

RESEARCH REPORT

# Housing Markets and Climate Migration

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# Executive Summary

**When climate migrants relocate due to sudden or chronic disasters, one of their first priorities is finding shelter, preferably in a home where they can quickly start the process of rebuilding their lives. Little is known, however, about the impact such migrants may have on housing markets in the communities that receive them. The inability of these communities to anticipate such effects can stress housing markets—especially where housing availability and affordability is already a challenge—and may require emergency interventions to support both migrants and existing residents. Understanding what changes to anticipate can help receiving communities better prepare for any impacts to housing markets as a result of climate migration.**

This report describes a recent study that sought to provide such information through an examination of the impacts of prior climate change–induced migrations on three receiving communities: the metro area of Houston, Texas, where residents of New Orleans relocated following Hurricane Katrina in 2005; Central Florida, where Puerto Ricans arrived after Hurricane Maria in 2017; and inland parts of Terrebonne and Lafourche Parishes in Louisiana, where residents of coastal Louisiana have migrated due to chronic flooding and sea level rise over the past two decades. Our study used a combination of interviews with housing professionals, advocates, service providers, and government officials and quantitative analyses of key housing market indicators in receiving communities before and after the migration. Our findings indicate that the impacts of climate migrations on housing markets are heavily dependent on a range of factors, including the circumstances and characteristics of both receiving communities and migrant populations. Nonetheless, there were some commonalities identified across the three case studies, including:

- Before a migration, most receiving communities faced challenges meeting the housing supply and affordability needs of existing residents, which were exacerbated by the migrants' arrival.
- Migrants required assistance from receiving communities to navigate unfamiliar housing markets, find and afford new housing, transition to longer-term housing options, and access transportation between housing and other key services.
- Migrants initially clustered in locations with available housing and/or existing connections to their origin communities, which elevated occupancy rates in those areas but did not measurably increase rents.

- Long-term impacts of migrants on housing markets are hard to observe, given variations in housing trajectories, timelines, and geographic dispersion, especially in the for-sale market.

These findings in turn suggest a range of practical and policy implications for potential receiving communities, including steps they can take to prepare for future climate migrations through increased funding (including from federal sources) for pre-event planning, better integration of housing and transportation services, more attention to affordable housing needs generally, and expanded data collection on migrants and their needs as they change over time.

This study was conducted as part of the “Capacity and Change in Climate Migrant Receiving Communities Along the US Gulf: A Three-Case Comparison” project led by the Urban Institute. The project explored five operational areas in which receiving communities experience impacts from climate migrations: housing markets, financial institutions and financial health, employment and economic development, health care systems, and social, cultural, and recreational institutions.

# Housing Markets and Climate Migration

## Introduction

Housing represents a unique element of climate migrants' relocations to receiving communities, as it is often the first need to be addressed that in turn shapes many of the decisions that follow regarding employment, financial services, health care access, and social, cultural, and recreational options. Migrants' housing needs also change dramatically over the course of the relocation process, from finding immediate shelter to identifying intermediate options to eventually settling permanently in the receiving community. Thus, our exploration of how housing markets in receiving communities respond to climate migration events encompasses a long time frame and wide-ranging set of considerations.

Our analysis centers on case studies of three climate migrant receiving communities: the area of Houston, Texas, where residents of New Orleans relocated following Hurricane Katrina in 2005; Central Florida, where Puerto Ricans arrived after Hurricane Maria in 2017; and Terrebonne and Lafourche Parishes, where residents of coastal Louisiana have migrated further inland over the past two decades. We analyzed data from interviews with members of the receiving communities who were involved in or had direct knowledge of the impacts of climate migration on their housing markets. We also collected and analyzed rental market data from CoStar and for-sale housing market transactions from Zillow's ZTRAX dataset<sup>1</sup> in the receiving communities during this period. We applied statistical analyses to check for any changes that could be linked to the migration.

We find that the impacts on the housing market in receiving communities evolved in different ways across the three sites, reflecting their different starting conditions, migrating populations, and migration processes. These are detailed below within four broad topics: conditions in housing markets before the migration, specific housing needs of the migrating population, short-term and intermediate impacts on housing markets following the migration, and long-term effects observed as the migrating population in the receiving community moved toward more permanent residency.

At the same time, we also identified some similarities and shared experiences across the three sites. For example, migrants in each receiving community faced challenges when it came to navigating unfamiliar housing markets, such as gaps in knowledge and lack of resources when they transitioned

from immediate shelter to more intermediate and long-term housing. Interviewees in each site noted that migrants who made the decision to stay in the receiving community often needed considerable support and assistance to understand the process of acquiring housing, affording private market lodging, and overcoming transportation challenges. The capacity and approach of each community to respond to these needs, meanwhile, varied according to housing availability for migrants and the ability of local organizations to overcome other challenges.

Although individual migrants and families had a critical need for immediate and longer-term housing in all three communities, how that demand played out across each site was less obvious. We identified some immediate effects on occupancy rates in our interviews with community members and the quantitative data collected for the study, especially in areas with a known geographic concentration of migrants in the short and medium term. Over the longer term, however, the effect of in-migration on housing costs appears to be negligible. This is likely a consequence of both migrants' small numbers relative to the larger population of the receiving community and variations in the timing and locations where migrants who opted to stay for the long term chose to make their permanent home.

Nonetheless, the commonality of some elements of receiving communities' experiences offers an opportunity for potential policy interventions to support future climate migrations. For example, communities might support migrants looking to transition to private market intermediate housing through the provision of temporary rental vouchers or no-interest loans to cover security deposits. Policymakers can also do more to encourage receiving communities to proactively identify resources to help migrants navigate unfamiliar housing markets and overcome transportation challenges.

This area of research has only grown more relevant as the frequency of extreme weather events and severity of climate change accelerate, prompting more people to relocate in search of communities they perceive as safer and providing greater opportunities. Whether prompted by a sudden cataclysmic event or motivated by chronic conditions that gradually make original communities inhospitable—or a combination of the two—such moves necessarily require migrants to secure lodging, generally as a precursor to meeting their other needs. Yet as noted above, the housing needs of climate migrants often change over time as they transition from the need for immediate shelter in the wake of a sudden or unplanned relocation, to intermediate options as they begin the process of resettling into their new community, to more permanent housing as they make the decision to stay long term. Thus, migrants often make multiple moves over the course of this process, including, in some cases, moving back to their original community. Those who stay in their new communities for the longer term, meanwhile, make unique decisions about the timing, location, and form of their subsequent moves, some of which may be predicated on circumstances in the receiving community's housing market. Yet overall



uncertainty about these stay-or-leave decisions and secondary moves can inhibit a strong supply response from the housing market.

To frame our analysis of the impacts that climate migrants had on housing markets in receiving communities (box 1), it is useful to understand the following contexts:

- In **Houston**, many migrants arrived in the immediate wake of Hurricane Katrina, often transported by bus and with little advance notice and few material possessions. The city government initially accommodated these migrants at public venues, such as the Astrodome and the George Brown Convention Center, which served not only as congregate shelters but also as service centers for migrants to receive assistance. When a hurricane threatened Houston less than a month later, however, the government was forced to evacuate the mass shelters, requiring a new set of housing solutions for migrants who were still unable to return to New Orleans. Through a large existing network of former New Orleanians who had moved to Houston before Katrina, many migrants were able to find available rentals and other medium-term housing options. However, these presented a different set of challenges for migrants looking to access services, employment, education, and other needs, as the rental homes were generally scattered and not necessarily convenient to transportation or location-based services. A subset of these migrants would eventually decide to stay for the long term, moving into housing and neighborhoods that better fit their specific needs. For example, some housing in Houston was purpose-built for migrants, allowing them to retain some elements of their lifestyle and culture from New Orleans in their new communities.
- In **Central Florida**, migration primarily occurred in the weeks and months after Hurricane Maria struck Puerto Rico, as the scale of devastation and the likely time required for the island to recover became apparent. This allowed organizations in Orange and Osceola Counties some time to prepare for migrants' arrival, including by setting up short-term housing options. Much of this housing was in motels contracted by the federal government to provide temporary lodging, though the large Puerto Rican diasporic community in the area also stepped up to house family and friends in their homes. While these options were intended to serve as temporary housing, some migrants remained in their initial lodging for as long as a year or more following their arrival, as a combination of uncertainty about returning to the island and a tight local housing market prevented them from making the move to intermediate housing. Indeed, many migrants have still not decided whether to settle permanently in Florida, even as Puerto Rico continues to face more disasters and challenges to its rebuilding process, prompting still more residents to relocate.

- In **Louisiana**, chronic flooding interspersed with numerous acute events—including Hurricanes Katrina, Gustav, Laura, and Ida—has prompted many coastal residents to relocate further inland within Terrebonne and Lafourche Parishes over the past two decades. Although sudden events may have been a catalyst for some of these migrants, most had some agency over the timing and location of their moves. The original residents of Isle de Jean Charles (IDJC), for example, agreed to relocate as part of the state’s planned resettlement, which was developed with and funded in part by the federal government. The purposeful nature of these moves had different implications for the receiving community relative to the other two case studies. First, most of these migrants either had housing provided for them (in the case of IDJC residents) or could choose to resettle where existing housing was available. Thus, the primary housing transition in this migration was either from intermediate housing (some of which had been secured with federal assistance) or from the original community directly into permanent housing. The protracted timeline of this mass migration also had a more gradual impact on the receiving communities, which were better able to distribute and absorb this increase in demand. There are exceptions, of course, in the case of cataclysmic events like Hurricane Ida, which forced unplanned moves into temporary housing. In either case, the receiving communities in Terrebonne and Lafourche still faced several challenges in meeting migrants’ needs and helping them adapt to very different housing markets and living conditions.

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## BOX 1

### Receiving Communities and Disaster Contexts

The research team identified three US Gulf Coast communities that were receiving destinations for climate migrants following catastrophic climate change–induced hurricanes and environmental loss events. This study examined community responses to migrants' shifting housing needs over time and the impacts of climate migration on the housing market in receiving communities.

- **Houston, Texas.** Houston was a receiving community for climate migrants from New Orleans following Hurricane Katrina in 2005. Many of those who were temporarily sheltered in the weeks following Hurricane Katrina never returned to New Orleans and continue to live in Houston today. Among the case study communities, the Houston case provides the longest time frame from which to observe change over time.
- **Osceola and Orange Counties surrounding Orlando, Florida.** Central Florida was a receiving region for climate migrants from Puerto Rico following Hurricane Maria in 2016, and immigration from Puerto Rico to this region was ongoing for many years before Hurricane Maria. Central Florida provides an opportunity to examine institutional capacity and responses in communities with well-established social, cultural, and economic ties between sending and receiving communities.
- **Inland Terrebonne and Lafourche Parishes in Southern Louisiana.** The communities of inland Terrebonne and Lafourche Parishes have been a receiving destination for many Louisianans—including multiple different Indigenous and tribal populations—displaced from far southern coastal regions that have been experiencing land loss and chronic and severe flooding and hurricanes for decades. This region provides the opportunity to examine impacts from both ongoing and acute disaster events as well as understand receiving community capacity amid longer-term, ongoing migration processes.

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We expect that the impacts of these migrations on the housing markets in each receiving community differ based on the circumstances of the migrating population as well as the capacity of the receiving community to serve them. However, these impacts do not happen in a bubble. Therefore, this report also seeks to understand how the actions of receiving communities themselves affect housing market outcomes, for both migrants and existing residents.

