

## **Context Statement**

This memo aims to retrospectively examine natural disaster relief management with a particular focus on equity. Specifically, by analyzing the distribution of grants awarded following Hurricane Katrina in 2005, we can help reform programs to better serve those in need. This memo aims to inform disaster aid administrators, who ultimately make decisions on the recipients and amounts associated with grant funding. In particular, with the memo, we address the director of the Louisiana Office for Community Developments, whose department is responsible for leading rebuilding efforts following natural disasters in the state of Louisiana, a hurricane-prone state. Our research is focused around the following two questions:

- What proportion of total property damage is recouped in disaster relief funding, and how does this vary by income status?
- What is the average amount of excess benefits awarded to citizens, and how does this total vary between insured and uninsured individuals?

By answering the questions above, we aim to spotlight the inequity in relief aid, where lower-income populations are receiving inequitable treatment as they attempt to rebuild. This helps serve as a case study to rethink and retool disaster relief distribution such that vulnerable populations are prioritized in future recovery efforts.

## **Executive Summary / TL;DR**

Following hurricanes Katrina and Rita in 2005, Louisiana launched the Road Home Program to help homeowners rebuild or repair storm-damaged property. However, with controversies in equitable allocation, this case study offers valuable insights into future program design. Learning from the mistakes of previous allocation mishaps, our study uncovers income disparities in aid allocation which should be resolved in future programs in order to provide fair, unbiased, and equitable outcomes for all residents.

By analyzing the state's own grant data, we demonstrate that the distribution of disaster relief funding was regressive, aiding homeowners with alternative means of aid, such as insurance payouts, rather than prioritizing homeowners without alternative means of aid. This leads to excess funding awarded to those who do not need it, and takes away timely funding from those who may need it most. We also demonstrate that the program's reliance on pre-storm property values, rather than actual damage assessments, systematically disadvantaged low-income homeowners whose properties were worth less before the storms.

To prevent perpetuating inequalities during emergency situations, we advise disaster relief administrators against using property value in calculating aid distributions. Furthermore, we would advise administrators to better coordinate with insurance funding to eliminate wasteful, excess benefits and the redirection of such funding to address disproportionate gaps in coverage of damages for lower-income residents.

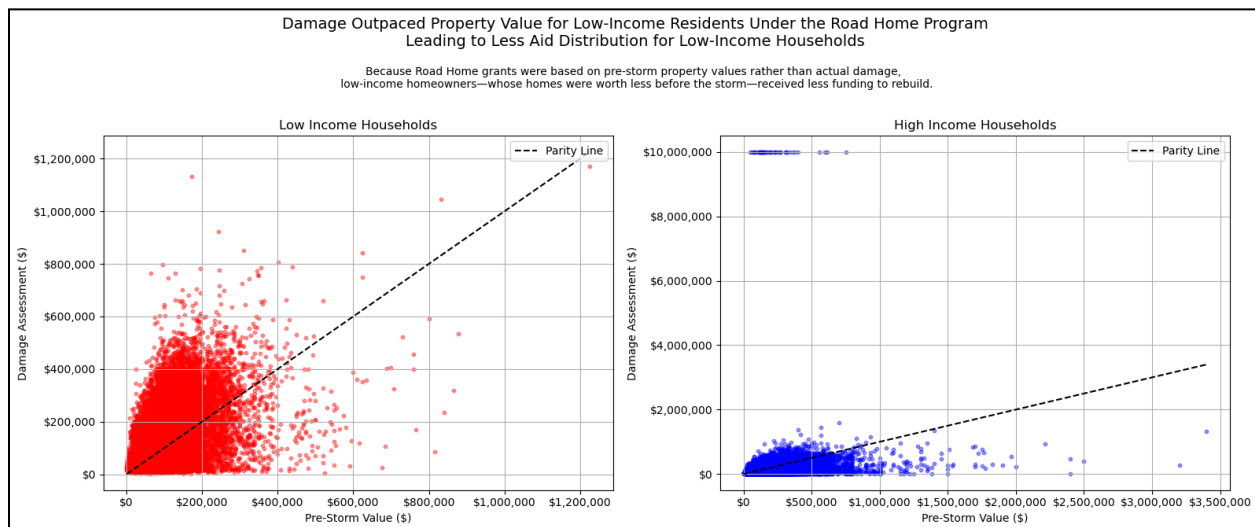
## Body of the Memo

Our research has found that lower property value homeowners had a lower proportion of their hurricane damage covered by the Road Home grants when compared to homeowners of property with higher property value. Many of the poorest residents received far less funding than needed to rebuild, deepening existing racial and economic inequities across Louisiana's Gulf Coast.

