



FACT SHEET:

City of Houston Releases Updated Needs Assessment for Hurricane Harvey

The problem: Existing methods for calculating residential damage after a disaster are limited and have the potential to severely underestimate recovery needs. Houston has had five federally declared disasters in the last three years. If damage is underestimated after each disaster, Houston is being chronically under-resourced for recovery.

What we did: The Housing and Community Development Department commissioned a team of data scientists and flood engineers to build a new model for calculating storm damage. The new methodology more accurately accounts for residential damage, and identifies people the old model missed.

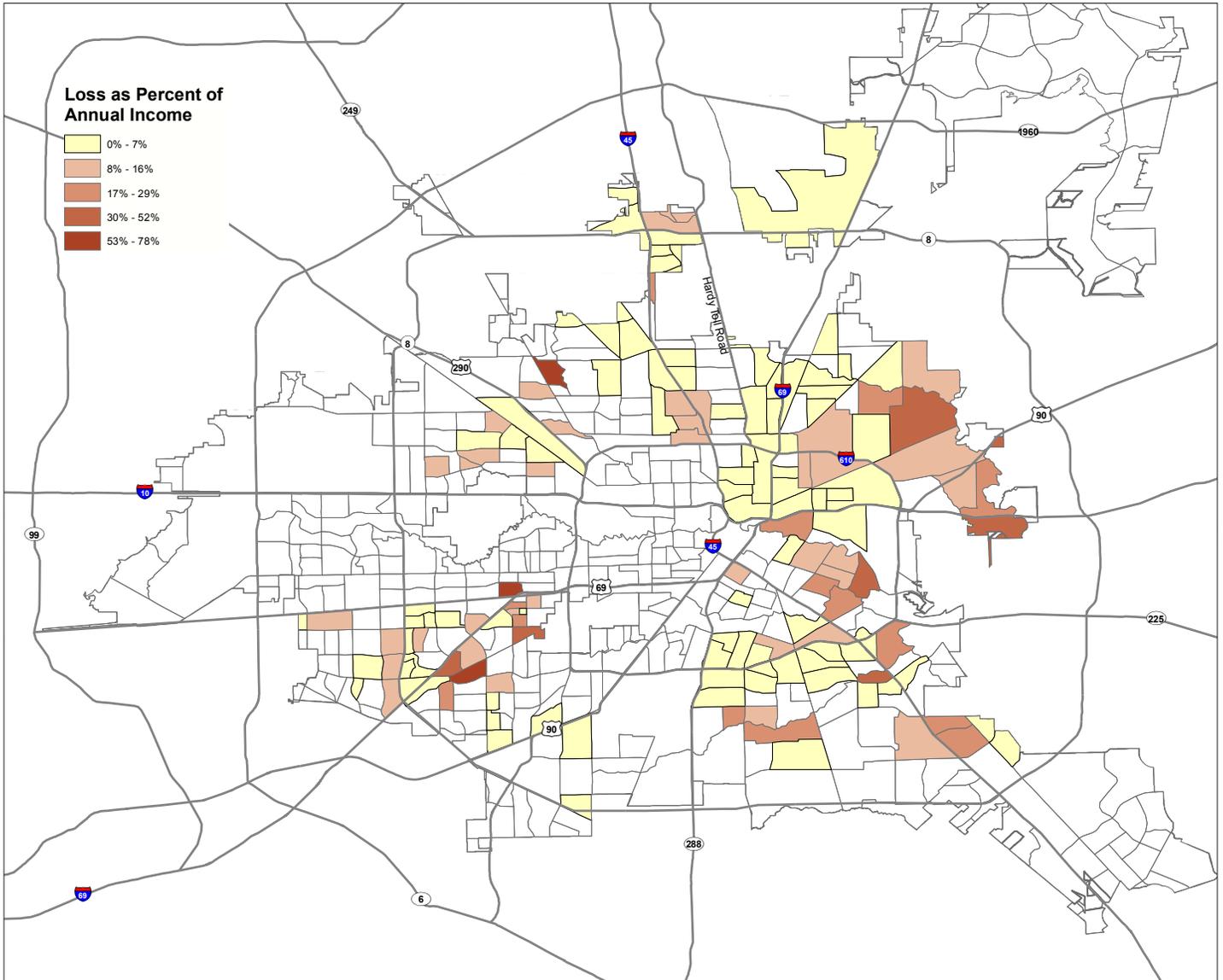
What we found:

