

# Identifying the Opportunities to Expand Manufactured Housing

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## I. INTRODUCTION

Access to affordable housing and equitable opportunities to build wealth through sustainable homeownership are major, growing concerns in the United States. Housing is becoming less and less affordable in the United States, especially among low-income homeowners and low-, very low-, and extremely low-income renters (McClure, 2019; Ritcher et al., 2019). As evidence of the challenge, the [Freddie Mac House Price Index](#) showed an increase of more than 19% between July 2020 and July 2021; Freddie Mac's Economic & Housing Research Group forecast house price growth of nearly 17% for 2021 overall.

The affordability problem is uneven across the United States and more pronounced in metropolitan areas, which already suffer from tight supply, higher demand, and scarcity of land (Anacker, 2019). In fact, 99 of the 100 largest metropolitan areas experienced a double-digit rise in home prices between third quarter 2020 and third quarter 2021, according to the Federal Housing Finance Agency's (FHFA's) Top 100 Metro Areas Ranking. Affordability issues paired with economic disparities impacting communities of color, rural America, and other marginalized groups constitute a major barrier to housing stability and closing the racial homeownership and wealth gap.

Manufactured homes cost on average about half as much as site-built homes (excluding the land) and offer an attractive, energy-efficient, resilient housing option. Yet they compose only around 7.5% of existing and 9% of new U.S. homes. A major reason for the low percentage: state and local zoning regulations – often based on misconceptions – that constrain manufactured housing's role in the housing market. The potential for manufactured housing to play a bigger role in filling the affordable housing gap has taken center stage over the last few years.

To address industry requests for information that could help in identifying significant opportunities for market growth and transformation, Freddie Mac performed a quantitative analysis of data drawn from a variety of the best-available sources to provide a holistic view of the market. The results could assist industry participants in designing strategies and tactics to advance the acceptance, placement, and ownership of manufactured housing in metropolitan areas.

Key findings:

- More stringent zoning is associated with a lower share of manufactured home (MH) loans as a percentage of total loans.
- The stricter the regulation is around residential land use in a state, the fewer MH units shipped to that state.
- The areas with the most shipments of manufactured homes are in the West, while areas of opportunity are most prevalent in the Midwest.
- Jurisdictions considered "MH friendly" based on a framework that we developed include many individuals who appear able to qualify for mortgages and could benefit from more affordable homeownership options. Close to 25 million people living in MH-friendly jurisdictions are "mortgage ready" today. If zoning were less stringent, more than a million more individuals in those jurisdictions might be able to achieve homeownership with manufactured housing.
- When compared to recent buyers of site-built homes, MH-friendly jurisdictions contain a larger share of Black and Hispanic potential homebuyers.

## II. THE IMPACT OF ZONING ON MANUFACTURED HOUSING

Zoning regulations affect the usage, availability, and acceptance of manufactured homes. They may be implemented for various reasons, but often have the effect of partially or completely constraining manufactured home placements. States have zoning authority and set the tone. However, many states delegate some zoning authority to local governments through enabling acts.

State and local governments use zoning and other regulations to specify where, when, and how many manufactured homes are placed as well as what they look like and the infrastructure required to support them. The extent of regulation spans a wide range and varies by locality. Some states leave zoning decisions to the local jurisdictions and offer no regulatory framework. Others, for example, may require that building standards – including but not limited to design features, minimum square footage, and roof pitch – apply equally to manufactured and site-built homes. Except for some *CrossMod™ homes*, it is unlikely that any manufactured home will meet the criteria. Still other states may allow manufactured homes of any design but only in defined areas – for example, in existing manufactured housing communities. Deep-seated *perceptions* of manufactured housing also significantly influence the level of acceptance and zoning decisions within a jurisdiction.

Freddie Mac conducted an analysis to better understand and quantify the effect of zoning on manufactured housing. To produce a consolidated dataset, we accessed data from the 2020 Home Mortgage Disclosure Act (HMDA), the 2019 National Longitudinal Land Use Survey (NLLUS), the Manufactured Housing Institute (MHI), the 2018 Wharton Residential Land Use Regulatory Index survey (WRLURI), and the State Inclusionary Index (SII) compiled by the Virginia Polytechnic Institute and State University (Virginia Tech) for the U.S. Department of Housing and Urban Development (HUD). From these sources, a total of 825 jurisdictions across 32 states were matched based on *Federal Information Processing System (FIPS) codes*, which provide a standardized system for identifying various levels of geography (states, counties, core-based statistical areas (CBSAs), places, and more). The consolidated dataset contains information on the stringency of regulation around residential land use, lot size requirements, density and supply restrictions, existence of affordable housing programs, designation of MH as real property, local courts' involvement in the passing of zoning laws, and much more. Go to Appendix A for additional details.