The program's grant formula was based on the lower of a property's pre-storm value or its damage assessment, meaning that low value property owners, often low-income residents, whose houses were already valued less before the storms, received less money even when their homes were completely destroyed. Because grants were calculated using the lower of the two variables, every point above the parity line represents a household that was undercompensated. On the other hand, points near or below the line, concentrated among higher-valued homes, signal cases where the cost of repairs were covered.

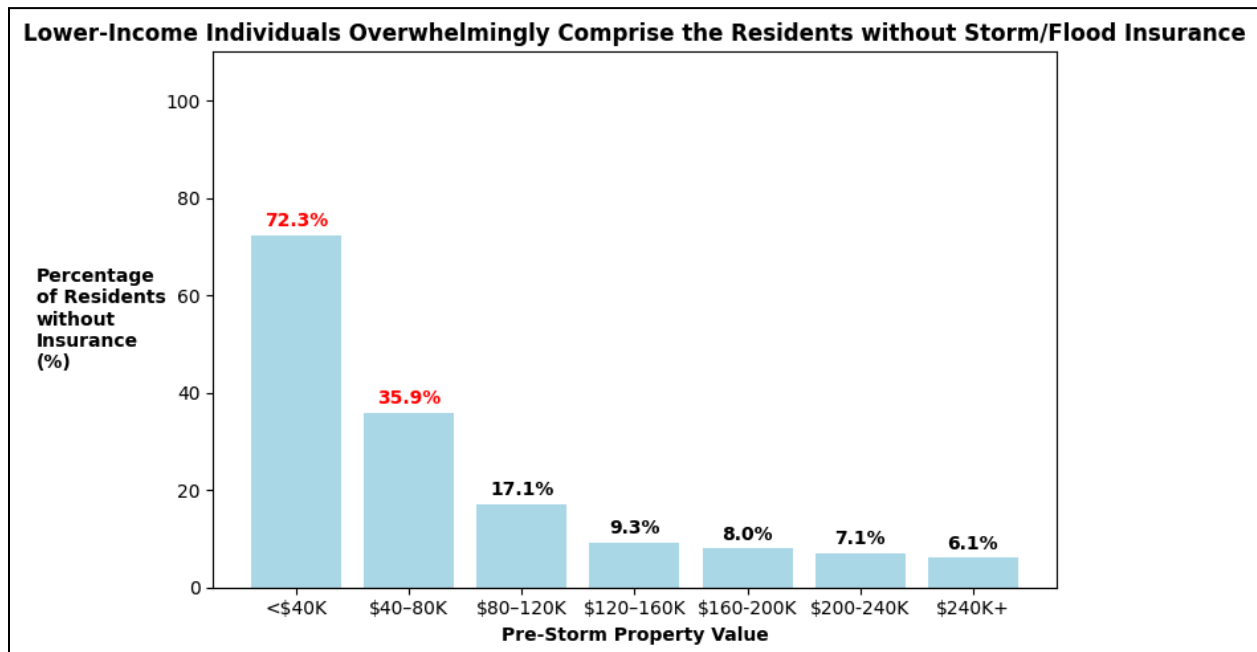
As the chart below illustrates, many low-income households suffered damages that far exceeded the value of their homes, leaving them significantly underfunded to rebuild. In contrast, higher-value homeowners often had damages that aligned more closely with their pre-storm property values, allowing their grants to fully cover repair costs.

By calculating aid distribution by the pre-storm house value, the program distributed funds inversely to needs while learning poorer families to absorb the largest financial losses.

