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## Article

### Hurricane Harvey and the Houston Housing Market

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#### Introduction

In August 2017, Hurricane Harvey decimated parts of Houston and other coastal Texas cities. As America's fourth largest city (with a population of approximately 2.3 million<sup>1</sup>), any major storm that strikes Houston is potentially catastrophic. Harvey, a category 4 tropical storm, was not your average storm. Harvey was the largest storm to hit Texas in over 50 years and, over a 24-hour period, dumped more than two feet of rain in Houston. During the three-day downpour, Harvey produced the equivalent of the region's average annual total rainfall, approximately 51 inches of rain.<sup>2</sup>

This Paper will examine Harvey's effect on Houston's housing stock and how the flooding exacerbated housing unaffordability for lower- and middle-income renters and homeowners. While Harvey's floods damaged commercial properties and roads also flooded, much of the damage toll in Houston—estimated to be as high as \$180 billion—involved Houston's

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1. UNITED STATES CENSUS BUREAU, QUICKFACTS: HOUSTON CITY, TEXAS, <https://www.census.gov/quickfacts/fact/table/houstoncitytexas/PST045216> [<https://perma.cc/R3GD-2GQK>] (listing the population estimate for the city of Houston at 2,303,482).

2. Harvey deposited 27 trillion gallons of rain in Texas and Louisiana, the greatest rainfall recorded in the continental United States. Jennifer Fablano, *Timeline Recounts the Devastating 2017 Atlantic Hurricane Season and Storms That Made It Memorable*, ACCUWEATHER (Nov. 15, 2017), <https://www.accuweather.com/en/weather-news/timeline-recounts-the-devastating-2017-atlantic-hurricane-season-and-storms-that-made-it-memorable/70003283> [<https://perma.cc/MDF7-6LTM>]; AJ Willingham, *A Look at Four Storms from One Brutal Hurricane Season*, CNN (Nov. 21, 2017), <http://www.cnn.com/2017/10/10/weather/hurricane-nate-maria-irma-harvey-impact-look-back-trnd/index.html> [<https://perma.cc/T8CA-7LGX>].

residential housing which has flooded during a “500-year flood” each year since 2014.<sup>3</sup> After discussing the limited stock of affordable housing that existed in Houston before Harvey, the Paper then argues that the flooding, *especially* in lower- and middle-income residential neighborhoods, is the almost inevitable consequence of lax zoning and pro-developer housing policies. The Paper ends by briefly presenting the housing issues that local, state, and federal officials must now confront in the aftermath of Harvey’s catastrophic flooding.

## I. Houston and Housing

### A. *Houston and Housing Affordability Before the Storm*

For years, Houston has been one of the most economically segregated cities in the country.<sup>4</sup> Houston remains economically segregated largely because its politically powerful residents thwart any attempt to place affordable housing units in their neighborhoods.<sup>5</sup> Though Houston was (and

3. John Schwartz, James Glanz & Andrew W. Lehren, *Builders Said Their Homes Were Out of a Flood Zone. Then Harvey Came*, N.Y. TIMES (Dec. 2, 2017), <https://www.nytimes.com/2017/12/02/us/houston-flood-zone-hurricane-harvey.html> [<https://perma.cc/4KQN-WWUY>]; Sarah Pralle, *Hurricane Harvey Shows How Floods Don’t Pay Attention to Flood Zone Maps—Or Politicians*, WASH. POST (Sept. 7, 2017), <https://www.washingtonpost.com/news/monkey-cage/wp/2017/09/07/hurricane-harvey-shows-how-floods-dont-pay-attention-to-flood-zone-maps-or-politicians/> [<https://perma.cc/A2PM-FEQ3>]; Prashant Gopal, *Distressed Investors Are Already Buying Houston Homes for 40 Cents on the Dollar*, BLOOMBERG: BUSINESSWEEK (Oct. 12, 2017), <https://www.bloomberg.com/news/articles/2017-10-12/investors-head-to-houston-to-buy-from-panicked-homeowners> [<https://perma.cc/2P34-NCK2>]; Julia Horowitz, *The U.S. Has Been Hit by Two Giant Hurricanes. Here’s the Financial Toll*, CNN (Sept. 11, 2017), <http://money.cnn.com/2017/09/10/news/economy/hurricane-irma-harvey-economic-damage/index.html> [<https://perma.cc/5HU2-N8GZ>].

4. Mike Tolson, *How Houston Became America’s Most Economically Segregated City*, BUS. INSIDER (Aug. 2, 2012), <http://www.businessinsider.com/how-houston-became-the-most-economically-segregated-city-in-america-2012-8> [<https://perma.cc/83R9-HDDR>]. For a discussion of economic segregation generally, see CENTER FOR HOUSING STUDIES OF HARVARD UNIVERSITY, THE STATE OF THE NATION’S HOUSING 6, 17 (2017) [http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/harvard\\_jchs\\_state\\_of\\_the\\_nations\\_housing\\_2017.pdf](http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/harvard_jchs_state_of_the_nations_housing_2017.pdf) [<https://perma.cc/X9ZC-RRHJ>] [hereinafter STATE OF THE NATION’S HOUSING].