The 825 jurisdictions included in our consolidated dataset are categorized based on the state's manufactured housing zoning laws, as shown in Exhibit 1.

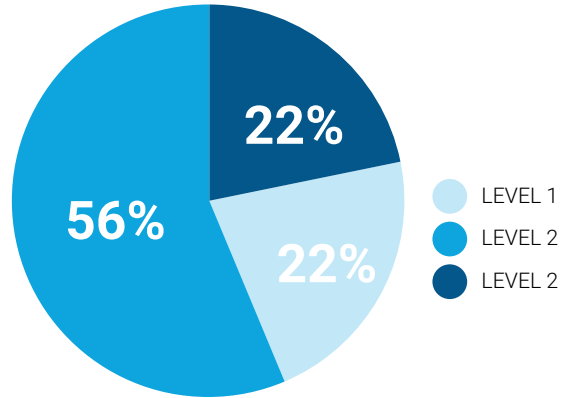
- Level 1 jurisdictions prohibit outright bans and must allow MH in some area(s) within the city. There are 181 (22%) of such jurisdictions in the data.
- Level 2 jurisdictions allow MH but could impose the same building standards to both MH and site-built homes. The majority of jurisdictions (56%) fall into this category.
- Level 3 jurisdictions are in states with no state laws on zoning preemption for MH owners which could mean that the zoning is unknown or more restrictive in these jurisdictions. There are 180 (22%) jurisdictions in Level 3.

**Note** that no state requires jurisdictions to allow manufactured homes in all single-family residential neighborhoods based solely on being built to the national HUD Manufactured Housing Construction and Safety Standards, commonly called the HUD Code.



## Exhibit 1: Most Jurisdictions Are Allowed to Impose Regulations to Limit MH

### Zoning Laws for a MH Owner



**Source:** Freddie Mac's calculations using 2021 data from the Manufactured Housing Institute.

**Level 1:** Jurisdiction is required to prohibit outright bans and must allow for MH in some areas within the city (n=181).

**Level 2:** Jurisdiction is prohibited from outright banning MH but is allowed to impose the same building standards to both manufactured and site-built homes (n=464).

**Level 3:** No state laws on zoning preemption for MH owners (n=180).

In addition to any state laws regarding manufactured housing, many local jurisdictions enact additional regulations. These can take a wide variety of shapes. Most commonly, they relate to minimum lot-size requirements, or density restrictions; 95% of the jurisdictions in the consolidated dataset apply these additional regulations. Minimums may vary within a jurisdiction. For example, the smallest required minimum may be half an acre near an industrial part of the city and the largest minimum may be two acres in a residential area. As shown in Exhibit 2, more than 38% of jurisdictions surveyed have largest minimum lot-size requirements up to a half-acre and 30% have largest-minimum requirements between a half-acre and two acres. In about 27% of jurisdictions, the largest minimum is more than two acres. The added cost of the land moves affordable homeownership beyond the reach of many people who otherwise could afford to own manufactured homes.



## Exhibit 2: 57% of Jurisdictions Require Lot Sizes of More than Half an Acre

Density Restrictions Index (DRI)	Number of Jurisdictions	Percent
0	40	5.04
1	305	38.41
2	127	15.99
3	111	13.98
4	211	26.57
<b>Total</b>	<b>794</b>	<b>100</b>

**Source:** Freddie Mac's calculations using 2018 WRLURI survey.

**Key:**

0 = no minimum lot size regulation anywhere in the jurisdiction  
 1 = a minimum no larger than 0.5 acres  
 2 = a minimum, with the largest from 0.5-1.0 acres  
 3 = a minimum, with the largest from 1.0-2.0 acres  
 4 = a minimum, with the largest more than 2.0 acres

**Note:** DRI is missing data points for some jurisdictions in the consolidated dataset.

Another way to constrain manufactured housing is through caps on the supply of new housing through placing limits on building permits, construction, or number of dwellings and units. Typically when demand outstrips supply, prices rise. This alone could exacerbate affordability issues, but also could drive builders and developers to choose placing site-built homes in those areas, which generally sell for higher prices than manufactured homes. Restrictions on supply are measured by the Supply Restriction Index (SRI). This index reflects the extent to which there are explicit caps on the supply of new housing and comes from 2018 WRLURI. However, as shown in Exhibit 3, 94% of jurisdictions in our dataset do not place caps on new housing supply.