## What We Know About Housing Markets and Climate Migration

Within the literature on disaster-based migration, very little scholarship addresses its impacts on housing markets in receiving communities. Indeed, nearly all analyses of post-disaster housing focus on

the impact of disasters on the housing stock (Comerio 1997; Kirby and Hardison-Moody 2018) or efforts to rebuild permanent housing within the same market (Comerio 2014, 1998). Analyses of post-disaster migrations, meanwhile, have often focused on other economic and social sectors—such as labor markets (Card 1990; McIntosh 2008), public infrastructure (Araya et al. 2019), and crime rates (Hussey et al. 2011)—but not on housing markets.

However, there are other bodies of research—namely, those that analyze the effect of demand shocks on housing markets generally, as well as studies of disaster-induced migration patterns and how they differ from other population shifts—that may offer some insight into climate migration’s potential effects on housing markets. By piecing these together, we can develop a set of hypotheses on how housing markets react to climate migrations, as well as identify some remaining open questions to pursue in future research.

## EXPERIENCES OF RECEIVING COMMUNITIES

We can hypothesize the likely impacts of climate migrants on housing markets in receiving communities through a review of the general theory of supply and demand for housing. This general theory separates the housing market into two distinct but related markets: one for housing as space and one for housing as an asset (DiPasquale and Wheaton 1992). For the purposes of this review, we focus on the former, reflecting the position of migrants seeking shelter following a natural disaster.<sup>2</sup> The demand for space is determined by the number of households seeking housing; their preferences for certain sizes, locations, and amenities; and their ability to pay for these features. Supply meets this demand at a price point that covers the suppliers’ costs of provision, plus some profit (Green and Malpezzi 2003).

But what happens in housing markets that see an unexpected increase in demand, such as from an influx of residents relocating after a natural disaster? Economic theory would suggest that, given a pre-disaster equilibrium state in the receiving community’s housing market, the demand curve will initially shift such that prices for available housing will increase. Over time, however, the supply of housing available will adjust to meet this demand, achieving a new equilibrium at a price point lower than in the initial surge but higher than before the shock (see, for example, Cochrane and Poot 2019).

Of course, theory does not always reflect reality, so the actual effect of a demand shock may be very different than the above hypothetical. For one, housing markets do not follow the standard rules of supply and demand in capitalist markets, as housing is not a homogenous good readily available to all consumers (Green and Malpezzi 2003). Additionally, supply responses to shifts in demand are constrained by the availability of land, construction materials, and skilled labor. The myriad regulatory

and financing requirements involved in the provision and acquisition of housing also add inefficiencies to housing transactions (Green and Malpezzi 2003; Schwartz 2010).

There are also differences in housing submarkets by type and location that may trigger different responses to demand shocks. An increase in demand for rental housing, for example, may be easy to match with additional supply in the short term with existing vacancies, short-term rentals, and conversions of owner-occupied or nonresidential properties. Given the relatively easier acquisition process for rental housing compared with owner-occupied housing, this response may be quick enough to dampen short-term price spikes. Owner-occupied housing, meanwhile, generally has less excess capacity, fewer readily available substitutes, and longer and more complicated transaction processes (Belsky and Drew 2008). A spike in demand for home purchases will therefore be harder to absorb and require more time to increase supply in response. In other words, increases in prices for these units may lag the initial shock, but they will be larger and take longer to return to equilibrium (Cochrane and Poot 2019).

To our knowledge, there are no existing studies on climate migration–induced demand shocks in housing markets, but other real-world examples may offer some hints about what such a phenomenon might look like. Other migratory events, such as large-scale immigration or relocations for reasons other than natural disasters, likely share similar characteristics with those caused by extreme weather events. A seminal study of one such event examined the impact of Cuban migrants on rents in Miami, Florida (Saiz 2003). This analysis found that a 9 percent increase in the population because of migration was associated with an 8 to 11 percent rise in rents, suggesting an approximately 1-to-1 correspondence between increases in housing demand and prices. Subsequent work by Saiz (2007) and others (Mussa et al. 2017; Ottavanni and Peri 2007; Saiz and Wachter 2011) have confirmed that this estimate applies to other US housing markets, including both rental and owner-occupied housing; however, the duration of the effect for the latter is longer, as theory suggests.

A meta-analysis by Cochrane and Poot (2019) expanded the scope of prior work to include studies from outside the United States and a larger set of migratory events, including some linked to climate-related impacts. They find that the impacts of increased demand on housing costs may be wider than Saiz's estimate, potentially even including declines in prices from demand surges if the influx of new residents triggers a greater outflow of existing households from the area. They also observe large variances in these estimates related to the locations, time frames, populations, and contexts of each event. Moreover, they conclude that while most observed and researched effects are statistically significant, the economic significance in actual value change is generally small and isolated to narrow submarkets by housing type and neighborhood (see also Larkin et al. 2019).

## EXPERIENCES OF MIGRANTS

We also drew from literature on disaster-induced migration to assess whether comparisons with other migratory events would be appropriate for estimating effects on housing markets. While this body of research is smaller relative to analyses of residents who remain in their original locations, existing studies reveal some notable similarities and distinctions within the broader category of environmental migration (see, for example, Oliver-Smith 2013). Relative to gradual or man-made (or man-exacerbated) climate impacts, disaster-induced migrations are generally more sudden and acute—meaning people feel their impacts directly and personally—triggering an unanticipated and involuntary relocation, at least temporarily (Bates 2002). Climate migrants are thus less prepared for their move, tend to make instinctive or limited-information decisions about their destination options, and may have fewer financial or social resources to help them resettle. These factors all influence where and how migrants engage with the housing markets in their new communities.

Beyond the exigencies of how and why they move, disaster migrants still face similar circumstances as other migrants—including those fleeing wars or violence, political or economic crises, or religious or personal persecution—in adapting to and being received in a new environment. This includes navigating a potentially unfamiliar housing market with different norms and processes, learning about different costs and housing types, and facing potential backlash against perceived “outsiders” infiltrating the community (Hopkins 2012). These conditions can drive migrants’ decisions about moving into specific neighborhoods or choosing certain housing types.

There are also differences in what constitutes a “disaster migrant” based on the type and scope of the disaster, migrants’ length of tenure in a new community, and both geographic and population characteristics (Mitchell et al. 2012). One study estimated the amount of post-event migrations that occurred in the United States over 80 years as a result of more than 100 federally declared disasters and found wide variation based on these dimensions (Boustan et al. 2018). Overall, however, they estimated that county out-migration rates increase by 1.5 percentage points during the decade in which such an event occurs. Notably, changes in federal policy and programmatic responses to disasters, including the creation of the Federal Emergency Management Agency (FEMA), did not appear to affect out-migration rates or propensities.

Additionally, research has shown that certain subpopulations are more susceptible to relocation following natural disasters, which may affect migration rates associated with specific events. Mitchell and others (2012) review prior studies that suggest “[the] elderly, the physically challenged, renters, the young, and others are all vulnerable to displacement after a disaster...[as] are those inhabiting substandard housing and those in geographically risky communities” (p. 150). Whether displaced

individuals return to their homes or go on to become climate migrants, and what differences exist between these groups, is less well known. Elliot (2015) notes that migration rates away from areas with repeated natural hazards—including singular events as well as chronic episodes of flooding, droughts, and fires—are greater among people of color than for non-Hispanic whites, though much of this difference is explained by the lower homeownership rates of the former group. Xiao and Van Zandt (2012) also find that the people least likely to return to their original community following a disaster are those who experienced severe damage or total loss of their homes and those who have sufficient income or wealth to comfortably restart in a new community.

## Toward a Theory of Climate Migrants and Housing Markets

While not specific to the topic of housing market impacts associated with disaster-induced migration, the literature reviewed above provides potential questions and hypotheses for further study. The different experiences of climate migrants relative to other migrants, for example, may indicate a different set of decisionmaking processes used by the former in evaluating their housing options, which in turn influence their choices about where to live and what type of housing to occupy. Within the heterogeneous population of climate migrants who choose to permanently relocate following a disaster, we also find that households' different priorities and interests can affect demand for certain types and locations of housing.

For instance, climate migrants, unlike those participating in a voluntary migration, must first make the decision whether to stay for the short or long term in their new community (Landry et al. 2007). Shorter-term relocations will have greater impacts on rental markets given the lower transaction costs and time relative to purchasing housing (see, for example, Belsky and Drew 2008). The neighborhoods and housing types that traditionally serve the rental market are therefore likely to feel the effects of increased demand first. Effects in homeownership markets, meanwhile, tend to become evident later and are smaller in magnitude compared with those in rental markets due to a confluence of factors.<sup>3</sup>

The definition of “market” used in these analyses is salient to the observed outcomes. If evaluated at the city or metropolitan-area level, the influx of new residents following a natural disaster may not be large enough to register substantial changes in housing costs. That does not mean, however, that disaster-induced migration will not have a noticeable impact on specific neighborhoods or ZIP codes, particularly in areas with demographic and economic characteristics similar to those of the migrant

population. Indeed, in the case of planned migrations, the effect is likely very localized, down to the parcels immediately surrounding the relocation site. For an assessment of these types of impacts, it may be useful to consider studies of similar site-specific shocks, such as those linked to major transit, recreational, commercial, or other types of developments (see, for example, Duncan 2011; Lipscomb 2003).

The relevant questions derived from this review include:

1. What housing conditions existed in receiving communities before and after the arrival of climate migrants?
2. How did local housing institutions and providers respond to migrants during and after their arrival?
3. To what extent have housing conditions and capacities changed over time across receiving communities and compared with places that did not receive migrants?

Additional questions of interest, though secondary to the primary questions above, include:

4. How did climate migrants meet their immediate needs for shelter following the disaster (e.g., extended stay hotels, short-term rentals, doubling up with existing households), and how long did they remain in their initial lodging?
5. On what factors did climate migrants base their decision to stay in their new communities and their decision to own or rent?
6. Do climate migrants tend to concentrate in certain neighborhoods or housing types? If so, what accounts for this clustering, and how long does it persist?
7. What characteristics, if any, distinguish climate migrants from the populations of either their original or destination community?
8. Are some climate migrants more likely to remain for the long term, relocate from their initial post-disaster residence, or purchase housing?
9. Was there evidence of secondary migration by existing residents in the receiving communities in response to climate migration?



# Methods

To address the questions above, our study team conducted qualitative and quantitative analyses of housing market conditions before, during, and after each of the three selected climate events (box 2).

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## BOX 2

### Methodology

Millions of people are expected to be displaced by climate change in the United States alone by the end of this century, yet little is known about communities' institutional capacity to effectively receive and support climate migrants or their ability to do so over time as the effects of climate change advance. To support climate migration policy and planning, the Urban Institute led five unique studies of community impacts, capacity, and responses to climate migration across five institutional domains:

- Housing markets
- Financial institutions and financial health
- Employment and economic development
- Health care systems
- Social, cultural, and recreational institutions

Each study used mixed-methods data collected from three US Gulf Coast communities that have received climate migrants following catastrophic climate change-induced hurricane events (see box 1 for more information about the selected sites). Across the five studies, the research team used a mix of complementary qualitative and quantitative research methodologies. Three methodologies were used across the five studies:

- Semi-structured, qualitative interviews with institutional experts and community stakeholders
- Quantitative analysis of public and private market, institution, and population data
- Content analysis of news articles reporting on community institutional responses to regional climate migration

The research team reviewed available data types, sources, quality, and site contexts to select the most appropriate data sources and analytic approaches for the study questions at the respective sites. Each methodology and data source was designed to address the overarching and study-specific research questions, such that triangulation and cross-case comparison across communities, themes, and topics were possible even with variations in data sources and analyses across study communities.

Research constraints across the five studies related to data scale, data availability, and challenges conducting community research in regions affected by climate change. For a full discussion of study limitations, see the Limitations section in the overarching report, *Climate Migration and Receiving Community Institutional Capacity in the US Gulf Coast*.