- ▶ **The true residential impact of Harvey is much larger than previously understood.** The extent of residential damage from Harvey is almost \$16 billion. Old methodologies only counted some of the damage that is eligible to be addressed according to HUD rules, at just over \$1 billion. The new methodology accounted for the full extent of the damage and identified an additional 130,000 Houstonians impacted by the storm.
 - ▷ To date, the federal government has provided Houstonians around \$4 billion for recovery, leaving an additional \$12 billion in unaddressed damage that will have to be met through private resources and additional federal funds.
- ▶ **Two ways to assess how much more federal aid Houston needs to meet the most serious unmet housing needs.**
 - ▷ So far, Houston is set to receive \$1.17 billion for housing recovery. But this amount is based on the old way of calculating damage. The new way sought to identify all impacted residents and provide a more comprehensive and accurate estimate of costs to repair impacted homes, based on Houston-specific maps. Using the new way, Houston has additional unmet need that wasn't previously accounted for:
 - **\$870 million more:** corrects for the number of households that had damage
 - **+ \$1.1 billion more:** corrects for the amount it costs to repair the damage
 - **\$2 billion total additional funding needed**
 - ▷ Federal funding from the Housing and Urban Development Department (HUD) is intended to meet a subset of the total housing need, especially for vulnerable people who can't recover with private resources.

Key takeaways from the data:

- ▶ About **30 percent of the 700,000 households in Houston sustained some form of damage to their home or personal property**, with flood waters coming very close or touching the building. 10 percent of households had flood water inside their homes.
- ▶ Flooding from Harvey was not simply the result of rivers and bayous spilling their banks; sustained, heavy rainfall over inadequate drainage systems caused ponding across all areas of the city. **Fifty-nine percent of the damage from Harvey occurred outside the 500-year floodplain.**
- ▶ **Flooding devastated areas with high levels of social vulnerability**, where low-income residents have the fewest resources to recover. Twelve neighborhoods were identified that have at least one census tract with very high social vulnerability (above 0.8 on the University of South Carolina's Social Vulnerability Index) and damage above 50 percent of the estimated annual income of residents in the buildings that were damaged: Braeburn, East Houston, Golfcrest, Greater Fifth Ward, Greenspoint, Gulfton, Hunterwood, Inwood, Lawndale, Midwest, Northshire, and Northside.
- ▶ The deepest flooding - more than six feet of water - occurred in Kingwood, Lake Houston, Magnolia Park, Memorial, Northshore, and Uptown. Flooding in some areas was exacerbated by controlled release of the Addicks and Barker reservoirs by the Army Corps of Engineers. **Neighborhoods with high home values have received the greatest amount of assistance to date**, even as high levels of unmet housing need remain in these areas.
- ▶ **Persons with disabilities were disproportionately impacted.** While persons with disabilities represent 10 percent of Houston's overall population, they represent 15 percent of impacted households.
- ▶ **Forty-six percent of impacted households were renters.** The federal disaster recovery framework limits the kinds of assistance that can be provided to renters directly; the recovery strategy for renters relies on building more affordable rental housing throughout the city, helping renters become homeowners in areas safe from future flooding, and public services programs.
- ▶ **Seniors represent 12 percent of impacted people, but 21 percent of damage by dollar value.** Because homeownership is high among seniors, the value of buildings and contents are higher for this group as compared to groups with lower homeownership rates.
- ▶ After six years of declining homelessness in Houston, **the city has seen a 15 percent rise in homelessness after Harvey.** Significant interventions after Harvey to transition more than 600 families out of disaster shelters and into apartments and other residents likely prevented the homelessness rate from jumping even higher.
 - ▷ The data modeling based on building damage does not identify homeless populations; the Local Needs Assessment relies on data from the Coalition for the Homeless to track homelessness.

Loss as a Percentage of Estimated Income (SVI Tracts)



Flood Depth Within the City of Houston