## Exhibit 3: Most Jurisdictions Do Not Place Caps on New Housing Supply

Supply Restriction Index (SRI)	Number of Jurisdictions	Percent
0	771	93.91
1	14	1.71
2	17	2.07
3	4	0.49
4	10	1.22
6	5	0.61
<b>Total</b>	<b>821</b>	<b>100</b>

**Source:** Freddie Mac's calculations using the 2018 Wharton Residential Land Use Regulatory Index survey

**Note:** SRI is missing data points for some jurisdictions in the consolidated dataset.

**Note:** A SRI score of 0 indicates no cap on new housing supply.

While some states may use zoning to discourage manufactured housing, some also encourage this housing option in their jurisdictions. For example, they may designate MH as real property rather than personal property (chattel); through the titling policy. Accordingly, homeowners may take advantage of mortgage financing, which offers longer loan terms and lower interest rates, and may allow them to qualify for federal and state income tax deductions.

## To What Extent Does Zoning Affect Manufactured Housing?

To quantify the relationship between zoning and manufactured housing in a jurisdiction, Freddie Mac used various analytical techniques and tools to gain insight into where zoning most affects placement of manufactured homes and by how much. We also analyzed to which states manufactured homes are being shipped and where they are being financed.

Our analysis of 2020 Home Mortgage Disclosure Act (HMDA) data and the 2018 WRLURI showed that more stringent zoning is negatively related to manufactured housing. We used both MH loans with and without land and calculated the percent of MH loan originations relative to the total loan originations in a county. The WRLURI is constructed from a variety of subindexes<sup>1</sup> related to density controls, supply restrictions, and affordability measures among other variables.

We also analyzed the relationship between zoning and MH loan originations by region. Our findings suggest that the relationship is strongest<sup>2</sup> in the Northeast and the West.

Factors besides zoning may affect manufactured housing. For example, regional differences in views and perceptions<sup>3</sup> could play an important role. It is important to control for other relevant factors to formulate accurate predictions. Therefore, we leveraged several machine-learning and statistical-modeling tools to isolate the factors in our dataset that predict how zoning affects manufactured housing.

Results are consistent across several estimation techniques. Go to Appendix A, Exhibits A.6 through A.10 for more details. This additional analysis confirmed that the stringency of regulation around residential land use has a negative effect on manufactured home loan originations. For example, the effect of WRLURI on the share of MH loans is about -0.2. This means that if regulation around land use becomes more stringent<sup>4</sup> by a factor of 1 as measured by WRLURI, the share of MH loans is predicted to decrease by about 0.2%. In other words, if a jurisdiction with a WRLURI of 1 and MH loans representing 4% of total loans, making zoning more stringent to a point where its WRLURI increased to 2, the share of MH loans in that jurisdiction would decrease and become equal to about 3.8%.<sup>5</sup> Using a different modeling approach, Dawkins et al. (2011) found that zoning regulations reduce the odds that one manufactured home or more will be placed in a community.

Furthermore, we explored relationships between shipments of manufactured homes and zoning using U.S. Census Bureau 2020 shipment data. As might be expected, the more stringent a state's land-use regulation<sup>6</sup>, the smaller the number of manufactured homes shipped to that state.

Finally, Freddie Mac explored loan originations to gain insights on where manufactured homes are being financed. As shown in Exhibit 4, loan originations are most heavily concentrated in the West – in Washington, Oregon, California, Nevada, and Arizona – as well as in Michigan, Colorado, Southeast Texas, and Central Florida. Notable concentrations also are in Middle Appalachia and along the Southeast coasts. Manufactured home loans as a percentage of all loans are highest in the southern part of the country. This pattern is consistent for households with low and moderate incomes and consistent with trends we see in the shipment data.

In addition to zoning laws, perceptions and other economic and social factors (for example, demographics, household incomes and lack of affordable housing options) may also lead to geographic differences in the acceptance and prevalence of manufactured homes.

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<sup>1</sup> See (Gyourko et al., 2019) for more details about the construction of the 2018 WRLURI.

<sup>2</sup> The correlation between WRLURI and MH loans as a percentage of total loans in the Northeast and the West is equal to -0.3 and -0.27, respectively, compared to -0.16 and -0.02 in the South and Midwest, respectively.