Table 1 summarizes the types of data collected for these analyses and the indicators used to address the primary research questions.

**TABLE 1**  
**Summary of Research Questions, Methods, and Indicators**

	Quantitative sources		Qualitative sources	
	Dataset	Indicators	Tool	Source
<b>What housing conditions existed in receiving communities before migrants' arrival?</b>	American Community Survey	House prices/rents, affordability (price/income ratio), vacancy rates	Interviews	Qualitative and site teams
	CoreLogic/Zillow parcel data	Sales, price changes	Descriptive reports of conditions	Media, local housing market experts, policy
<b>How did local housing institutions and providers respond to migrants?</b>	American Community Survey	House prices/rents, affordability (price/income ratio), vacancy rates	Interviews	Qualitative and site teams
	CoreLogic/Zillow parcel data	Sales, price changes	Descriptive reports of conditions	Media, local housing market experts, policy
	Local government/permitting authority	Housing permits and starts data		
<b>To what extent have housing conditions and capacities changed over time across receiving communities and compared with places that did not receive migrants?</b>	Difference-in-difference analysis and other descriptive and statistical analyses of data		Interviews	Qualitative and site teams
			Descriptive reports of conditions	Media, local housing market experts, policy

## Qualitative Analysis

For the qualitative analysis, site teams conducted remote or in-person interviews with housing professionals in each of the receiving communities including realtors, landlords, developers and other private housing actors who engaged with migrants; government and public officials who developed and/or ran assistance programs for migrants; and local advocates, community groups, and/or nonprofit organizations (including religious organizations) that assisted migrants with resettling in receiving communities (see table 2).

TABLE 2

## Interview Counts by Site and Informant Type

	Florida	Texas	Louisiana	Total
Nonprofit	4	6	8	18
Realtor	2		1	3
Government official	5	3	10	18
Religious organization	1			1
Professional association	1			1
Community representative			2	2
Advocate	1	2	1	4
Other	1	4	4	9
<b>Total</b>	<b>15</b>	<b>15</b>	<b>26</b>	<b>56</b>

The site teams recorded and transcribed each interview and then coded the transcripts using a coding scheme developed by the study team to highlight collected information relevant to the primary and secondary research questions. The study team then reviewed the coded transcripts to identify key findings within and across the three sites. While these data offer firsthand perspectives on the conditions of housing markets in receiving communities during and after the migration, they do not necessarily provide a comprehensive or representative set of all experiences in the three case study sites. Site-specific conditions—such as the longer length of time since the migration to Houston, informants in Florida who had no or limited English proficiency, and the impacts of Hurricane Ida causing an abrupt end to interviews in Louisiana—also limited the scale and effectiveness of interviews as a means of data collection. Finally, there is an inherent loss of depth and nuance when the interviewers and/or coders do not conduct the analyses of qualitative data, as they have a deeper understanding of what was said, how it was said, the context in which it was said, and its relation to the other information provided. Without this fuller picture of the interviews themselves, this analysis should not be considered objective or complete.

## Quantitative Analysis

Our quantitative analysis used a difference-in-difference (DiD) research design to evaluate the impact climate migrants had on local housing markets. The DiD model is constructed to compare differences

between groups before and after a “treatment.” (See Lechner 2010 for a survey of the literature and applications.) In our study, the in-migration of new residents as a result of a climate-related disaster outside the study area is considered the treatment, and we compare the observed differences in house prices, rents, and vacancies in places that received migrants with places that did not, before and after the migration period. Because housing supply is relatively fixed over the short term, we hypothesized that the shock to the system created by a large number of households seeking housing within a narrow window would translate into higher prices shortly after the disaster-driven in-migration, which would then dissipate over time as supply and demand adjust to a new equilibrium.

To identify the possible impacts of migrants on housing prices, the study team created a DiD model that incorporated additional explanatory variables that could account for observed differences in outcomes. These include variables controlling for differences in property characteristics (e.g., lot size or year built) and socioeconomic factors within a geography that can affect sales prices, consistent with hedonic regression modeling.

The study team used the August 2021 version of Zillow’s ZTRAX database for information on transactions (including timing and prices) and structural attributes to assemble a dataset of median property-level variables for each ZIP code and census tract. Zillow makes the ZTRAX data available by state, with separate data files for transaction records and assessor records. The team wrote a Python script to extract transactions and parcels located within each study area. For the purposes of an additional analysis of Hurricane Maria migration using comparison communities, the script also pulled data from demographically similar Public Use Microdata Areas (PUMAs) in Los Angeles, California; Atlantic City, New Jersey; and Las Vegas, Nevada, consistent with the geographies identified for the financial health study. We identified properties as being within a PUMA based on the ZIP code of the mailing address, using the PUMA-to-ZIP-code correlation lists generated by the Missouri Data Center’s Geographic Correspondence Engine.

After creating the geographic extracts, the study team further narrowed the ZTRAX datasets by retaining only the variables needed for the model and dropping any nonresidential parcels; the team then merged the separate transaction and assessor data by appending the structural attributes from the assessor dataset to each transaction.

The study team further cleaned the data by dropping any non-arm’s-length transactions, based on the PLACES Lab’s guidance for identifying transactions at fair market value.<sup>4</sup> At this point, the team collapsed individual sales transactions to create datasets of medians for the property-level variables of interest at the ZIP code and census tract levels.

The study team then merged these datasets with socioeconomic data extracted from census surveys. For Houston, the study team extracted data from the 2000 Decennial Census and calculated medians and counts for current ZIP code and tract boundaries using a crosswalk generated by GeoLytics's Neighborhood Change Database. For Florida and Louisiana, the team used American Community Survey five-year data, with the vintage including the year of the climate event as the midpoint of the survey. The study team then tested impacts for four years before and after the quarter of the disaster.

For the rental market analyses in Houston and Florida, we used data from CoStar, which reported on rents, inventory, occupancy, and supply at the ZIP code level. These data are based on regular surveys of property owners and skew toward professionally managed, larger properties; not all ZIP codes within the study areas are included, as some geographies have too few multifamily properties. We acknowledge the limitations of these rental data but note that there is no comprehensive, administrative record of rents comparable to recorded transaction data. As with the home sales data, we used the DiD model to evaluate the impacts of in-migration on occupancy and rent levels.

## Findings

The study team's analysis uncovered several findings relevant to our primary and secondary research questions. Table 3 summarizes these findings, along with their applicability to the research questions. For simplicity, we group these findings into the following broad topics: conditions of housing markets in receiving communities before the migration event, specific housing needs of the migrating population, initial impacts from the migration on housing markets in receiving communities, and long-term impacts.

TABLE 3

## Summary of Key Findings by Topic and Relevance to Research Questions (RQs)

Topic	Findings	RQ1	RQ2	RQ3	RQ4	RQ5	RQ6	RQ7	RQ8	RQ9
<b>Housing markets before migration</b>	Receiving community housing markets were generally tight before migration	X								
	Members of receiving communities perceived migrants as having few options or resources following the climate event		X					X		
<b>Needs of the migrating population</b>	Different short-term housing options required to serve migrants' needs		X	X						
	Migrants moving to medium-term housing options were unprepared to navigate housing markets in receiving communities							X		
	Housing in receiving communities was perceived to be more expensive relative to original communities, which migrants were unprepared to address		X			X		X		
	Lack of transportation options presented additional challenges					X	X			
	Migrants initially clustered geographically		X		X	X	X			
<b>Initial impacts of migration on receiving communities</b>	Housing affordability initially became worse after migrants' arrival, especially in tight markets		X		X					
	Rental occupancy rates increased in clustered locations		X							
	Concentrated migration had no impacts on rents		X							
<b>Long-term impacts</b>	No clear trends in housing metrics after initial migration			X				X	X	X

## Housing Markets Before Migration

Before we could explore how housing markets in receiving communities responded to migrants, we needed to understand the starting condition of those markets before the migration event. This included whether markets were tight or loose with respect to vacancies and costs; if housing prices and rents had been stable or increasing; and whether existing residents were able to acquire and afford appropriate housing. Knowing whether housing markets were well-functioning or already stressed and failing to meet residents' needs helps provide context for the changes that occurred during and after the migration.

### RECEIVING COMMUNITY HOUSING MARKETS WERE GENERALLY TIGHT BEFORE MIGRATION

When asked about conditions in housing markets before the migration event, several housing professionals and advocates in receiving communities described longstanding challenges with supply and affordability, which were already placing a strain on the existing population. Informants in Central Florida noted that the lack of affordable housing pushed residents into crowded and untenable living situations, with one noting, “You saw a housing crisis where regular residents couldn’t afford living in an apartment, so they had to live in a motel.”

There was a shortage. There was a three-year Section 8 waiting list, but it wasn’t obvious. The system was probably at 95 percent, it wasn’t collapsing yet. Obviously, the rents are expensive. People were living [in] their cars, people that work [at] Disney lived in their cars.

—Florida informant

The 95 percent occupancy rate estimate provided by the Florida informant tracks relatively closely with the CoStar rent data for Orange County in the year before Hurricane Maria, with even tighter market conditions in ZIP code 32822, which would see an influx of migrants in the wake of the hurricane. By the third quarter of 2017, average asking rents in the ZIP code hit \$1,102, having risen in every consecutive quarter since the beginning of 2011. The ZIP code-level rents were roughly 7 percent lower than those of the county, though the trend of rising rents tracked closely with the county overall.

Conditions were even tighter in Osceola, where the county’s average occupancy rate exceeded 96.5 percent beginning with the second quarter of 2016 (having been above 95 percent in every quarter but two since the start of 2013). Conditions in the four receiving ZIP codes in Osceola tracked the general market tightness, with two ZIP codes (34744 and 34746) having occupancy rates at or above 97 percent in the year before Maria. In the third quarter of 2017, Osceola rental properties overall reported 97 percent occupancy, with two ZIP codes of interest at or above 98.5 percent

occupancy. Osceola rents had also been rising in the year before Maria and were up 6.3 percent. This increase outpaced the rise in the focus ZIP codes, the highest of which rose 6 percent while the other rent increases ranged from 2.1 to 3.8 percent.

The for-sale market in Orange and Osceola Counties saw significant annual price growth (12 percent) from the middle of 2016 through the middle of 2017 for existing homes in both counties, with median prices for existing homes rising a dramatic 20 percent in ZIP codes that would soon see in-migration. Median new home prices saw a much more moderate increase over the same period, at 4 percent for the two counties; again, however, the ZIP codes with future in-migration saw a more substantial 7 percent annual increase.

We heard similar reports in Louisiana, where experts noted both affordability and future flooding risks as challenges to the existing housing stock. Some informants raised concerns that the influx of migrants from coastal communities would exacerbate these supply constraints, while others worried for the migrants themselves: “We have a shortage of rental housing, we have a shortage of safe housing, and so for a family to end up inland equally at risk, it’s not really a win anyway.” The most recent migrations from coastal areas to inland locations are part of a longer pattern of these population shifts. A Terrebonne Parish–sponsored affordable housing study from 2011 noted, “Over the past 10 years—and particularly after the storms of 2005 and 2008—there has been a significant migration away from coastal areas of the parish...and inland toward Houma and areas to the north” (GCR & Associates, Inc. 2011). The study notes that between the 2000 and 2010 censuses, Schriever, another inland community in Terrebonne Parish, saw a 22 percent increase in population—well above the parish’s 11.4 percent growth rate. Over the most recent decade, Schriever saw minimal growth in its housing stock—a net increase of 26 units with a net loss of 59 rental homes for the five-year period surveyed in the 2020 American Community Survey—but the stock numbers fluctuated over the decade, likely reflecting units lost to disasters as well as to obsolescence.<sup>5</sup> Rents in Schriever rose 1.7 percent per annum from 2010 through 2015 and moderated further between 2015 and 2020 with a 0.3 percent annualized increase (US Census Bureau 2022, 2017, and 2012).