5. Rebecca Elliott & Nancy Sarnoff, *Off to Uneven Start, Housing Remains Top Priority of Harvey Recovery*, HOUS. CHRON. (Sept. 8, 2017), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Off-to-uneven-start-housing-remains-top-priority-12184474.php> [<https://perma.cc/7BGS-EG9J>]. For example, a developer recently proposed to build a mixed-income residential complex in a high-income neighborhood. The primarily white and upper-income residents, with the support of Houston’s black mayor, raised classic “Not In My Back Yard” (NIMBY) arguments to prevent the development. Brentin Mock, *Why Houston Housing Is Poised to Get More Expensive and Unequal*, CITYLAB (Sept. 18, 2017), <https://www.citylab.com/equity/2017/09/housing-still-a-problem-in-nola-since-katrina/538371/> [<https://perma.cc/AE8Q-RETF>]; see also Emily Badger, *How ‘Not in My Backyard’ Became ‘Not in My Neighborhood’*, N.Y. TIMES (Jan. 3, 2018), <https://www.nytimes.com/2018/01/03/upshot/zoning-housing-property-rights-nimby-us.html> [<https://perma.cc/9RHG-RG2L>] (explaining how some individuals reach beyond the boundaries of their property to prevent residential development in their neighborhoods).

remains) relatively affordable compared to most major U.S. cities, it had an oversupply of vacant luxury apartments pre-Harvey but a relatively small supply of affordable rental housing. As discussed below, Harvey's flooding further reduced the supply of affordable housing while simultaneously increasing the demand for single-family housing, particularly short-term rental housing.

### B. *Harvey's Overall Effect on Housing*

Reports indicate that approximately one-third of the Houston housing stock was damaged or destroyed by Harvey's floods.<sup>6</sup> While the amount of Harvey's rainfall arguably was unanticipated, little about the flood's damage to housing is surprising. Houston, one of the fastest growing metropolitan areas in the country, has few zoning regulations and local leaders have virtually ignored the need to engage in meaningful flood control planning.<sup>7</sup> Moreover, damage reports from the flooding reveal that some rental housing, and even some newly constructed owned-occupied housing units, arguably should never have been built.<sup>8</sup>

Notwithstanding federal regulations that ostensibly govern residential construction in high-risk flood areas, Houston developers were allowed to build homes in flood-prone areas, and many of the Harvey-flooded properties were hastily constructed in high-risk flood zones during Houston's housing

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6. Rebecca Elliott, *Tens of Thousands Displaced by Harvey Still Yearn for Home*, HOUS. CHRON. (Nov. 22, 2017), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Houston-news-12378756.php> [<https://perma.cc/B8LT-V2PF>].

7. *Development Regulations*, CITY OF HOUS., <http://www.houstontx.gov/planning/DevelopRegs/> [<https://perma.cc/BM27-DDFK>] ("The city of Houston does not have zoning but development is governed by codes that address how property can be subdivided. The City codes do not address land use."); Kiah Collier & Neena Satija, *A Year Before Harvey, Houston-area Flood Control Chief Saw No "Looming Issues,"* TEX. TRIB. (Sept. 7, 2017), <https://www.texastribune.org/2017/09/07/conversation-former-harris-county-flood-control-chief> [<https://perma.cc/BYS2-UD6W>]; Shawn Boburg & Beth Reinhard, *Houston's 'Wild West' Growth: How the City's Development May Have Contributed to Devastating Flooding*, WASH. POST (Aug. 29, 2017), [https://www.washingtonpost.com/graphics/2017/investigations/harvey-urban-planning/?utm\\_term=.c5f413b4df5c](https://www.washingtonpost.com/graphics/2017/investigations/harvey-urban-planning/?utm_term=.c5f413b4df5c) [<https://perma.cc/Z3KL-PB29>].

8. Lise Olsen, *Many Homeowners Unaware They Lived in Reservoir 'Flood Pools,'* HOUS. CHRON. (Sept. 26, 2017), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Many-homeowners-unaware-they-lived-in-reservoir-12231188.php> [<https://perma.cc/HAK5-W5UR>] (reporting that many of the homes that flooded during Harvey were located in "flood pools" alongside the Barker and Addicks reservoirs and that engineers debate whether the county should have allowed construction so near the reservoirs in the first place); see Adele Peters, *How Houston Can Become More Resilient to Future Floods*, FAST COMPANY (August 29, 2017), <https://www.fastcompany.com/40459626/how-houston-can-become-more-resilient-to-future-floods> [<https://perma.cc/AX2Z-59E8>] (noting that many low-income apartment complexes were built in floodplains or were built in accordance with outdated floodplain maps); see also Greg Willet, *As Many as 43,000 Apartments Appear Off Line in Metro Houston*, REALPAGE (Sept. 29, 2017), <https://www.realpage.com/mpf-research/many-as-43000-apartments-appear-off-line-metro-houston/> [<https://perma.cc/Q2AE-842T>] (reporting that many apartments were built in a 100-year-old floodplain).

boom.<sup>9</sup> Some Harvey-damaged homes had already suffered flood damage in one of the three 500-year floods that have hit Houston since 2014.<sup>10</sup> As homes built in a 500-year flood zone have only a .2% chance of flooding in any given year, Harvey’s catastrophic flooding reveals the inadequacies of flood maps and flooding predictions.<sup>11</sup> Moreover, reports now indicate that local leaders and developers manipulated flood zone designations and prevented neighborhoods from being designated as flood zones to make it easier and less costly for developers to build homes on flood plains.<sup>12</sup>