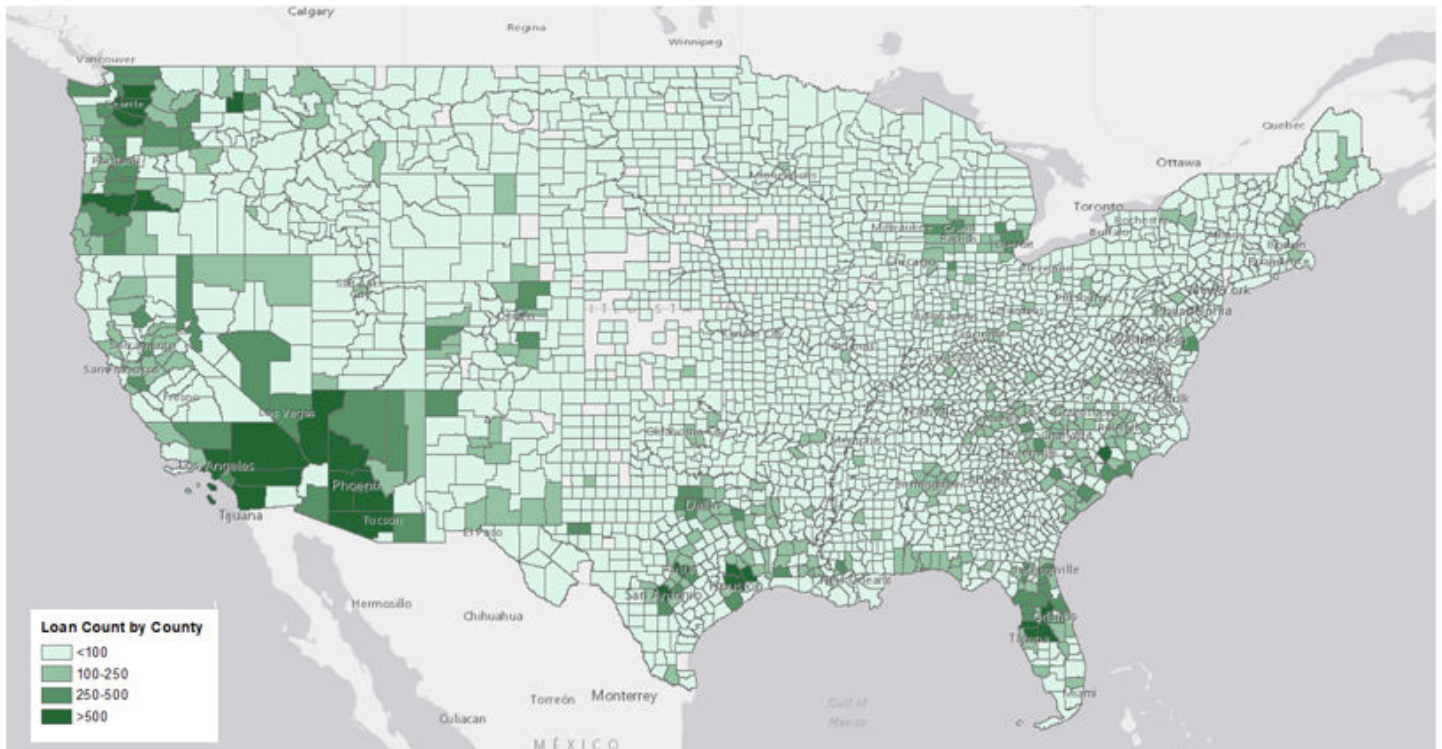
<sup>3</sup> Further analysis is needed to fully control for perceptions. However, our methodology captures part of the effect of perceptions through the inclusion of region dummies in the models

<sup>4</sup> Zoning can become more stringent for a variety of reasons, among which are lot-size requirements, limits on the supply of new housing, and more.

<sup>5</sup> The third column of Exhibit 4 reports the marginal effects from the second part of the ZIM. Technically, the coefficient on the WRLURI means that, conditional on seeing a MH loan in a county, a unit increase in WRLURI will lead manufactured housing as a percentage of total loans to decrease by about 0.2%

<sup>6</sup> MH shipment data are at the state level, whereas stringency of regulation is at the jurisdiction level. To mitigate this difference, we calculated the average stringency across all jurisdictions within the same state and assigned the average to the state. Analysis of shipment data focused on the 32 states in the consolidated zoning dataset.

## Exhibit 4: Concentration of Manufactured Home Loans by County



**Note:** Data is 2020 HMDA originations and purchases of manufactured housing properties for home purchase or refinance; non-conforming loans, second liens, unsecured loans, and loans with missing values for applicant income are excluded. Shading represents loan count within each county.

### III. MH-FRIENDLY JURISDICTIONS AND MH MARKET OPPORTUNITIES

Manufactured housing is attracting more and more attention as a potential remedy to issues related to housing affordability and sustainable homeownership. However, as our analysis revealed, states and local governments by means of zoning hinder the use and acceptance of manufactured housing. To address industry requests for information that could help in identifying significant opportunities for market growth and transformation, Freddie Mac developed a framework for defining the level of opportunity a jurisdiction offers for manufactured housing. Based on our analysis of existing literature and indices using the consolidated zoning dataset we created, we constructed the MH Friendly Index based on criteria related to the following:

- Lot-size requirements – looser density requirements imply lesser restrictions on the supply of new housing; lower lot size requirements imply more affordable or cheaper cost of land
- The Wharton Residential Land Use Regulatory Index (WRLURI)
- Restrictions on the placement of manufactured housing through zoning laws
- The number of constraints imposed on new housing supply
- The degree to which the jurisdiction encourages inclusion of manufactured housing through the designation of manufactured homes as real property, zoning, and consistent treatment with other housing types