An exception to this characterization of tight housing markets came from a few informants in Houston, who noted that there was some slack in the availability of market-rate housing before Hurricane Katrina. One recalled that “occupancy rates were decent but not completely full,” which helped the Houston area absorb a portion of the influx of migrants from New Orleans after the storm hit. This depiction of pre-Katrina conditions aligns with apartment market data from CoStar. In strong contrast to the Florida markets discussed above, occupancy rates in Houston had been in decline for several years before the hurricane, with citywide average occupancy falling to a low of 88.1 percent at



the end of 2004 before jumping upward to an average of 89.7 percent in the second quarter of 2005. The rise seen in Houston in the first half of 2005 was even more pronounced in the ZIP codes that would see in-migration after Katrina, starting the year with occupancy averaging below 88 percent and rising to near parity with the rest of the city by the end of the second quarter. Others noted that challenges remained for residents with lower incomes in need of more affordable housing options, with one describing “a consistent shortage of affordable housing in the marketplace” that still remains in effect. Asking rents in the second quarter of 2005 averaged \$769 citywide and \$643 in ZIP codes that would receive migrants. The roughly \$150 rent difference between receiving communities and the Houston average was consistent over the four years before Katrina. Note, however, that even the \$643 average asking rent would be considered unaffordable to households earning below 30 percent of area median income (\$18,300 for a four-person household), as it would account for 42 percent of their income (US Department of Housing and Urban Development 2005).

The relatively lower pre-migration occupancy rates for rental properties are likely linked to the general affordability of for-sale homes in the Houston area. Coincidentally, the same \$643 that would rent a home in the high-migration Houston ZIP code matched the monthly mortgage on the median home in Houston in the first quarter of 2005 (\$134,800), assuming an 80 percent loan-to-value ratio at the prevailing 5.95 percent interest rate. The Texas Housing Affordability Index calculated that the required income to qualify for the median home was \$30,868 (Gaines 2005). Setting aside the issue of a down payment, homeownership was potentially in reach for even low-income households earning 50 percent of the area median income (\$30,500 for a four-person household).

## **Needs of the Migrating Population**

Beyond existing market tightness and lack of supply, especially for more affordable housing options, receiving communities also faced challenges meeting migrants’ particular housing needs and circumstances. While some of these needs related to differences in the operations and types of housing between the original and receiving communities, others reflected the characteristics of the migrant population itself.

### **MEMBERS OF RECEIVING COMMUNITIES PERCEIVED MIGRANTS AS HAVING FEW OPTIONS OR RESOURCES FOLLOWING THE CLIMATE EVENT**

In all three sites, informants expressed an opinion that most migrants to receiving communities had moved because of a lack of options, rather than as part of an intentional plan. Implicit in this assumption

was the belief that any residents of the original communities with the desire and capacity to move where, when, and how they chose would likely have done so before the event or circumstances that precipitated the bulk of the migration. Meanwhile, the migration itself often left migrants with few resources, given the urgency with which they left their origin communities and/or the costs they incurred during the migration. Thus, the migrants received by the three case study sites were generally believed to need the most assistance from receiving communities to secure housing following their move.

In Florida and Houston, the arrival of most migrants in the immediate aftermath of the storms added to this perception of desperation driving their decision to move. Some members of receiving communities saw migrants as not having the means to ride out the long recovery process in their original communities and believed they were moving out of a need for better economic opportunity. This added to their sense that migrants required help settling in the receiving communities, including through the transition to more intermediate housing as many made plans to stay for the long term.

Later, people who moved and stayed in the hotels had less mobility because they didn't have the right certifications, and they had circumstances in life that made it more difficult. That specifically was the same population that was already struggling in Osceola County prior to Hurricane Maria.

*—Florida informant*

In Louisiana, meanwhile, most migrants did move intentionally and with a plan, though their circumstances were not necessarily any less dire. With respect to the IDJC migrants, for example, several informants noted that the people moving to the planned community still had few alternatives, as they lacked the income, credit scores, and capacity to acquire private market housing on their own. This raised concerns about their ability to manage and afford their new housing.

Most of the folks going into the new isle are low income and on Social Security benefits...They're not even sure if they're going to be able to afford the new houses that the state is providing to them...the property taxes are going to be, alone, higher than what they've ever seen, [and] a lot of these folks don't pay any homeowner's insurance where they are at now. So that's going to all be additional expenses to them.

*—Louisiana informant*

An empirical analysis conducted by Groen and Polivka (2010) supports these observations, at least among migrants to Houston. In their study of evacuees from New Orleans following Hurricane Katrina, they found that migrants with lower incomes were considerably less likely to have returned in the year following the storm, with only 38 percent of those earning less than \$15,000 moving back to the same

county they lived in before the storm, compared with 62 percent of those earning \$15,000 to \$75,000 and 74 percent of those earning more than \$75,000.

#### **DIFFERENT SHORT-TERM HOUSING OPTIONS ARE REQUIRED TO SERVE MIGRANTS' NEEDS**

The circumstances of each migration also suggest different solutions to meet migrants' housing needs, particularly in the immediate wake of the precipitating event. Arrivals in Houston, for example, came during or in the days following Hurricane Katrina, with little advance notice or ability for the area to prepare for the influx. Repurposing large public facilities such as the Astrodome and the Brown Convention Center was the best solution to address the situation quickly, if temporarily. When an impending storm made these options inviable, the community needed to quickly identify housing options, this time relying on excess capacity in the private market to provide rentals for most of the relocated residents.

Meanwhile, the gap of a few weeks between Hurricane Maria making landfall on Puerto Rico and residents' migration to Central Florida allowed the receiving community to secure housing for relocated migrants in motels or with the large Puerto Rican diasporic community in the region. While arguably a better option than congregate shelters, many migrants remained in this short-term housing for a year or longer following their arrival, as tight conditions in the existing housing market coupled with uncertainty over the pace and status of recovery efforts in Puerto Rico impeded transitions out of these temporary lodgings. As a result, many migrants initially resorted to living in crowded conditions, with multiple families occupying a single unit. Those who were able to stay with family or friends likewise often contributed to crowded conditions, which were untenable for the long term.

In Louisiana, the planned and gradual nature of most relocations did not necessitate a large-scale provision of emergency housing for relocating residents. That did not mean, however, that migrants did not still have short-term housing needs. Some residents of the new IDJC settlement received federal assistance to find and afford temporary housing inland while construction of the planned community was in process. Other migrants moving from coastal areas as a result of chronic conditions, however, were generally left to secure their own housing in a market with few affordable rental options.

#### **MIGRANTS MOVING TO MEDIUM-TERM HOUSING OPTIONS WERE UNPREPARED TO NAVIGATE HOUSING MARKETS IN RECEIVING COMMUNITIES**

Following the provision of short-term housing, migrants who opted to stay in receiving communities required different housing to meet their medium- to long-term needs. In Florida and Houston, these needs were mostly met through the private rental market, which allowed migrants to establish a home

base from which to stabilize other aspects of their lives (e.g., employment and education) while leaving their options open to move to other neighborhoods or even back to their original communities. In Louisiana, some migrants likewise sought rental housing as a temporary option while waiting for their new homes in the planned resettlement community.

Navigating certain aspects of the private housing market, however, presented a challenge for many migrants who lacked familiarity with the process of finding, acquiring, and staying in their homes. Multiple informants pointed to large gaps in migrants' knowledge and capacities to deal with landlords and brokers, qualify for rentals and mortgages, pay security deposits and other upfront costs, and manage ongoing expenses associated with their new homes. For example, informants in Florida noted that some Puerto Ricans who arrived after Hurricane Maria did not know that most rentals required a security deposit equal to one to three months' rent. Others remarked that many migrants lacked credit scores, which most landlords used to screen for new tenants. These aspects of the process to rent housing in Florida thus presented barriers to migrants finding and securing new homes.

Over there, they don't run your credit when you're trying to rent, so a lot of the people that came here thought they could just rent a house. But then they were disqualified because either they didn't have the security deposit or credit to pass that part.

—Florida informant

Informants raised a different set of concerns in Louisiana, though still related to the differences between what migrants were used to in their original communities and what they found in the receiving communities. Informants noted that most migrants from IDJC had been living on untitled land that had been informally settled and passed down from older family members, which made it challenging for these migrants to establish ownership and eligibility for a home in the new settlement. Some also faced barriers to qualifying for a mortgage, given their inconsistent incomes and lack of previous credit. We also heard similar reports regarding non-IDJC migrants who were more likely to participate in the informal economy in coastal communities.

This was a difficult community...We started seeing that a lot of the people that used to be on the island were not going to be able to re-unify and rebuild their house because they either had a really bad credit score, or they didn't have the income to support a mortgage.

—Louisiana informant

In Houston, only a few informants mentioned knowledge or capacity gaps in migrants' experiences with private rental markets, which, as noted above, had some excess capacity at the time of their arrival. This likely made landlords more open to working with migrants to meet their housing needs. Many migrants also received assistance from community groups and less formal networks, including through

churches and existing connections to former New Orleanians who had previously moved to the area. This likely helped many navigate the private market. Indeed, informants in all three sites observed that migrants with existing connections to the receiving community—generally through friends or family who had moved to the area earlier—were better able to navigate housing markets and/or receive assistance with their initial shelter needs.

### HOUSING IN RECEIVING COMMUNITIES WAS PERCEIVED TO BE MORE EXPENSIVE RELATIVE TO ORIGINAL COMMUNITIES, WHICH MIGRANTS WERE UNPREPARED TO ADDRESS

In addition to knowledge and capacity gaps, many migrants struggled to afford the higher costs of housing in receiving communities relative to those in their original communities. Several informants reported migrants experiencing “sticker shock” while seeking private housing options. This was especially common in Florida, where one informant observed, “People think they can get a one-bedroom, one-bathroom [unit] for \$900 and everything is fine, but they don't understand that we live in one of the highest-priced cities in the US.”

Informants also noted higher housing costs in Louisiana, sometimes as a consequence of the additional expenses migrants faced from owning homes with titles and mortgages, compared with the less formal housing arrangements many were used to before the migration. These costs included regular maintenance, homeowner’s insurance, property taxes, and mortgage interest payments—all of which many migrants had never previously paid. Some informants described efforts underway to help migrants cover these ongoing costs, including incorporating some commercial opportunities in the planned community.

I am creating an economic development plan to create a cash flow that will assist the island people with the payment of their flood and homeowner’s insurance, as well as termite protection, [because] people from the island are less used to paying for all these things.

—Louisiana informant

The site teams heard less in the interviews about differences in housing costs between Houston and New Orleans creating challenges for migrants following Hurricane Katrina, beyond the challenge of a general shortage of affordable housing in the receiving community.

### LACK OF TRANSPORTATION OPTIONS PRESENTED ADDITIONAL CHALLENGES

While not an explicit focus of our questions for informants in the three study sites, interviewers heard repeated observations about the critical role of transportation in meeting migrants’ housing needs. In Florida and Texas, for example, most migrants did not have the option of bringing a vehicle with them,

either because they lost it in the storm or by the nature of their transport (usually bus or plane) to the receiving community. Thus, these migrants became heavily dependent on public transportation networks or assistance from others to get around a larger, more sprawling region than the one they had left. Locating housing that was near transportation and accessible to other services, such as employment and schools, was therefore essential to helping migrants resettle in receiving communities.

A lot of the housing we had available was not downtown, and they were far from the city. If they had a car, they lost it in the hurricane, so that was a challenge. They were in places far out without access to transportation, so that was a real challenge.