### C. *Harvey and the Houston Rental Market*

Approximately 45% of Houstonians were renters before the storm, and estimates are that approximately 6% of apartments were damaged or destroyed by Harvey.<sup>13</sup> Because less than half of renters had flood insurance, residents who lived in flooded housing had to find ways to replace personal property and potentially had to find replacement housing.<sup>14</sup> Given the limited supply of affordable housing before the storm and the increased demand for rental housing after the storm, renters—especially if they are lower- and middle-income—may face years of housing insecurity.<sup>15</sup>

Immediately after the flooding, some renters did not know whether they could remain in their flooded housing or whether they had the right to vacate flooded housing they viewed as unsafe. That is, some renters who lived in flooded homes that still had water and utilities preferred to remain in their flood-damaged housing because they knew how challenging it would be to find alternative affordable housing. But because “habitability” is not a

9. Olsen, *supra* note 8; Schwartz, Glanz & Lehren, *supra* note 3 (observing that the “surging local economy fuel[ed] demand for new upscale housing” and describing how developers artificially raised the elevation of lots in flood plains such that federal flood-insurance rules did not require purchasers to be notified of the risk).

10. Schwartz, Glanz & Lehren, *supra* note 3.

11. Michael Kimmelman, *Lessons from Hurricane Harvey: Houston’s Struggle Is America’s Tale*, N.Y. TIMES (Nov. 11, 2017), <https://www.nytimes.com/interactive/2017/11/11/climate/houston-flooding-climate.html> [<https://perma.cc/22QU-5T99>].

12. Schwartz, Glanz & Lehren, *supra* note 3; Gopal, *supra* note 3; Pralle, *supra* note 3 (discussing attempts by officials in New Orleans to prevent a neighborhood from being designated as a high-risk flood zone).

13. Elliott, *supra* note 6; Donna Kimura & Christine Serlin, *Houston’s Road to Recovery: Affordable Housing Owners in Texas Begin Life After Hurricane Harvey*, AFFORDABLE HOUSING FIN. (Sept. 7, 2017), [http://www.housingfinance.com/news/houstons-road-to-recovery\\_o](http://www.housingfinance.com/news/houstons-road-to-recovery_o) [<https://perma.cc/MS7R-3QNJ>]; Fernando Alfonso III, *Houston Neighborhoods with the Highest Percent of Damaged Apartments Following Hurricane Harvey*, HOUS. CHRON. (Oct. 11, 2017), <http://www.chron.com/news/houston-texas/houston/article/houston-apartments-damaged-hurricane-harvey-12270464.php> [<https://perma.cc/36EA-C77U>].

14. Liz Hamel, Bryan Wu & Mollyann Brodie, *An Early Assessment of Hurricane Harvey’s Impact on Vulnerable Texans in the Gulf Coast Region*, KAISER FAM. FOUND. 1, 19 (Dec. 2017), <http://files.kff.org/attachment/Report-An-Early-Assessment-of-Hurricane-Harveys-Impact-on-Vulnerable-Texans-in-the-Gulf> [<https://perma.cc/7MTH-AC7L>].

15. THE STATE OF THE NATION’S HOUSING, *supra* note 4, at 26.

precisely defined term, even tenants who wanted to remain in flooded housing could be forced to move if their landlords deemed the housing to be uninhabitable.<sup>16</sup>

Conversely, tenants who felt that their housing was unsafe had no legal right to abandon the premises once their landlords deemed the housing to be habitable, even if they lived in housing that had flooded in earlier storms. The uncertainty about their right to vacate ostensibly uninhabitable housing forced some renters to choose between breaching their leases (and paying early termination fees) or remaining in what they viewed as unsafe housing. But even renters who had compassionate and understanding landlords who waived early termination fees could not avoid the fact that Houston has an insufficient supply of affordable rental housing. Thus, tenants who chose (or were forced) to vacate flooded housing had to find additional housing and then gather enough money to pay for security deposits or rental application fees.<sup>17</sup>

The owners of flood-damaged homes have some control over where they will live and their overall housing costs, *especially* if they have flood insurance. In contrast, because landlords decide when (or whether) to rebuild damaged rental units and the amount of rent they will charge once the units are repaired, renters do not have the level of housing security that homeowners have. Moreover, given how rental property owners in Louisiana, Mississippi, and Texas responded to hurricanes Katrina and Rita, Houston renters may face housing insecurity for years. A 2010 HUD study that examined residential housing markets after those hurricanes found that as many as 25% of residential properties still had “substantial repair needs” five years after the hurricanes and that approximately 17% remain uninhabitable.<sup>18</sup>

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16. KAISER FAM. FOUND., *supra* note 14; Mitch Smith, *For Renters, Harvey Was the First Blow, Followed by Orders to Move*, N.Y. TIMES (Sept. 8, 2017), <https://www.nytimes.com/2017/09/08/us/houston-texas-renters-harvey.html> [<https://perma.cc/7R9S-PTMJ>]. See generally *Kamarath v. Bennett*, 568 S.W.2d 658 (Texas 1978) (discussing the implied warranty of habitability).

17. Abigail Hauslohner, *Recovering from Harvey When ‘You Already Live a Disaster Every Day of Your Life,’* WASH. POST (Sept. 5, 2017), [https://www.washingtonpost.com/national/recovering-from-harvey-when-you-already-live-a-disaster-every-day-of-your-life/2017/09/05/40a07e10-9247-11e7-8754-d478688d23b4\\_story.html](https://www.washingtonpost.com/national/recovering-from-harvey-when-you-already-live-a-disaster-every-day-of-your-life/2017/09/05/40a07e10-9247-11e7-8754-d478688d23b4_story.html) [<https://perma.cc/K79M-6JKX>].