Our MH Friendly Index has three tiers. Tier 1 includes jurisdictions that are most welcoming to manufactured housing. We define Tier 2 jurisdictions by relaxing some of the criteria we used to define Tier 1 to include jurisdictions that may apply more stringent restrictions; we further relaxed our criteria to define Tier 3. The tiers are not mutually exclusive: All jurisdictions in Tier 1 are included in Tier 2 and all jurisdictions in Tier 2 are included in Tier 3. Exhibit 5 summarizes the criteria for each tier. Go to Appendix B for a list of jurisdictions and their corresponding MH-friendliness tier, county, state, nearest metropolitan area, and region.

## Exhibit 5: Criteria for Defining the Tiers of the MH Friendly Index

TIER 1	TIER 2	TIER 3
Has a lot-size requirement of a half-acre or less.	Has a largest minimum lot-size requirement of 2 acres or less.	Has a largest minimum lot-size requirement of 2 acres or less.
Has a WRLURI less than the median, less stringent regulation around residential land use than half of the sample.	Has a WRLURI less than the 75th percentile, less stringent regulation around residential land use than 75% of the sample.	Has a WRLURI less than the 75th percentile, less stringent regulation around residential land use than 75% of the sample.
Allows manufactured housing placements to some extent or at least does not ban it outright.	Allows manufactured housing placements to some extent or at least does not ban it outright.	Either allows manufactured housing placements to some extent or at least does not ban it outright; or no state laws cover zoning preemption.
Imposes no annual caps on building permits, construction, or number of dwellings and units (i.e., no caps on the supply of new housing).	Imposes no annual caps on building permits, construction, or number of dwellings and units (i.e., no caps on the supply of new housing).	Imposes no annual caps on building permits, construction, or number of dwellings and units (i.e., no caps on the supply of new housing).
Strongly encourages inclusion of manufactured housing through the designation of manufactured homes as real property, zoning, and consistent treatment with other housing types.	Moderately or strongly encourages inclusion of manufactured housing through the designation of manufactured homes as real property, zoning, and consistent treatment with other housing types.	Weakly, moderately, or strongly encourages inclusion of manufactured housing through the designation of manufactured homes as real property, zoning, and consistent treatment with other housing types.

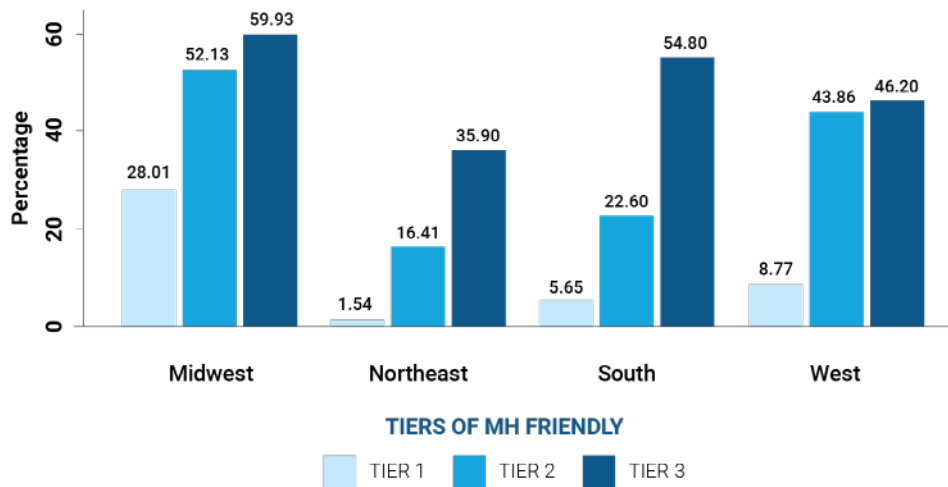




Exhibit 6 shows the proportion of MH-friendly jurisdictions by region. The Midwest has the highest percentage of jurisdictions in each tier. In fact, about 60% of jurisdictions in the Midwest are MH-friendly. Even in the Northeast where we find the lowest number of MH-friendly jurisdictions, 36% of jurisdictions are MH friendly.

## Exhibit 6: Percentage of MH Friendly Jurisdictions by Region

To highlight the opportunity to expand manufactured housing in MH-friendly jurisdictions, we layered in Freddie Mac’s unique “mortgage-



**Source:** MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

readiness” measure. Using anonymized individual credit bureau data as of January 2021, we define consumers as “mortgage ready” if they meet the following criteria:

- Do not currently have a mortgage
- Are 45 years old or younger
- Have a credit score of at least 660
- A debt-to-income ratio not exceeding 25%
- Have no foreclosures or bankruptcies in the past 84 months
- Have no severe delinquencies in the past 12 months<sup>7</sup>.