—Texas informant

Even with the migration of residents to inland Louisiana, the interviewees noted transportation challenges. Informants there were more concerned with the distances that migrants would have to travel to access employment, retail, and other services. Some also noted that former coastal residents were more accustomed to traveling by boat and may not own or have regular access to cars for inland transportation.

If you can't afford to drive 40 miles, to pay for the gas to drive 40 miles to work every day, then you might need to live right next to the place where you work—and that might be a dangerous place with respect to flood risk, or wind risk, or whatever.

—Louisiana informant

A lack of reliable and cost-effective transportation is not just a concern for migrants making the initial move to receiving communities but can also hinder the process of moving to intermediate housing and resettling. Reliance on public transportation, for example, necessarily limits both housing and job options available to migrants and can make finding employment and medium-term housing more difficult.

## Initial Impacts of Migration on Receiving Communities

As climate migrants became absorbed into the private housing markets in their receiving communities, some localized impacts on those markets were inevitable, especially in neighborhoods where many migrants initially clustered. Yet while the effects of the migration in such places were dramatic, they were also short-lived: housing markets either adjusted to the surge in demand, or migrants dispersed from initial neighborhoods to other communities in the region that were able to absorb smaller numbers of new residents. Our quantitative focus in this section is on the rental markets in receiving communities, given that home purchases reflect a decision to permanently relocate. Moreover, in the cases of unplanned migration, we know that people often make such a decision at a later date.

## MIGRANTS INITIALLY CLUSTERED GEOGRAPHICALLY

In all three case study sites, informants reported geographic clustering of migrants soon after their arrival in receiving communities. They attributed this clustering to a combination of factors: where available housing options were located, including both existing housing and new construction built for migrants, as well as the presence of existing residents from the same diaspora as the migrant population. In Houston, for example, much of the excess supply that existed before migrants' arrival was located in a handful of economically distressed neighborhoods, making them generally more affordable as a short- or intermediate-term option. In the longer term, some communities became known as hubs for migrants, including a new development through Habitat for Humanity that was specifically designed to allow migrants to remain together and retain some cultural elements from their original communities.

The tighter housing market in Central Florida during the Hurricane Maria migration, meanwhile, did not provide sufficient existing housing for migrants, who were more likely to live together in motels (some for as long as a year, as noted above) or with friends or family in parts of the region with an existing Puerto Rican community. This clustering had clear advantages for many migrants as they adjusted to living in a new place and, as some informants noted, learned a new language: "Most people want to stay where there are more Spanish speakers. That's why Kissimmee has grown so much and almost everywhere you go in Kissimmee, you almost don't need to speak English." It is unclear, however, if this initial concentration of migrants will remain, as many are still deciding whether and where to stay for the long term.

In Louisiana, meanwhile, the gradual and dispersed nature of most migrants' relocations did not foster the same level of geographic clustering as in the other sites. The exception, of course, is among the residents of IDJC, whose planned relocation will necessarily cluster migrants in a specific community custom built for that purpose. Indeed, retaining the cultural ties of the IDJC and other coastal residents is an expressed objective of the resettlement.

That's why we're doing Isle de Jean Charles the way we are, so that community can hang on to [it] and hopefully we'll build back that culture. Pecan Acres is the same thing. That was a really tight-knit community, and most of them decided they wanted to go live in this new community we're building. So that's one piece: trying to help keep that social infrastructure together.

—Louisiana informant

Informants also commented on whether they thought this clustering of migrants was a positive or negative for the receiving community. In Houston, some reported a perceived increase in crime and social disorder in neighborhoods that housed large numbers of migrants, while in Florida and Louisiana,

there were more comments about the benefits to the area from more residents, such as increased demand for retail and community services that had previously not been available in these neighborhoods.

### HOUSING AFFORDABILITY INITIALLY BECAME WORSE AFTER MIGRANTS' ARRIVAL, ESPECIALLY IN TIGHT MARKETS

Another noted initial effect of migrants arriving in receiving communities was an increase in affordability challenges within the existing housing stock. This was true even in Houston, where some informants had reported slack in the market before Hurricane Katrina (which the migrants from New Orleans quickly absorbed). In Louisiana, the arrival of migrants from coastal areas similarly taxed existing housing supplies, especially as the region faced its own series of severe storms and damage to its housing stocks.

The most acute concerns about worsening affordability, however, were expressed by informants in Florida, where supplies were already tight and some existing residents were forced to live in motels or crowded housing conditions. Coupled with migrants' lack of resources and inability to afford these higher costs, affordability quickly became a concern for both new and existing residents.

We already had a housing crisis before an influx of 50,000 that don't have money, don't have resources, [and] need affordable housing. We don't have housing for folks that have been living here for 20 years, let alone those who are fleeing crisis. Our community just didn't have the capacity to meet those immediate needs.

—Florida Informant

Notably, the sudden uptick in housing demand did not appear to alter long-term trends in housing costs, even in areas with known clustering of migrants. However, the concentration of demand into a small number of ZIP codes within much larger metro areas is reflected in changes in rental occupancy rates in the receiving communities in the period coinciding with the in-migration, as shown in the quantitative findings presented below.

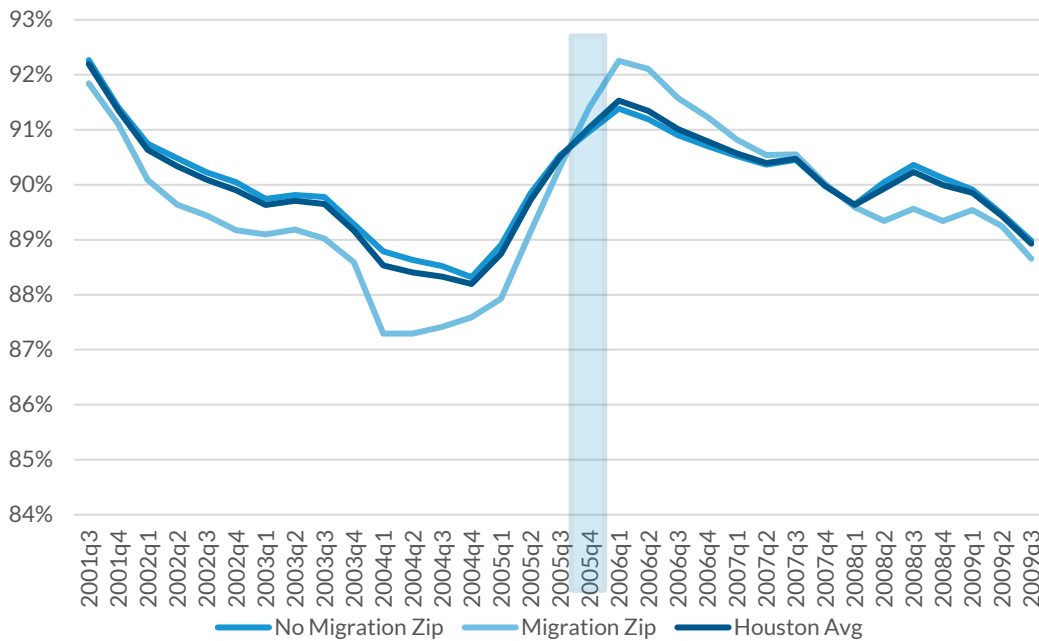
### RENTAL OCCUPANCY RATES INCREASED IN CLUSTERED LOCATIONS

Supporting the notion of clustering by migrants in certain areas, our quantitative analysis found that occupancy rates in ZIP codes with larger concentrations of migrants increased faster relative to those in other ZIP codes. In Houston, occupancy rates in receiving communities—which were 0.6 percent below the citywide average in the second quarter of 2005—jumped above the citywide average in the fourth quarter of 2005 and peaked in the second quarter of 2006 at 0.8 percent above the city average. Occupancy rates in the receiving communities remained higher than citywide averages for the eight



quarters following Katrina. These findings align with the informants' reports of how migrants navigated the housing market: migrants may not have immediately sought longer-term housing in the receiving community, but as they made the decision not to return to New Orleans, found themselves unable to remain with friends and family, or received support for housing costs, they began to lease homes as reflected in the data.

**FIGURE 1**  
Houston Rental Occupancy Rate, 2001–2009

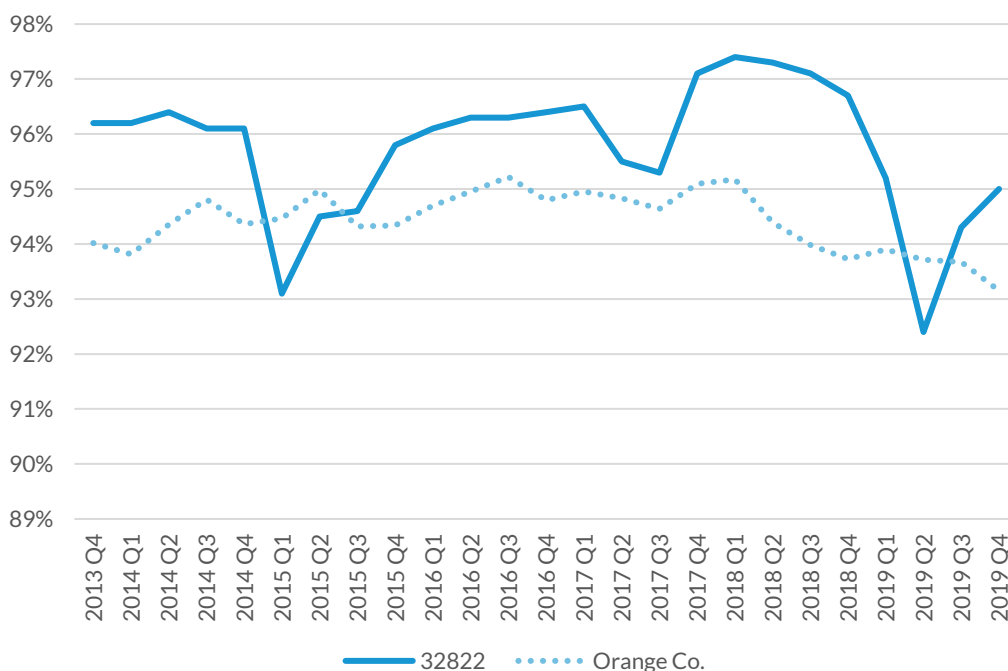


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Source: CoStar real estate data.

In Florida, occupancy rates in ZIP code 32822—the only ZIP code in Orange County with a notable concentration of migrants—rose nearly 2 percentage points in the quarter following Hurricane Maria, compared with less than half a percentage point for the county overall. Occupancy in this ZIP code remained elevated throughout 2018.