18. ABT ASSOCIATES INC., ET AL., U.S. DEP’T OF HOUS. & URBAN DEV., HOUSING RECOVERY IN THE GULF COAST PHASE 1: RESULTS OF WINDSHIELD OBSERVATIONS IN LOUISIANA, MISSISSIPPI AND TEXAS 32–33, 38–39 (2010), [https://www.huduser.gov/portal/publications/commddevl/hsgrec\\_gulfcoast1.html](https://www.huduser.gov/portal/publications/commddevl/hsgrec_gulfcoast1.html) [<https://perma.cc/6URK-4KHA>]; see also Jonathan Spader, *Will My Neighbors Rebuild? Rebuilding Outcomes and Remaining Damage Following Hurricanes Katrina and Rita*, 17 CITYSCAPE: J. POL’Y DEV. & RES. 199, 208, 211 (2015), <https://www.huduser.gov/portal/periodicals/cityscape/vol17num2/ch8.pdf> [<https://perma.cc/B2YF-27HT>].

#### D. *Harvey's Effect on Homeowners*

Homeowners were particularly hard-hit by Harvey as approximately 55% of the flood-damaged homes were owner-occupied, and damage to rental housing was not as major as damage to owner-occupied housing.<sup>19</sup> After the storm, mortgage loan delinquency rates rose and foreclosures spiked in part because homeowners with outstanding mortgages were still required to make timely loan payments unless they were granted a forbearance period.<sup>20</sup> Homeowners were legally required to make their mortgage payments, even while their homes were repaired and even though they also may have been paying rent for short-term housing.<sup>21</sup>

While homeowners in Houston were more likely to have general insurance or flood insurance than renters, only half appear to have received insurance payments to replace damaged personal property, repair their homes, or pay for short-term rental housing.<sup>22</sup> Homeowners lacked flood insurance for several reasons. Because flood insurance is expensive, some could not afford the monthly premiums. Some homeowners did not purchase flood insurance because of outdated or inaccurate flood zone maps.<sup>23</sup>

19. KAISER FAM. FOUND., *supra* note 14, at 19.

20. FANNIE MAE, HISTORICAL DATA PROVIDES INSIGHTS INTO PAST HURRICANE EXPERIENCE (2017), <http://www.fanniemae.com/resources/file/credit-risk/pdf/hurricane-data-commentary-110617.pdf> [<https://perma.cc/6CSN-MBXL>]; URBAN INST., HOUSING PROFILE OF STORM AREAS: WHAT CAN WE LEARN FROM PAST STORMS? (2017), [https://www.urban.org/sites/default/files/publication/94121/2001562\\_what\\_can\\_we\\_learn\\_fact\\_sheet\\_finalized.pdf](https://www.urban.org/sites/default/files/publication/94121/2001562_what_can_we_learn_fact_sheet_finalized.pdf) [<https://perma.cc/AL98-22XS>]; Brad Finkelstein, *Mortgage Delinquencies Rise Following the Three Hurricanes*, NAT'L MORTGAGE NEWS (Nov. 17, 2017), <https://www.nationalmortgagenews.com/news/mortgage-delinquencies-rise-following-the-three-hurricanes> [<https://perma.cc/C3RM-KBK5>].

21. See, e.g., Giulia Afiune, *Harvey Was Three Months Ago. These Displaced Families Are Still in Limbo*, TEX. TRIB. (Nov. 21, 2017), <https://www.texastribune.org/2017/11/21/hurricane-harvey-was-three-months-ago-these-displaced-texas-families-ar/> [<https://perma.cc/8235-T3MH>] (illustrating an example where rent is being paid in addition to mortgage payments); David Trotta & Brian Thevenot, *Another Blow from Harvey: Houston Home Prices, Rents Likely to Rise*, REUTERS (Sept. 1, 2017), <https://www.reuters.com/article/us-storm-harvey-realestate/another-blow-from-harvey-houston-home-prices-rents-likely-to-rise-idUSKCN1BC5QY> [<https://perma.cc/WU5X-E89U>].

22. KAISER FAM. FOUND., *supra* note 14, at 25.

23. Houston's flood plain maps failed to predict 75% of the damage from floods that occurred between 1999 and 2009 and did not designate many of the areas damaged by Harvey as high-risk flood zones. Jack Witthaus, *Houston Flood Maps Were Struggling to Predict Damage Before Harvey, Study Says*, HOUS. BUS. J. (Sept. 11, 2017), <https://www.bizjournals.com/houston/news/2017/09/11/houston-flood-maps-were-struggling-to-predict.html> [<https://perma.cc/C5TB-46RD>]. Flood maps also fail to consider how climate changes have changed sea levels or weather patterns. Amanda Kolson Hurley, *The House of the Future Is Elevated*, CITYLAB (Dec. 8, 2017), <https://www.citylab.com/design/2017/12/the-house-of-the-future-is-elevated/540327/> [<https://perma.cc/25GA-6BGX>]; Sarah Pralle, *Hurricane Harvey Shows How Floods Don't Pay Attention to Flood Zone Maps—or Politicians*, WASH. POST. (Sept. 7, 2017), <https://www.washingtonpost.com/news/monkey-cage/wp/2017/09/07/hurricane-harvey-shows-how-floods-dont-pay-attention-to-flood-zone-maps-or-politicians/> [<https://perma.cc/7DGZ-TAUU>]. Though FEMA's "map modernization program" was meant to update federal flood maps,