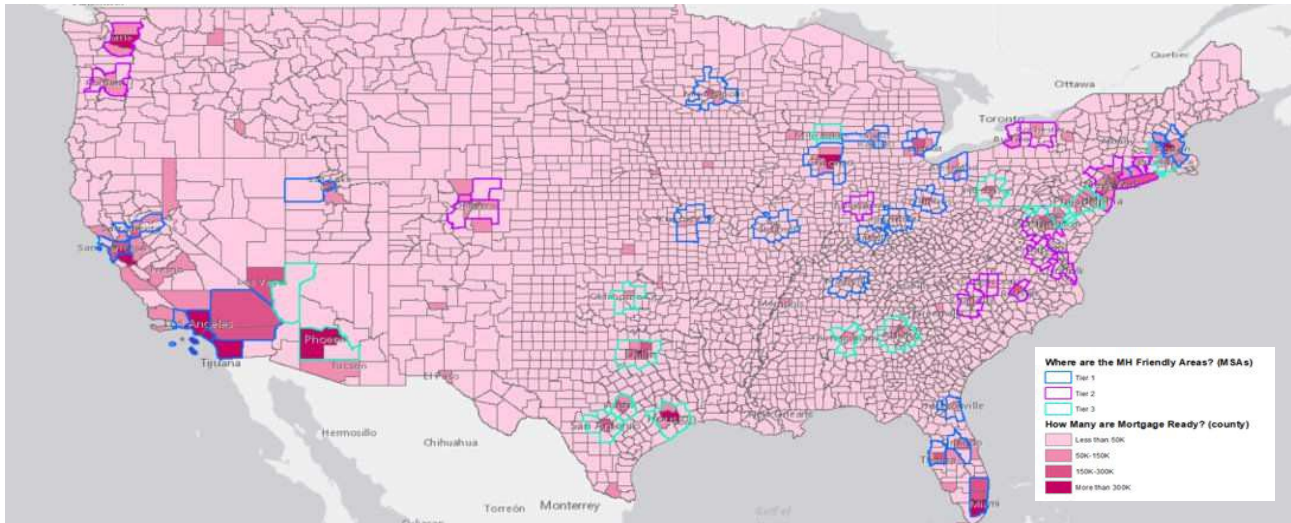
Go to Appendix B, Exhibit B.2 for more details. To provide a more targeted perspective, we also estimated the number of low- and moderate-income “mortgage ready” consumers in each the metropolitan area, or those whose incomes are 100% of the area median income (AMI) or less<sup>8</sup>. We estimate that between 7,000 and 2.8 million “mortgage-ready” consumers with low and moderate incomes live in each of the metropolitan areas with MH-friendly jurisdictions. In total, close to 25 million “mortgage-ready” consumers live in MH-friendly metro areas.

<sup>7</sup> See Freddie Mac Insight Report “Who Are The Future Borrowers? A Deep Dive into their Barriers and Opportunities” for more details.

<sup>8</sup> Consistent with a Duty to Serve Underserved Markets focus, we consider low- to moderate-income consumers as those with incomes up to 100% of the area median income (AMI). See Underserved Areas Data | Federal Housing Finance Agency (fhfa.gov) for AMI definitions.

Exhibit 7 highlights some of the metropolitan areas that present immediate opportunities to expand the manufactured housing market. It shows the intersection of several MH-friendly areas (outlined in blue, purple, and green) and concentrations of mortgage-ready households (in shades of red).

## Exhibit 7: MH Market Opportunities



**Source:** Mortgage-readiness is based on Freddie Mac calculations using anonymized credit bureau data for January 2021. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

Interestingly, the mean number of manufactured homes shipped in Tier 1 MH-friendly states is nearly 2,000 units annually, 700 units fewer than in states in tiers 2 or 3. This could be due to potential differences in whether the units are shipped to metro versus non-metro areas. However, this remains uncertain because data are captured at the state level only. Regardless, this highlights the opportunity around manufactured housing, particularly in Tier 1 jurisdictions. Moreover, we found MH-friendly jurisdictions in all states in our dataset, some of which are in tiers 2 and 3, further demonstrating that many more consumers could benefit from the availability of manufactured homes.