**FIGURE 2**  
**Orange County Occupancy Rate, 2013–2019**



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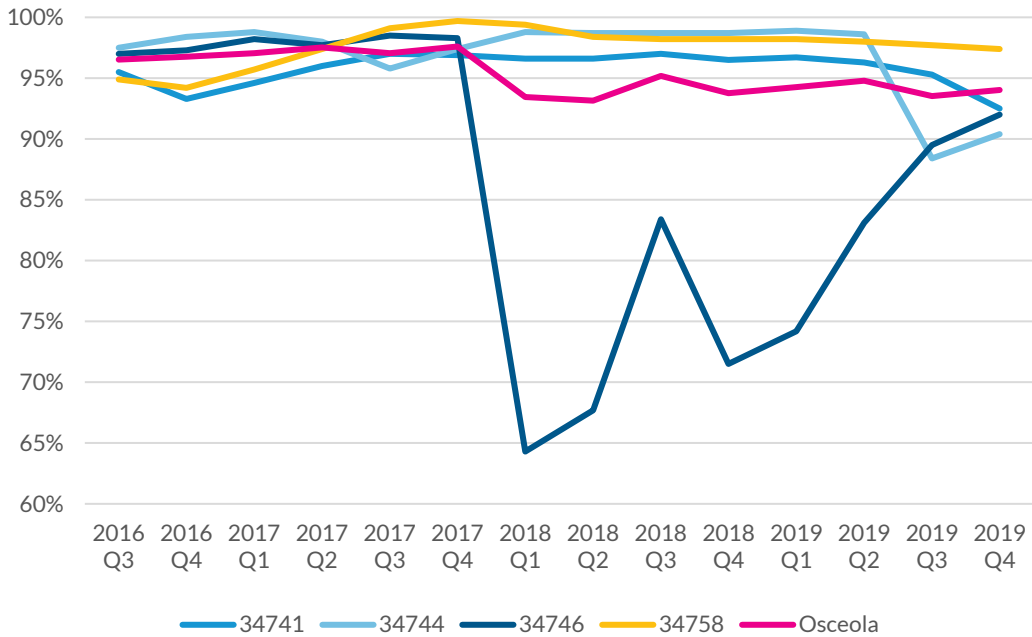
Source: CoStar real estate data.

The data from Osceola County hint at a similar story, but with occupancy rates functionally at the upper bound in several ZIP codes—properties will have vacant units as they turn over between residents, so the effective maximum is below 100 percent—the changes in occupancy due to in-migration are harder to identify. Occupancy rates in ZIP code 34744 were at 98 percent in the quarter before Maria, had dropped to 95.8 percent in the immediate aftermath of Maria, recovered to 97.4 percent at the end of 2017, and remained near 99 percent for all of 2018 and into the first half of 2019. As before, we see a lag of two quarters between the quarter of the hurricane and when occupancy rates rose significantly. It should be noted that ZIP code 34744 has the lowest rents of all receiving ZIP codes, which likely accounts for the more pronounced increase in occupancy.

The steep drop-off in occupancy observed in ZIP code 34746 is due to new construction coming online over the course of 2018 that was slowly absorbed, masking any possible impacts from in-migration. We do not have enough data to determine counterfactually what the absorption and, by extension, occupancy rates might have been otherwise. Note, however, that rents in the ZIP code were approximately 18 to 20 percent above the countywide average during 2018. Given what we have learned from informants about the financial capacity and systems knowledge of many migrants, newly

constructed rental homes—which tend to be priced at the top end of the market—were unlikely to attract many migrants.

**FIGURE 3**  
**Osceola County Occupancy Rate, 2016–2019**



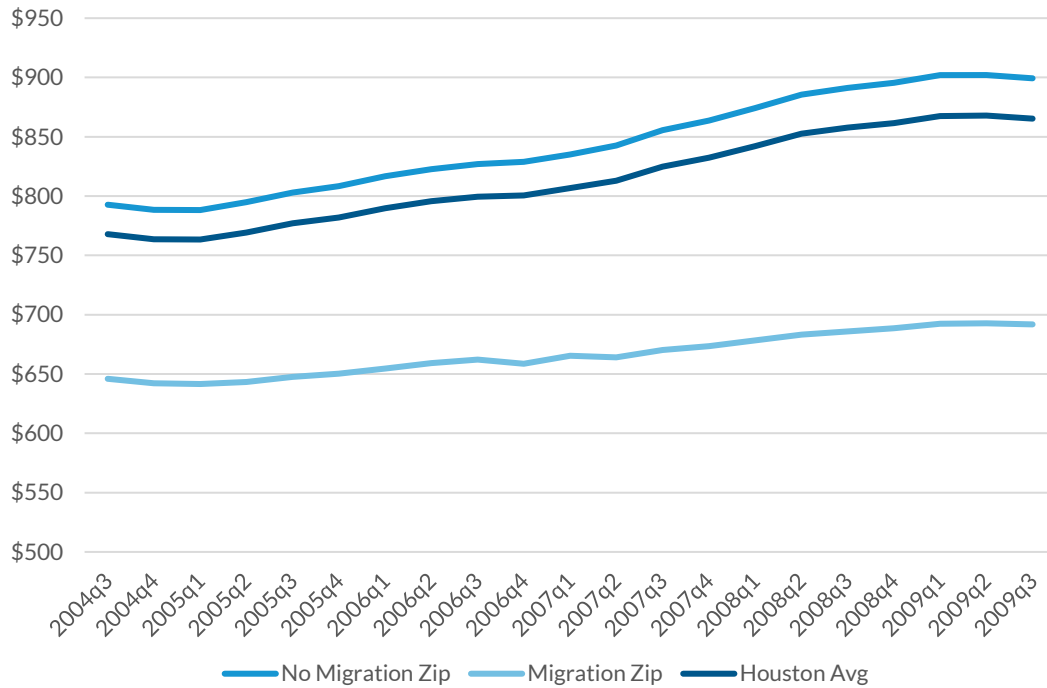
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Source: CoStar real estate data.

**CONCENTRATED MIGRATION HAD NO IMPACTS ON RENTS**

Unlike occupancy rates in ZIP codes that received migration, which changed in the aftermath of migration events relative to their respective markets, rents showed no similar upward shifts. We see this lack of effect in the rents for homes in Houston: rents in the second quarter of 2006, when occupancy rates peaked, showed a 0.7 percent quarterly change in receiving and non-receiving communities. Over the long term, rents increased relatively faster in ZIP codes that did not experience significant migration relative to those that had initially received large numbers of New Orleanians, but the impact of migration was not shown to be a significant contributor to the diverging pattern.

**FIGURE 4**  
**Houston Average Asking Rent per Unit, 2004–2009**

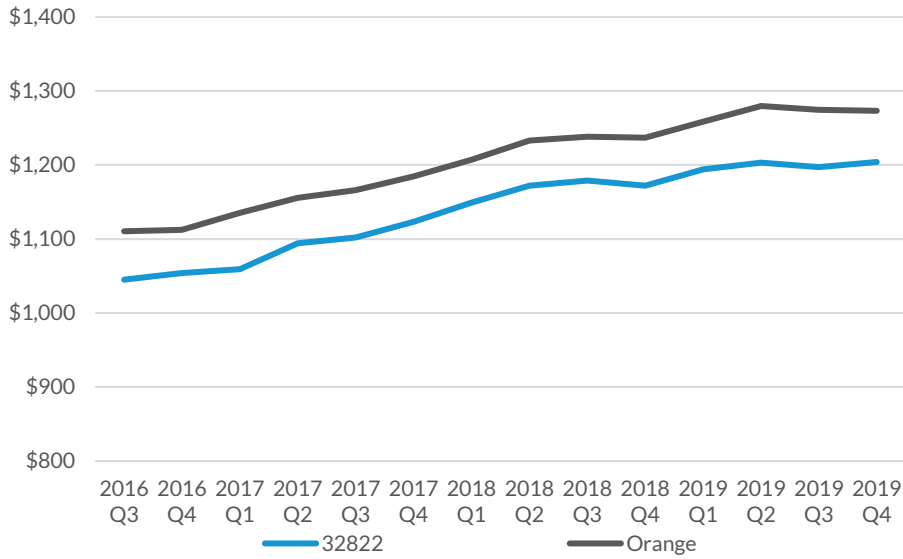


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Source: CoStar real estate data.

Post-Maria migration impacts on rents were similarly muted, with affected ZIP code-level rent trends in both Orange and Osceola Counties largely pacing with their overall counties' increases. We attribute this non-effect to the relatively small number of migrants added to the existing populations in these ZIP codes, along with the dispersed duration of when many made the move from immediate shelter to the private rental market.

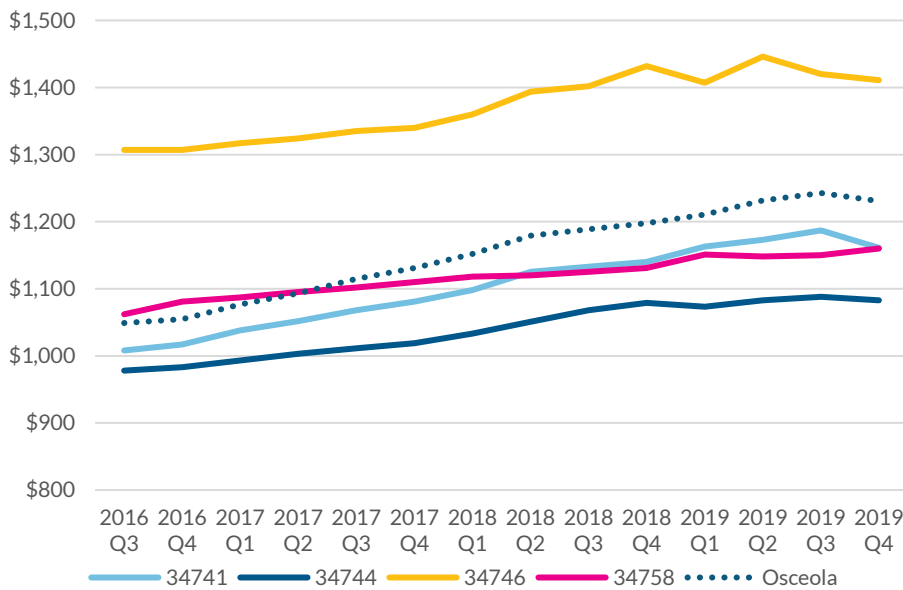
**FIGURE 5**  
**Orange County Asking Rents, 2016–2019**



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Source: CoStar real estate data.

**FIGURE 6**  
**Osceola County Asking Rents, 2016–2019**



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Source: CoStar real estate data.

## Long-Term Impacts

Although we identified some effects on housing markets in receiving communities in the wake of climate migrations, the evidence of longer-term impacts is less obvious. There are many possible explanations for this. For one, the trajectories of migrants' moves within the housing market can vary wildly, making it hard to pinpoint specific timeframes or locations in which to observe particular metrics. Moreover, while the sudden influx of tens of thousands of migrants into a receiving community can produce dramatic short-term effects, their numbers are still small relative to the larger existing population, which limits their ability to drive large movement in aggregate metrics measured over longer time frames.

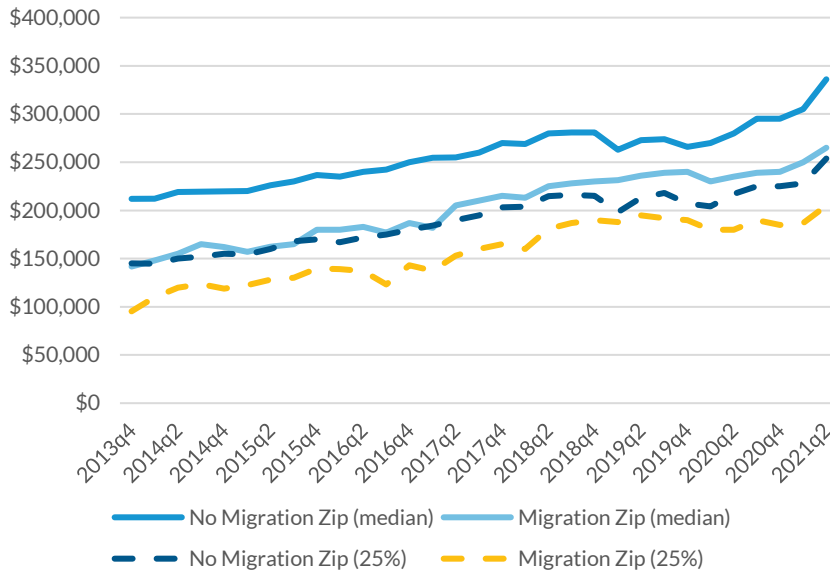
### NO CLEAR TRENDS IN HOUSING METRICS AFTER INITIAL MIGRATION

Beyond the short-term impacts to occupancy rates noted above, the quantitative analysis of rents and construction data show negligible effects on receiving communities' housing markets after two years. The small numbers of migrants relative to the existing population, along with the staggered pace of their moves into more permanent housing, likely did little to move the larger market in any dramatic ways. And not all migrants end up staying in their receiving communities, as informants in Florida and Houston noted continued movement back and forth among many of the migrants who left in the immediate aftermath of the storms. In Louisiana, meanwhile, the migration is still ongoing, so long-term impacts are not yet observable.