Flood insurance is mandatory only if the owner buys property in a designated flood zone. As a result, some homeowners failed to buy insurance because they did not live in a designated flood zone when they bought their homes or were never told that their neighborhoods were prone to flooding.<sup>24</sup> Finally, some homeowners failed to buy flood insurance after they were told (by either developers, realtors, or lenders) that they did not need the insurance, even though they later learned that their homes were in high-risk flooding areas.<sup>25</sup>

Like renters, even insured homeowners now face months and perhaps years of dislocation and disruption. Homeowners with flood insurance were also in limbo in the immediate aftermath of Harvey because adjusters could not timely process the volume of Harvey-related insurance claims to determine how much damage was covered by insurance. Until their claims were processed, homeowners could not decide whether (and to what extent) they could remodel or rebuild or whether they should sell their homes and buy or rent elsewhere.<sup>26</sup> Moreover, since Houston has now had three 500-year storms in three years,<sup>27</sup> even insured homeowners must weigh the costs and benefits of repairing, rebuilding, or moving, since there is no guarantee that another catastrophic flood will not damage their homes before they can finish the current renovations.<sup>28</sup>

#### *E. The Disparate Impact of Harvey on Houston's Poor and Middle Class*

Harvey harmed all income groups. Higher-income neighborhoods in Houston (like The Woodlands) flooded as did virtually all neighborhoods in the popular coastal town of Port Aransas.<sup>29</sup> While upper-income Houstonians

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FEMA used much of this funding to digitize existing paper maps rather than improve the accuracy of those maps. *Id.*

24. KAISER FAM. FOUND., *supra* note 14, at 20; Schwartz, Glanz & Lehren, *supra* note 3. Homeowners who bought homes in areas that did not yet exist on FEMA maps often faced the dilemma of either buying expensive flood insurance or challenging the flood zoning designation. Heather Long, *Where Harvey Is Hitting Hardest, 80 Percent Lack Flood Insurance*, WASH. POST (Aug. 29, 2017), <https://www.washingtonpost.com/news/wonk/wp/2017/08/29/where-harvey-is-hitting-hardest-four-out-of-five-homeowners-lack-flood-insurance/> [<https://perma.cc/F9Q4-846X>].

25. *See, e.g.*, Schwartz, Glanz & Lehren, *supra* note 3 (“When Esteban and Paola Seañez moved into their home next to Spring Creek in 2015, their mortgage company assured them that the plot was high and dry.”).

26. The dislocation was particularly stressful for homeowners with minor children as they had to either find rental property near their children’s schools, have their children stay with relatives or friends, increase their commutes to take their children to school, or keep their kids out of school. *See* Afiune, *supra* note 21. Likewise, homeowners with pets had to find pet-friendly rental housing or find temporary homes for their pets. *See id.*

27. Kimmelman, *supra* note 11.

28. *See, e.g.*, Afiune, *supra* note 21; Gopal, *supra* note 3.

29. Schwartz, Glanz & Lehren, *supra* note 3; Julie Chang, *After Hurricane Harvey, Port Aransas Faces Long Road to Recovery*, AUS. AM.-STATESMAN (Oct. 13, 2017), <http://www.mystatesman.com/news/state--regional-govt--politics/after-hurricane-harvey-port-aransas-faces-long-road-recovery/e1bVIKUCEg4ce3WLEFazKJ/> [<https://perma.cc/QT9J-D8ZS>].

were harmed by Harvey, lower- and middle-income residents (particularly renters, blacks, and Latinos) were particularly hard hit.

Few lower-income renters had flood insurance. Given this, they had to either use their scarce income or depend on government assistance to replace personal property they lost in the storm. In addition, while all residents reported losing income, lower- and middle-income residents were at a greater risk of losing income because of the increased likelihood that they work on an hourly or contract basis. Workers who could not get to work because their cars flooded, roads were impassable, or because their employers temporarily (or permanently) closed because of Harvey faced greater income insecurity since they would not be paid if they could not physically get to their jobs. Although some workers may have been eligible for FEMA or state unemployment benefits, income interruption—even if caused by a natural disaster—does not legally excuse tenants from paying their rent on time. As a result, even some tenants whose housing did *not* flood were evicted or fell behind on their rent because of Harvey.<sup>30</sup>

The biggest disparity, however, between lower- and upper-income residents was the varying amount of damage to their homes. Lower- and middle-income residents now face greater housing insecurity than higher-income residents, and Harvey had a particularly devastating effect on Houston's poorest residents. Harvey flooded or damaged 25% of the Houston Housing Authority's public housing and low-income-housing-tax-credit developments<sup>31</sup> and dramatically increased the shortage of affordable rental housing.

Rental prices rose and may remain higher post-Harvey because of the increased demand from displaced tenants, from homeowners who needed temporary rental housing while their flood-damaged homes were being repaired, and from workers who moved to Houston as part of the rebuilding efforts.<sup>32</sup> Higher-income homeowners who needed short-term housing easily outbid renters, especially for housing in highly desirable neighborhoods. In addition, higher income residents have the ability to use their disposable income, savings, or insurance payments to pay the fees and higher rents associated with short-term leases.<sup>33</sup>

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30. KAISER FAM. FOUND., *supra* note 14, at 25; Smith, *supra* note 16.

