actuarially sound rates.[56]

8 Conclusion

Road Home has failed to promote rapid reconstruction of New Orleans neighborhoods because its goals exceed the scope of a disaster compensation program. The 2005 hurricanes caused as much damage as they did in part because government at all levels failed to accurately inform homeowners of the risk they faced and failed to properly manage levee infrastructure. In crafting a disaster compensation policy, the Louisiana Recovery Authority should have restricted program eligibility to those homeowners who suffered as a result of government failure. Expanding the program scope to include those who suffered wind-related damage and offering compensation to the entire state contributed to a fiscal shortfall and moral hazard.

Road Home's exit penalty has also proven extremely damaging to Louisiana's long-term recovery. A disaster compensation policy should not penalize residents for choosing to leave the state or become renters, options that may actually be in their best interests. In effect, the exit penalty undermines autonomy and predicates receipt of aid on choices that may worsen residents' financial and personal situations.

The deepest irony of Road Home is that its policies have created multiple layers of uncertainty, precluding informed action. Program creators acknowledge that they are uncertain about how neighborhoods will recover. This inability to predict residents' actions hampers the state's ability to identify green space. The LRA's proposed ten-year process for unloading property buyouts continues to distort the real estate market. This uncertainty makes it difficult for residents to make decisions about housing repairs and investments.

Road Home policies, which attempt to engineer lives and re-create the past, have been a primary cause of the uncertainty and instability that continues in Louisiana, particularly in New Orleans. Rather than launching the biggest housing recovery program in U.S. history, policy makers should work within the role and limits of government in disaster recovery, clearly identifying liability for losses; compensating individuals quickly without trying to influence choices; and establishing and enforcing ex-ante disaster prevention mechanisms—including mandatory flood insurance and homeowners insurance, elevation and mitigation measures, and adherence to building codes.

Road Home's broad goals of neighborhood recovery and affordable housing development dilute ex-post disaster assistance, confuse intents, and distort housing markets—all consequences that weaken and stall the recovery of Louisiana.

56. Sutter, *Ensuring Disaster*, 3.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