Just as migration does not appear to have significantly affected rents, in-migration did not lead to any changes in home price data over several quarters following the migration events. Regression analyses of post-Maria sales found no difference in prices as a function of treatment geography at either the PUMA or ZIP code levels.

FIGURE 7

Orange and Osceola Counties Median Home Sales Price, 2013–2021

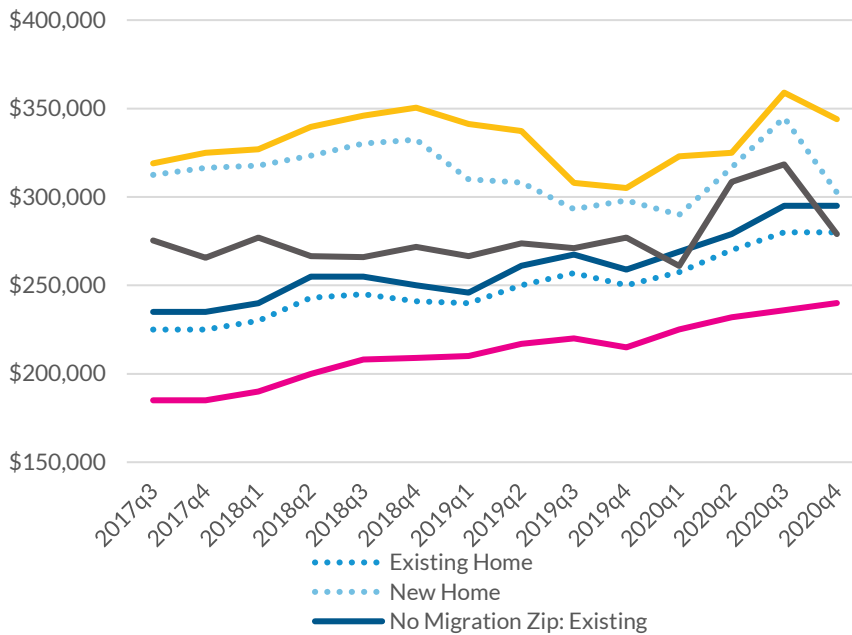


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Source: ZTRAX transaction data.

FIGURE 8

Sales Prices for New and Existing Homes in Orange and Osceola Counties



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Source: ZTRAX transaction data.

These findings are consistent with the narrative that migrants are uncertain about the duration of their stay in the receiving community. Because of the uncertainty, relatively few are likely to purchase a home, given the transaction costs and relative permanence of the acquisition. Their generally lower incomes and credit scores may also limit their eligibility for mortgage financing, at least until they are more established in their new community. Therefore, relative to the overall volume of home purchases in Houston and Orlando, the number of migrants who decide to purchase is likely minimal and will be spread out over an indeterminate period. Moreover, while we have focused on the communities that initially received migrants in the wake of natural disasters, subsequent moves into homeownership may not be limited to the same target ZIP codes, further diluting their potential effect on prices.

## Syntheses, Recommendations, and Policy Implications

Each of the findings above, organized thematically and temporally, offers insights into specific aspects of each migration and their impact on receiving communities. Yet as noted above, these impacts do not happen in a vacuum and are themselves shaped by numerous factors, including how receiving communities responded to migrants' housing needs. These findings, when viewed as a whole, therefore allow us to infer how the actions of the receiving communities—as well as ones they did not take—affected housing outcomes for both the communities and the migrants themselves. These inferences in turn offer suggestions for steps that potential receiving communities can take to prepare for climate migrations, including policy actions at the local, state and federal levels.

### Inferences from Findings

Based on the findings of this study, we broadly characterize the receiving communities' responses to climate migrations into the four meta-categories listed below. Each not only summarizes the nature of receiving communities' role in shaping housing market outcomes for migrants and existing residents but also suggests ways that future climate migrant destinations may better prepare for and anticipate the needs of relocatees following a climate event.

#### RECEIVING COMMUNITIES DID LITTLE TO ASSIST MIGRANTS WITH THE TRANSITION FROM SHORT- TO MEDIUM-TERM HOUSING

As noted above, in the two cases where immediate housing was required to shelter an unexpected influx of migrants, receiving communities were able to marshal resources and develop solutions to meet these needs. These solutions were largely dependent on the amount of advance notice communities had



to prepare, what resources and capacities existed in their housing and shelter systems, and the circumstances of the migration itself. In Louisiana, however, the lack of a sudden precipitating event meant there was no need for a rapid, large-scale mobilization to provide immediate shelter.

While responses to the immediate housing needs of migrants were at least partially successful in securing short-term housing, the receiving communities' response to migrants' medium- and longer-term housing needs was much less robust and effective, in part because of communities' reliance on the private rental housing market. This was especially acute in Louisiana, where reports suggest that many migrants struggled to adapt to life far from their coastal communities. There is little evidence, however, that the communities considered whether the market would be able to effectively address the needs of and absorb the increase in demand from the migrants; whether the migrants themselves had the capacity to navigate the market; and what resources were needed to facilitate this transition. Each of these factors is described in more detail below.

With respect to the existing conditions and capacity of the market to absorb new residents, officials should seek to understand what available housing supply exists or can be added, where this supply is located, how quickly it can be secured for migrants, and at what price points. Knowing this information in advance may, for example, have helped officials in Florida facilitate the transition of migrants out of motels earlier so they could begin the process of establishing roots in the receiving community. As a result of local officials not understanding these conditions—and failing to take steps to mitigate the challenges they presented to migrants—many evacuees from Puerto Rico remained in their short-term housing for up to a year or more.

Another factor relevant to helping migrants move to medium-term housing is whether there are any gaps between the migrants' capacity and resources and what they need to navigate the market. As noted above, in each case study, site informants reported a lack of knowledge about how private housing markets operate, including how to find, secure, and maintain housing. At the same time, many migrants also needed assistance to afford housing, both as a consequence of their generally lower incomes—which may have been a catalyst of their migration in the first place—and losses of resources as a consequence of the climate event that led to their relocation. Receiving communities should anticipate these needs and look for solutions to fill these knowledge and resource gaps before migrants begin the transition to the private market.

Finally, receiving communities need to understand the landscape of public and private resources available to them to facilitate the transition from short- to medium- to long-term housing. These include everything from federal agencies that can provide migrants with financial assistance, local institutions

and organizations that can help identify housing options and opportunities, and community members willing to guide migrants through the machinations of the local housing markets. Bringing together and leveraging these resources would help streamline the process of getting migrants out of short-term shelters and into housing that can serve as a base for their integration into the receiving community.

#### COMMUNITIES NEED TO CONSIDER TRANSPORTATION AS PART OF ANY HOUSING STRATEGY

Our findings about migrants' transportation needs underscore how vital it is for receiving communities to factor this resource into their strategies for housing migrants, in both the short and medium term. This means understanding what transportation deficiencies exist for migrants and developing solutions to fill these gaps, including by beefing up public transit service in the wake of a large migration so migrants have access to areas throughout the region to find and secure their housing options. It could also include the provision of private vehicles to migrants who were unable to bring their own from their origin communities so they do not have to rely on the limited reach of public transportation.

Filling these transportation gaps can also help migrants beyond just their housing needs. The data collected from informants made clear that transportation challenges also affect migrants' ability to access employment, health, financial, and social/cultural services. Moreover, it is likely that future migrations will have the same transportation issues, as some portion of the migrating population is likely to arrive without access to adequate and necessary transportation options.

#### RECEIVING COMMUNITIES NEED TO DO MORE TO SUPPORT RENTAL MARKETS GENERALLY

The data collected for this study show that, in general, the rental markets in receiving communities before migration were already failing to meet the needs of the existing population, particularly with regard to affordable housing. Informants in Florida and Louisiana noted a lack of available rental supply placing strains on residents, forcing them to travel long distances to secure appropriate housing, live in crowded circumstances, or reside in housing that is not climate resilient. The arrival of the migrants only exacerbated the need for more and better rental housing, driving up costs and requiring even more residents to make untenable trade-offs.

Therefore, increasing support for and the supply of rental housing must be a part of any receiving community's strategy. This is especially relevant for ensuring that medium-term housing options are available to migrants but can also be an element of any short- or long-term strategies as well. As the experience of Houston showed, excess supply in the rental market was crucial to serving migrants' short-term needs after the initial congregate shelters were forced to evacuate. In Florida, meanwhile, the large numbers of migrants who continue to transition between their receiving and origin

communities need flexible rental options to remain available to them. At the same time, even if receiving communities are able to boost the supply of rental housing, migrants will still need assistance to afford that housing, especially in their transition to permanent residency as they rebuild their financial resources.

#### **MORE AND BETTER DATA ARE NEEDED ON THE EXPERIENCES OF CLIMATE MIGRANTS**

A recurring finding of this study is the lack of more and detailed data on the experiences of climate migrants navigating housing markets in receiving communities. This is evidenced in the lack of clear trends found in macro-level data, despite suggestions from informants that they observed more micro-level trends in prices, availability, and affordability. There is also a lack of data on the trajectories of climate migrants as they integrate into their new housing markets, including the timing, location, and form of their moves to intermediate and permanent housing options. Finally, more information is needed on the gaps between the capacity and expectations of migrants and what housing markets and conditions are available to them. Though not within the scope of this study, we heard from multiple informants about the challenges that migrants faced navigating and adapting to their new homes, often as a result of unexpected changes relative to their prior lifestyles. A better understanding of the nature and consequences of these challenges would help receiving communities better prepare for future migrants' needs.

Of course, it would be callous to insist that receiving communities experiencing an influx of migrants spend valuable time and resources standing up comprehensive data collection and management systems at the expense of addressing their immediate needs. Rather, more could be done at the federal level to establish the necessary infrastructure for capturing and disseminating meaningful real-time data as disaster-induced migration occurs so that receiving communities can plug into an existing ecosystem designed to respond to migrants' and receiving communities' needs. Unlike communities at high risk for climate-related disasters—which have more internal expertise and a standing response infrastructure, including data collection for decisionmaking—we have no ex ante expectation of where disaster-driven migration will occur or that the receiving communities will have the necessary infrastructure in place. As policymakers look to build out that capacity, it will be critical to document their experiences through quantitative and qualitative data collected from both migrants and members of receiving communities in the immediate wake of the migration.

## Policy Implications

The above inferences for what receiving communities can and should do to support migrants and mitigate negative impacts on their housing markets suggest several options for policy interventions at the local, regional, state, and federal levels.

### MORE FEDERAL RENTAL ASSISTANCE AND INCENTIVES FOR AFFORDABLE HOUSING IN RECEIVING COMMUNITIES

Our findings about migrants' limited financial capacity to afford housing in receiving communities, coupled with the challenges those communities often face in ensuring adequate rental housing supply to meet the surge in demand, suggest some important roles for the federal government to play in supporting climate migrants. In particular, the federal government should provide more financial assistance in the form of vouchers for migrants to use to reduce their housing costs as they rebuild their financial resources in their new home. As the experience of migrants in Central Florida shows, this period can last for many years following the migration event; thus, a deeper commitment to ensuring migrants have stable and affordable housing may be necessary.