31. Press Release, HOUS. HOUSING AUTHORITY, *Houston Housing Authority, Oklahoma City Housing Collaborate to Creatively Solve Affordable Housing Scarcity* (Oct. 31, 2017), <http://www.housingforhouston.com/media/52703/hha%20%20ocha%20collaborate%20to%20creatively%20solve%20affordable%20housing%20scarcity%20-%20final.pdf> [https://perma.cc/ZL9K-52DC]. The HHA provides housing for over 50,000 low-income residents. *Id.*

32. Elliott & Sarnoff, *supra* note 5; Shonda Novak & Lilly Rockwell, *Harvey Shakes Up Houston's Real Estate Market*, AUS. AM.-STATESMAN (Sept. 8, 2017), <http://www.mystatesman.com/business/harvey-shakes-houston-real-estate-market/liE9MIQf2zU9KzcT4jDLJ/> [https://perma.cc/8MUH-6V9D]; Trotta & Thevenot, *supra* note 21.

33. See Elliott & Sarnoff, *supra* note 5; Laura Kusisto & Valerie Bauerlein, *Before Harvey, Houston Had a Glut of Rentals. Not Any More*, WALL STREET J. (Sept. 3, 2017),



Higher-income residents also faced fewer risks to their homes because homes in wealthier Houston neighborhoods were less likely to flood because those neighborhoods typically had better infrastructure and more sophisticated flood planning. Post-Harvey, flood waters receded fairly quickly in higher-income neighborhoods, which meant those homes generally had less mold damage.<sup>34</sup> In contrast, lower-income neighborhoods often had crude flood control systems (sometimes ditches), which overflowed and caused waters to accumulate in the residents' homes.<sup>35</sup> In addition, lower-income residents were more likely to lose their housing because much of Houston's affordable and subsidized housing was built in designated flood zones.<sup>36</sup>

Lower-income homeowners who lacked insurance but had outstanding mortgage loans faced a particularly painful dilemma. Uninsured homeowners (like insured owners) were required to repay their mortgage loans unless they were granted a forbearance, even if they could not live in their flood-damaged homes. Unlike insured homeowners, however, uninsured homeowners had to rely on their personal funds to replace household items, make repairs to their homes, pay for short-term rental housing, and remain current on their mortgages. The only realistic option for lower- and middle-income homeowners who could not afford to repair their homes, repay their mortgage loans, and also pay for short-term rental housing was to sell their home—almost always at a loss. While a short sale to a distressed buyer would relieve the owner of the burden of repaying the outstanding mortgage loan, the homeowner would forfeit any equity she had accumulated in her home.<sup>37</sup> Ultimately, Harvey may impose the biggest long-term losses on lower- and middle-income homeowners. Because housing constitutes the vast majority of wealth for middle-income households, Harvey's floods have likely pushed some middle-income Houstonians out of the middle class. Thus, in addition

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<https://www.wsj.com/articles/before-harvey-houston-had-a-glut-of-rentals-not-any-more-1504440001> [<https://perma.cc/Y88Y-QRQQ>]; Novak & Rockwell, *supra* note 32. In addition, some wealthy Houstonians had second homes they could occupy while they waited for their flooded primary residence to be repaired. *Id.*

34. See, e.g., Robert Dowman, James Pinkerton & Mike Tolson, *Harvey's Waters Recede Slowly from Neighborhoods, Reservoirs*, HOUS. CHRON. (Aug. 31, 2017), <http://www.chron.com/news/houston-texas/houston/article/Harvey-s-waters-recede-slowly-from-neighborhoods-12165756.php> [<https://perma.cc/TEH5-Y4MS>]; Alexander C. Kaufman, *Houston Flooding Always Hits Poor, Non-White Neighborhoods Hardest*, HUFFINGTON POST (Aug. 29, 2017), [https://www.huffingtonpost.com/entry/houston-harvey-environmental-justice\\_us\\_59a41c90e4b06d67e3390993](https://www.huffingtonpost.com/entry/houston-harvey-environmental-justice_us_59a41c90e4b06d67e3390993) [<https://perma.cc/MC4U-RCJP>]; Schwartz, Glanz & Lehren, *supra* note 3.

35. Jeremy Deaton, *Hurricane Harvey Hit Low-Income Communities Hardest: Minorities and Low-Income Communities Are the Most Vulnerable to Disaster*, THINKPROGRESS (Sept. 1, 2017), <https://thinkprogress.org/hurricane-harvey-hit-low-income-communities-hardest-6d13506b7e60/> [<https://perma.cc/YZ5H-VDE4>].