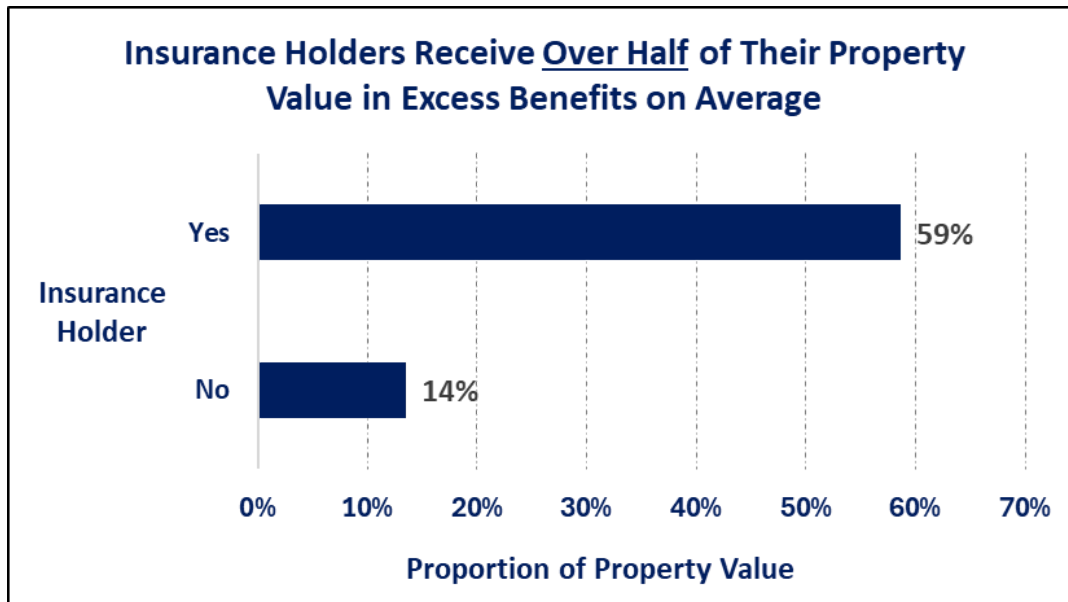


Furthermore, with fewer lower-income residents enrolled in storm and flood insurance, our study found that on average, those with insurance received almost ten times the duplicative benefits, or excessive grant money, compared to a resident without insurance. Combined with the previous insight, this finding highlights the need to reform grant administration; when lower-income residents have to cover more hurricane damage out of pocket, it is unfair that wealthier residents receive more money than they need to rebuild. Together, the two paint a picture of significant disparity in hurricane recovery, and suggest better program design to ensure equity.

In a contrasting fashion, while lower-income residents received disproportionately less in grant aid, wealthier property owners were receiving more than they were entitled to. Specifically, the Road Home grant program implemented two policies which widened the gap between lower-income and upper-income residents. Firstly, administrators assigned a penalty to cut grants by 30% for residents without storm or flood insurance. Next, they neglected to consider private storm or flood insurance payments prior to computing grant payments. As seen below, given that the proportion of non-insured individuals is significantly higher for populations with lower property value compared to those with higher property value, such policies stood to generate an outsized gap in disaster relief.



With over 72% of property owners with property values under \$40,000 lacking storm insurance, the 30% cut to grants for non-insurance holders creates a considerable and disproportionate burden for lower-income individuals. To further exacerbate this disparity, the below chart shows that the decision to neglect private insurance payments resulted in insurance holders enjoying over 50% excess benefits compared to their pre-storm property values. With wealthier property owners overwhelmingly holding storm insurance policies, this illustrates the inequity in government allocation, where needy individuals failed to receive adequate resources, while wealthier individuals received more than necessary.



Based on our study, we advocate that disaster relief policy should prioritize need over asset value to prevent rebuilding programs from reinforcing preexisting social and economic inequities. To ensure equitable recovery in future disasters, we recommend that disaster relief programs base grant calculations on verified damage assessments rather than pre-storm property values, which inherently disadvantage lower-income homeowners. In addition, improved coordination with private insurance agencies can prevent duplicative payments and redirect resources. Redirecting funds towards households with the greatest unmet needs would not only improve fairness but also accelerate recovery in the communities most vulnerable to future storms.