The provision of rental assistance is also not enough if there is not adequate supply available to absorb the increase in demand at any price point. Thus, the federal government should do more to incentivize and facilitate the development of more permanent rental housing, particularly affordable rental housing, by encouraging receiving communities to reform their zoning in the wake of a mass migration and offering enhanced tax benefits to private developers who build housing for climate migrants.

### MORE INTEGRATION OF LOCAL HOUSING AND TRANSPORTATION POLICIES

The vital role of transportation in helping migrants meet their housing needs requires not only that receiving communities consider changes to transportation policy and programs in the wake of a climate migration, but also that they coordinate these changes with policies that expand housing options for migrants. For example, transit-oriented development incentives can both boost housing supply in transit-rich neighborhoods—providing more options for transit-dependent migrants—and facilitate the expansion of transportation networks to take advantage of such incentives.

Housing is also not the only consideration in advancing transportation policies and programs, as access to employment and financial, health, and social/cultural resources is also critical to helping migrants resettle in receiving communities. The integration of transportation with broader land-use

policy, along with measures to ensure that sufficient services are provided in close proximity to any new housing, is another important consideration for receiving communities.

#### MORE DATA ON MIGRANTS AND THEIR IMPACTS ON RECEIVING COMMUNITIES

Lastly, governments at all levels should do more to ensure improved collection of robust data on climate migrants and their effects on receiving communities. As the quantitative analyses described above demonstrate, the lack of such data greatly limits our ability to adequately understand the full extent of migrants' impacts on housing markets, and in turn, to better target both material and policy solutions to help receiving communities prepare for future climate migrations. Such data might include detailed, low-level geographic data on changes in neighborhoods where migrants are known to cluster, as well as longitudinal data on the trajectories of migrants as they transition through short-, medium-, and long-term housing.

At a minimum, receiving communities can require certain data collection and reporting tasks of organizations and providers that serve migrant populations. These should include state, regional, and local governments as the recipients of federal funds to assist migrants. Such requirements should not place undue burdens on providers and should be developed in consultation with them, as well as with researchers, advocates, and migrants themselves, to ensure that only the most valuable and vital data are collected.

## Conclusion

The primary objective of this housing study was to develop a better understanding of the experiences and impacts of climate migrants on housing markets in receiving communities. The literature review makes clear what information we currently lack, leading to the set of research questions that guided our efforts. Meanwhile, the products of this research—namely, the findings, inferences, and policy implications listed above—advance our knowledge while also offering suggestions for how policymakers and potential future receiving communities can more effectively meet the housing needs of climate migrants.

More specifically, our research reveals a clear gap in receiving communities' ability to serve climate migrants, especially in their transition from publicly and/or community-supported short-term shelter to medium- and long-term housing, largely provided for by the private rental market. A lack of information—about the existing conditions of the market, the needs and capacities of the migrant population, and the quantity and types of resources needed to ensure smooth integration into the

receiving community—limited what receiving communities were able to do for migrants. This not only contributed to additional challenges and limits on migrants' housing options but also negatively affected affordability and availability of housing for existing residents, who were forced to compete with migrants for a limited supply of suitable housing.

Therefore, it is imperative that potential future receiving communities improve their access to and understanding of these information gaps and proactively work to fill them. Policymakers can support these efforts by collecting and requiring better data on the impacts of climate migrants. And all interested parties—local officials, advocates, community organizations, and others—should center migrants in their efforts to increase this understanding and better serve their needs.

# Notes

- <sup>1</sup> Data provided by Zillow through the Zillow Transaction and Assessment Dataset (ZTRAX). More information on accessing the data can be found at <http://www.zillow.com/ztrax>. The results and opinions of this analysis are those of the authors and do not reflect the position of Zillow Group.
- <sup>2</sup> We focus on acute events as triggers of migrations, rather than chronic conditions that are more likely to result in gradual, stochastically distributed relocations that are more easily absorbed by the existing housing stock in receiving communities. Even where climate impacts are chronic, such as in coastal Louisiana, acute events are likely to have a catalytic effect and prompt a larger migration, thus still resulting in a demand shock in the receiving community.
- <sup>3</sup> These include migrants spending time deciding whether to settle in their new community and purchase a home; having low credit scores and incomes that necessitate extra time to rebuild or to qualify for mortgage financing; geographic dispersal of where homes are purchased as migrants select communities that meet their particular needs; delayed-reaction secondary migrations of existing residents due to tightness in rental markets as a result of the migration; and the inherent longer time and higher costs associated with buying and selling a house versus renting.
- <sup>4</sup> Arms' length transactions include those flagged in the ZTRAX database as having a fair market sales price whose source was taken from the document of record, based on transaction taxes paid, price paid at auction, or fair-value cash price paid. See Nolte et al. 2021.
- <sup>5</sup> The nature of the survey makes it impossible to pinpoint the year in which units were added or lost, and without detailed 2020 Census data (which represent a point in time) to compare with 2010 data, we cannot glean more specificity about the housing market from the public datasets.

# References

- Araya, Felipe, Kasey M. Faust, and Jessica A. Kaminsky. 2019. "Public perceptions from hosting communities: The impact of displaced persons on critical infrastructure." *Sustainable Cities and Society* 48: 101508.
- Bates, Diane C. 2002. "Environmental refugees? Classifying human migrations caused by environmental change." *Popular Environment* 23: 465–77.
- Belsky, E.S., Drew, R.B. 2008. "Overview: Rental Housing Challenges and Policy Responses." In Retsinas, N.P., Belsky, E.S. (eds.), *Revisiting Rental Housing: Policies, Programs, and Priorities*. Washington, DC: Brookings Institution, pp. 14–56.
- Boustan, Leah Platt, Matthew L. Kahn, Paul W. Rhode, and Maria Lucia Yanguas. 2018. "The Effect of Natural Disasters on Economic Activity in US Counties: A Century of Data." Working Paper 23410. Cambridge, MA: National Bureau of Economic Research.
- Card, David E. 1990. "The Impact of the Mariel Boatlift on the Miami Labor Market." *Industrial Labor Relations Review* 43.
- Cochrane, Bill, and Jacques Poot. 2019. *The Effects of Immigration on Local Housing Markets*. Hamilton, New Zealand: University of Waikato.
- Comerio, Mary C. 2014. "Disaster Recovery and Community Renewal: Housing Approaches." *Cityscape: A Journal of Policy Development and Research* 16.
- . 1998. "Disaster hits home: new policy for urban housing recovery." Berkeley, CA: University of California Berkeley Press.
- . 1997. "Housing Issues After Disasters." *Journal of Contingencies and Crisis Management* 5: 166–78. <https://doi.org/10.1111/1468-5973.00052>.
- DiPasquale, Denise, and William C. Wheaton. 1992. The Markets for Real Estate Assets and Space: A Conceptual Framework. *Real Estate Economics* 20: 181–98. <https://doi.org/10.1111/1540-6229.00579>.
- Duncan, Michael. 2011. "The impact of transit-oriented development on housing prices in San Diego, CA." *Urban Studies* 48: 101–27. <https://doi.org/10.1177/0042098009359958>.
- Elliott, J.R. 2015. "Natural hazards and residential mobility: General patterns and racially unequal outcomes in the United States." *Social Forces* 93: 1723–47.
- Gaines, J.P. 2005. *Revised Texas Housing Affordability Index*. Technical Report No. 1742. College Station, TX: Real Estate Center, Texas A&M University.
- GCR & Associates, Inc. 2011. *Affordable Housing Market Study: Terrebonne Parish*.
- Green, Richard K., and Stephen Malpezzi. 2003. *A Primer on US Housing Markets and Housing Policy*. Washington, DC: Urban Institute.
- Hopkins, Daniel J. 2012. "Flooded Communities: Explaining Local Reactions to the Post-Katrina Migrants." *Political Research Quarterly* 65: 443–59.
- Hussey, Andrew, Alex Nikolsko-Rzhevskyy, and Ioana Sofia Pacurar. 2011. "Crime Spillovers and Hurricane Katrina." Memphis, TN: University of Memphis. p. 44.
- Kirby, S., and A. Hardison-Moody. 2018. "Housing and Disasters." In Anacker, K.B., Carswell, A.T., Kirby, S.D., Tremblay, K.R.E. (eds.), *Introduction to Housing*. Athens, GA: University of Georgia Press.
- Larkin, M.P., Askarov, Z., Doucouliagos, H., Dubelaar, C., Klona, M., Newton, J., Stanley, T.D., Vocino, A., 2019. Do house prices ride the wave of immigration?" *Journal of Housing Economics* 46: 101630.



- Lechner, Michael. 2010. "The Estimation of Causal Effects by Difference-in-Difference Methods." *Foundational Trends in Economics* 4: 165–224. <https://doi.org/10.1561/08000000014>.
- Lipscomb, Cliff. 2003. "Small Cities Matter, Too: The Impacts of an Airport and Local Infrastructure on Housing Prices in a Small Urban City." *Review of Urban & Regional Development Studies* 15:255–73. <https://doi.org/10.1111/j.1467-940X.2003>.
- McIntosh, Molly Fifer. 2008. "Measuring the Labor Market Impacts of Hurricane Katrina Migration: Evidence from Houston, Texas." *American Economic Review* 98: 54–57. <https://doi.org/10.1257/aer.98.2.54>.
- Mitchell, Christine M., Ann-Margaret Esnard, and Alka Sapat. 2012. "Hurricane Events, Population Displacement, and Sheltering Provision in the United States." *Natural Hazards Review* 13: 150–61. [https://doi.org/10.1061/\(ASCE\)NH.1527-6996.0000064](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000064).
- Mussa, Abeba, Uwaoma G. Nwaogu, and Susan Pozo. 2017. "Immigration and housing: A spatial econometric analysis." *Journal of Housing Economics* 35: 13–25. <https://doi.org/10.1016/j.jhe.2017.01.002>.
- Nolte, Christophe, et al. 2021. "Studying the Impacts of Environmental Amenities and Hazards with Nationwide Property Data: Best Data Practices for Interpretable and Reproducible Analyses." West Virginia University College of Law Research Paper No. 2021-013. <https://doi.org/10.2139/ssrn.3900806>.
- Oliver-Smith, Anthony. 2013. "Catastrophes, mass displacement and population resettlement." In *Preparedness and Response for Catastrophic Disasters*. Boca Raton, FL: CRC Press. pp. 185–224.
- Ottavanni, Gianmarco I.P., and Giovanni Peri. 2007. "The Effect of Immigration on US Wages and Rents: A General Equilibrium Approach." London, UK: Centre for Research and Analysis of Migration, University College London.
- Saiz, Albert. 2007. "Immigration and housing rents in American cities." *Journal of Urban Economics* 61: 345–71. <https://doi.org/10.1016/j.jue.2006.07.004>.
- Saiz, Albert. 2003. "Room in the Kitchen for the Melting Pot: Immigration and Rental Prices." *Review of Economics and Statistics* 85: 502–21.
- Saiz, Albert, and Susan Wachter. 2011. "Immigration and the Neighborhood." *American Economic Journal: Economic Policy* 3: 169–88. <https://doi.org/10.1257/pol.3.2.169>.
- Schwartz, Alex F. 2010. *Housing Policy in the United States*. London, UK: Routledge.
- US Census Bureau. 2022. American Community Survey 2020 5-year Estimates.
- . 2017. American Community Survey 2015 5-year Estimates.
- . 2012. American Community Survey 2010 5-year Estimates.
- US Department of Housing and Urban Development. 2005. *FY2005 Income Limits*.
- Xiao, Yu, and Shannon Van Zandt. 2012. "Building community resiliency: Spatial links between household and business post-disaster return." *Urban Studies* 49: 2523–42.

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