36. *Id.*

37. See, e.g., Gopal, *supra* note 3.

to their tangible property losses, some middle-income homeowners may never regain the financial stability they lost in the floods.<sup>38</sup>

#### F. *Recovery Efforts*

Despite promises from state and federal officials, housing recovery efforts in Houston have been slow, and elected officials have blamed each other for the delays.<sup>39</sup> State and local leaders as well as Harvey victims themselves have almost uniformly criticized the federal government's relief efforts and have been particularly critical of the Federal Emergency Management Agency (FEMA), the federal agency responsible for providing temporary financial assistance for citizens or legal residents<sup>40</sup> who need disaster relief.<sup>41</sup>

Generally speaking, renters can receive financial assistance to pay for at least one month of rental housing and can also apply for a grant to replace essential personal property not covered by flood insurance.<sup>42</sup> Homeowners

38. MECHELE DICKERSON, HOMEOWNERSHIP AND AMERICA'S FINANCIAL UNDERCLASS: FLAWED PREMISES, BROKEN PROMISES, NEW PRESCRIPTIONS 27 (2014) (describing the financial security and flexibility provided by homeownership in America).

39. For example, the Texas governor refused the Houston mayor's request to tap into the state's multibillion-dollar Rainy Day Fund to help pay for debris removal and cleanup, though he ultimately authorized about \$50 million (from a separate fund) to aid in cleanup costs. Kimmelman, *supra* note 11; Morgan Smith, *How Much Has Been Raised for Harvey Relief—and How's It Being Spent?*, TEX. TRIB. (Nov. 28, 2017), <https://www.texastribune.org/2017/11/28/how-much-money-going-hurricane-harvey-relief-texas/> [<https://perma.cc/3YYW-33LT>].

40. Undocumented residents could not apply for FEMA aid because FEMA only provides financial assistance to citizens or legal residents of the United States. FEMA, FACT SHEET: WHAT IS FEMA'S INDIVIDUAL ASSISTANCE PROGRAM?, [https://www.fema.gov/media-library-data/1461689021638-cfcfd7f6c263635802fa7a76a19e00ea/FS001\\_What\\_is\\_Individual\\_Assistance\\_508.pdf](https://www.fema.gov/media-library-data/1461689021638-cfcfd7f6c263635802fa7a76a19e00ea/FS001_What_is_Individual_Assistance_508.pdf) [<https://perma.cc/7K4J-6N5Q>].

41. See, e.g., KAISER FAM. FOUND., *supra* note 14, at 12; Brandon Fromby, *Coastal Officials Say Feds Failing Harvey Victims on Short-Term Housing*, TEX. TRIB. (Nov. 8, 2017), <https://www.texastribune.org/2017/11/08/coastal-texas-officials-say-feds-failing-short-term-housing-harvey-vic/> [<https://perma.cc/MPN9-NVLU>]; Al Ortiz, *Bush and Turner Criticize Congress for Delay in Approving Harvey Relief Package*, HOUS. PUB. MEDIA (Jan. 18, 2018), <https://www.houstonpublicmedia.org/articles/news/2018/01/18/262420/bush-and-turner-criticize-congress-for-delay-in-approving-disaster-relief-package/> [<https://perma.cc/MV79-NDG6>]; Smith, *supra* note 39. Federal officials, including the FEMA Administrator, have meanwhile blamed Texas for its lack of financial commitment to the recovery and overdependence on federal intervention. *FEMA Tells U.S. States to Improve Their Own Disaster Relief Efforts*, REUTERS (Sept. 3, 2017), <https://www.reuters.com/article/us-storm-harvey-fema/fema-tells-u-s-states-to-improve-their-own-disaster-relief-efforts-idUSKCN1BE0UG> [<https://perma.cc/QRT4-FM5W>]; David Morgan, *Officials Defend Harvey Response As Floods Ravage Houston*, CBS NEWS (Aug. 28, 2017), <https://www.cbsnews.com/news/houston-harvey-response-evacuations-defended-mayor-sylvester-turner-fema/> [<https://perma.cc/D9ZH-6RS5>]; Smith, *supra* note 39.

42. News Release, FEMA, Federal Aid Programs for the State of Texas, (Aug. 25, 2017), <https://www.fema.gov/news-release/2017/08/25/federal-aid-programs-state-texas> [<https://perma.cc/34YH-SGNA>]. By November 2017, more than 887,000 people requested financial assistance from FEMA, and more than 353,000 of those requests were approved. Elliott, *supra* note 5. A recent report finds that blacks and lower-income residents were less likely to have their requests approved than higher-income residents. KAISER FAM. FOUND., *supra* note 14, at 10.

can receive up to three months of rental housing assistance, can apply for grants to make home repairs and replace household items not covered by insurance, and can apply for low-interest loans to cover damage to their homes that are not covered by insurance.<sup>43</sup> Unfortunately, FEMA assistance has been inadequate and appears to have benefitted some residents more than others.

More than three months after Harvey hit, nearly half of area residents reported that they still faced significant financial or housing-related challenges, including lost income and the inability to repair their homes or find new housing.<sup>44</sup> Houston residents remained displaced months after Harvey hit, and some spent Thanksgiving 2017 living in tents, doubling up with friends or family, or staying in hotels paid for by FEMA vouchers.<sup>45</sup> Others continued to live in their damaged, often mold-infested, housing units.<sup>46</sup> Moreover, a recent study reports that white and upper-income residents whose homes were damaged or destroyed were more likely to receive assistance from FEMA than black or lower-income residents, even though the latter groups reported more property damage.<sup>47</sup>

## II. Moving Forward After Harvey

Houston's leaders must find ways to provide more affordable long-term housing for their lower- and middle-income residents. Even if disaster recovery efforts had been more successful, lower- and middle-income tenants would still struggle to find affordable housing, given the affordable housing shortage that existed pre-Harvey. Harvey exacerbated the housing unaffordability crisis by destroying affordable housing units and dramatically increasing the demand for temporary short-term housing. Since most housing losses were not covered by insurance, the affordable housing crisis will become particularly acute if landlords choose not to rebuild the flooded