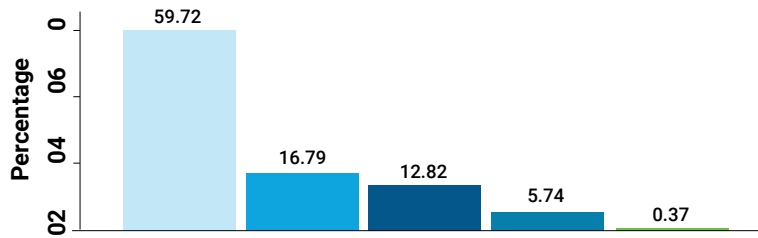
Additionally, although the Midwest has the highest share of MH-friendly jurisdictions, it has the second lowest mean number of shipments (about 1,550). According to Census Bureau data, the Midwest has also the lowest average sales price of manufactured homes with more than two sections. This further highlights the opportunity in the Midwest – not only in terms of zoning, but also from a pricing standpoint; consumers could benefit from lower prices in that region. Lastly, the West and the Midwest received a similar number of units, with shipments in the West being slightly higher.

Freddie Mac also looked at the characteristics of communities that are accepting of and welcoming to manufactured housing. Exhibit 8 shows demographic traits of these communities. On average, MH-friendly communities contain 17% Hispanic, 13% Black, 6% Asian, about 0.4% American Indian or Alaska Native, and 60% White residents. For comparison, in the 2020 HMDA data for site-built home purchases, Black borrowers represented more than 7% and Hispanic borrowers represented 9% of the market. Moreover, an average person living in an MH-friendly metro area has a yearly income<sup>9</sup> of about \$61,000. Manufactured home loans in MH-friendly metros<sup>10</sup> are more prevalent among people between 25 and 34 years old. Consumers aged 55 to 64 are the second largest demographic with manufactured housing loans. In addition, the average homeownership rate in MH-friendly metros is about 65%; the average share of Black and Hispanic mortgage-ready consumers in these communities is approximately 26%. Go to Appendix B, Exhibit B.3 for detailed profiles of communities that are welcoming to manufactured housing.

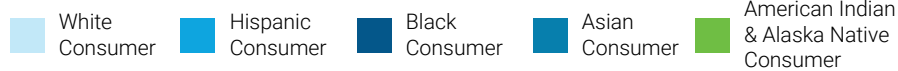
<sup>9</sup> Income refers to income per capita.

<sup>10</sup> 2020 HMDA data are missing age data on loans for some age groups in five MH-friendly communities.

## Exhibit 8: Race and Ethnicity in MH-Friendly Metropolitan Areas



### RACE & ETHNICITY IN MH FRIENDLY METRO AREAS



**Notes:** The percentages represent the mean across all MH friendly metropolitan areas (see Appendix) for a breakdown of race by metro area).

Asians include Native Hawaiians and Pacific Islanders. Whites, Blacks, Asians, America Indians and Native Alaskans are non-Hispanic members of these racial groups.

**Source:** Freddie Mac's calculations using 2019 and 2020 demographic data from Census Bureau and Brookings Institute.

It is important to note that additional market opportunities could arise for manufactured housing if zoning were less stringent. In fact, we identified areas of potential opportunity and calculated how many mortgage-ready consumers reside in these metropolitan areas, as shown in Exhibit 9. We estimate that an additional 1.08 million individuals could benefit if zoning were less stringent in these metro areas.

## Exhibit 9: Market Opportunity in Metro Areas with Less Stringent Zoning

METROPOLITAN AREA	REGION	NUMBER OF "MORTGAGE-READY" CONSUMERS	NUMBER OF LOW TO MODERATE INCOME (LMI) <sup>11</sup> "MORTGAGE-READY" CONSUMERS
San Jose-Sunnyvale-Santa Clara, CA	West	446,000	408,000
Santa Rosa, CA	West	73,000	64,000
Vallejo-Fairfield, CA	West	56,000	50,000
Bridgeport-Stamford-Norwalk, CT	Northeast	146,000	127,000
Ann Arbor, MI	Midwest	60,000	52,000
Muskegon, MI	Midwest	13,000	9,000
Ocean City, NJ	Northeast	10,000	8,000
Trenton, NJ	Northeast	53,000	47,000

<sup>11</sup> The number of LMI mortgage-ready consumers is a subset of the total number of mortgage-ready consumers in each metro area listed in Exhibit 9.



METROPOLITAN AREA	REGION	NUMBER OF "MORTGAGE-READY" CONSUMERS	NUMBER OF LOW TO MODERATE INCOME (LMI) <sup>12</sup> "MORTGAGE-READY" CONSUMERS
Shawnee, OK	South	5,000	3,000
Memphis, TN-MS-AR	South	112,000	74,000
Ogden-Clearfield, UT	West	80,000	66,000
Olympia-Tumwater, WA	West	35,000	29,000

**Note:** Mortgage-ready numbers are rounded up to the nearest thousand. LMI refers to low- to moderate-income consumers, with incomes up to 100% of the area median income.

**Source:** Mortgage-readiness is based on Freddie Mac calculations using anonymized credit bureau data for January 2021.