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43. FEMA financial assistance can also be used to pay for medical, dental, funeral, transportation, and other serious disaster-related needs that are not covered by insurance or other federal, state, and charitable aid programs. FEMA, *supra* note 42. Renters and homeowners can borrow up to \$200,000 to repair a primary residence and \$40,000 to replace damaged personal property. *Id.* Despite the availability of FEMA financial assistance, some lower- and middle-income homeowners (even if they are employed) do not appear to have applied for these loans, and some may not be able to afford to repay those loans, their outstanding mortgage loans, and their day-to-day expenses. KAISER FAM. FOUND., *supra* note 14, at 10, 12.

44. KAISER FAM. FOUND., *supra* note 14, at 8–9.

45. Elliott, *supra* note 5; Brandon Formby, *Coastal officials Say Feds Failing Harvey Victims on Short-term Housing*, TEX. TRIB. (Nov. 8, 2017), <https://www.texastribune.org/2017/11/08/coastal-texas-officials-say-feds-failing-short-term-housing-harvey-vic/> [<https://perma.cc/2XQY-5DVQ>].

46. See e.g., KAISER FAM. FOUND., *supra* note 14, at 21–22; Formby, *supra* note 45; Pralle, *supra* note 3; Smith, *supra* note 39; Ashley Welch, *Mold a Serious Health Risk in Wake of Harvey's Flooding*, CBS NEWS (Sept. 1, 2017), <https://www.cbsnews.com/news/houston-harvey-flooding-mold-serious-health-risk-in-texas/> [<https://perma.cc/ZSA6-KTTD>].

47. KAISER FAM. FOUND., *supra* note 14, at 6, 10, 18–19.

housing units or if they rebuild those units but convert them into higher-priced luxury rental units.<sup>48</sup>

Though FEMA relief has been slow and at times inadequate, state and federal disaster relief is, by design, limited in scope. That is, federal disaster relief is not designed to replace flood insurance, to make flood victims (whether insured or uninsured, renters or homeowners) whole, or to provide permanent affordable housing. Because southeast Texas will flood again (regardless of current or future flood map designations), Texas politicians and local Houston officials should put plans and policies in place to improve flood planning.

At a minimum, officials must consider whether (and how) to rebuild or move neighborhoods that are in flood-prone areas. Officials must also develop realistic housing development policies that make it harder for high-income residents to prevent developers from siting affordable housing in higher-income and lower-flood-risk areas. Similarly, officials must decide whether some areas (including popular coastlines) should be deemed unbuildable and whether developers should continue to be allowed to build homes on currently undeveloped flood plains or in high-risk flood areas that are not currently designated as such.<sup>49</sup>

Finally, elected officials should develop a clear process to help renters who choose to remain in a flood-damaged unit the landlord may have deemed uninhabitable and renters who prefer to vacate housing (without incurring termination fees) they deem to be uninhabitable. In addition, local leaders should consider ways to protect employed tenants and homeowners who temporarily cannot afford their rent or mortgage payments because of an income interruption caused by a natural disaster.

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48. See Kate Aronoff, *Now Comes the Uncomfortable Question: Who Gets to Rebuild After Harvey*, INTERCEPT (Aug. 20, 2017), <https://theintercept.com/2017/08/30/national-flood-insurance-program-harvey-who-gets-to-rebuild/> [<https://perma.cc/WKS9-QR3E>]; *States Buying Up Coastal Properties as Sea Levels Rise and Storms Grow Fiercer*, WISC. GAZETTE (Dec. 3, 2015), [http://www.wisconsin gazette.com/news/environment/states-buying-up-coastal-properties-as-sea-levels-rise-and/article\\_912e9eb6-18c8-5bc8-867e-604341c29c42.html](http://www.wisconsin gazette.com/news/environment/states-buying-up-coastal-properties-as-sea-levels-rise-and/article_912e9eb6-18c8-5bc8-867e-604341c29c42.html) [<https://perma.cc/EWL4-FL72>] (discussing efforts to buy homes prone to flooding); Long, *supra* note 24; *see also supra* note 33 and accompanying text.

49. Rice engineering professor Phil Bédient characterized federal flood insurance as “subsidized floodplain development” that allows leaders to apply loose development controls and to avoid investing in flood planning and infrastructure. Kimmelman, *supra* note 11; *see also* Ian Bogost, *Houston’s Flood Is a Design Problem*, ATLANTIC, (Aug. 28, 2017), <https://www.theatlantic.com/technology/archive/2017/08/why-cities-flood/538251/> [<https://perma.cc/5L4H-2NC2>]; Seth Borenstein, *Houston Drainage Grid ‘So Obsolete It’s Just Unbelievable,’* ASSOCIATED PRESS, (Aug. 29, 2017), <https://apnews.com/d279b95b3eff430f88fed9c4c2a22fad/Houston-drainage-grid-%27so-obsolete-it%27s-just-unbelievable> [<https://perma.cc/4LSR-ZPFC>]. Fortunately, Harris County (but not the city of Houston) recently approved new flood rules that will require builders to increase elevation for homes in certain areas to decrease the risk of future flooding. Hurley, *supra* note 23.