## IV. CONCLUSIONS

Manufactured housing has been gaining visibility as increasingly important to meeting the nation's need for safe, affordable housing. However, it historically has accounted for only around 10% of the housing supply. Freddie Mac's analysis in response to industry requests for insight into factors that may be holding back the market and opportunities to move it forward revealed that, while more stringent zoning regulations constrained manufactured housing ownership, many jurisdictions present opportunities.

Through our analysis, we identified areas with immediate opportunities for manufactured housing to help alleviate the housing shortage. For example, the Midwest contains the greatest share of jurisdictions that we identified as MH friendly, but that region receives the second lowest number of MH shipments. More individuals and developers might benefit from considering manufactured homes as an attractive, affordable housing solution in these jurisdictions. Areas that currently are not MH friendly and housing-constrained may benefit from reexamining the factors that influence housing in those areas and considering the examples set by jurisdictions that are friendlier to manufactured housing.

Also based on our findings, nearly 25 million people living in MH-friendly jurisdictions are "mortgage ready" today. An additional 1.08 million individuals could benefit from manufactured housing if zoning was less stringent in some jurisdictions in our data. In addition, MH-friendly jurisdictions contain a larger share of Black and Hispanic potential homebuyers, when compared to recent buyers of site-built homes.

Besides zoning however, perceptions significantly affect decisions around manufactured housing. Many consumers imagine manufactured homes as unattractive, unsafe, a bad investment and lenders are concerned about loan performance. In reality, manufactured homes are built to strict standards of quality established nationally by the U.S. Department of Housing and Urban Development, attractive, resilient, energy-efficient, and appreciate in value at about the same rate as site-built homes (Goodman et al., 2018). Although we attempted to control for perceptions in our analysis, more research is needed to understand the influence of perceptions on zoning and homebuying decisions. More work also needs to be done to help dispel long-held misperceptions.

Perceptions among younger people already may be changing, based on our findings that Millennials hold the highest percentage of manufactured home loans. Given that Millennials are the largest generation and just entering prime homebuying years, the pace of the manufactured housing market's growth may increase naturally to an extent. This cohort also could serve as advocates, promoting the benefits of manufactured homes to others and thereby increasing market opportunity.

The opportunity for manufactured housing to play a larger role in increasing affordable housing supply is great; so are the challenges. Working collaboratively across the housing ecosystem will be essential to lowering barriers and making the most of the opportunity.

<sup>12</sup> The number of LMI mortgage-ready consumers is a subset of the total number of mortgage-ready consumers in each metro area listed in Exhibit 9.

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## Appendix A: Data and Methodology

### I. Data

Information from the 2020 Home Mortgage Disclosure Act (HMDA), National Longitudinal Land Use Survey (NLLUS) 2019, the Manufactured Housing Institute (MHI), the Wharton Residential Land Use Index survey (WRLURI 2018), and data compiled by Virginia Tech for the U.S. Department of Housing and Urban Development were combined to produce a consolidated dataset that summarizes MH, zoning, and land use information from these four sources. A total of 825 jurisdictions across 32 states were matched using on [Federal Information Processing System \(FIPS\) codes](#), which provide a standardized system for identifying various levels of geography (states, counties, core-based statistical areas (CBSAs), places, and more).

The observational unit in the consolidated dataset is the jurisdiction whereas data from MHI are at the state level. Jurisdictions within the same state were assigned the same indicators as those of their respective states. One variable was affected by the above: treatment of MH in zoning laws. As it pertains to the latter variable, our approach is validated by the mere legal fact that the state has zoning authority. The same strategy was also used for the State Regulatory Inclusionary Index retrieved from data compiled by Virginia Tech for the U.S. Department of Housing and Urban Development. Manufactured home loans as a percentage of total loans were retrieved from the 2020 HMDA and is available at the county level. We employed a similar approach by assigning the same value to jurisdictions within the same county. Relating to the remaining variables from the other sources, observations were available at the jurisdiction level.

### Summary Statistics

Density restrictions are often used to constrain supply of new housing (Gyourko et al., 2019). Exhibit 2 shown in the main text summarizes the Density Restrictions Index (DRI). We, however, provide additional details and offer more insights and statistics linking DRI to other relevant information relating to manufactured home loans.

The DRI was constructed as a subindex of the WRLURI by asking respondents in the 2018 WRLURI whether minimum lot-size requirements are in place and, if so, what the largest minimum lot size is for any neighborhood within the same jurisdiction. This subindex was divided into five categories and takes on the following values:

- DRI = 0 if there is no minimum lot size regulation anywhere in the jurisdiction
- = 1 if there is a minimum, but it is no larger than 0.5 acres
- =2 if there is a minimum, and the largest one is from 0.5-1.0 acres
- =3 if there is a minimum, and the largest one is from 1.0-2.0 acres
- =4 if there is a minimum, and the largest one is for more than 2 acres.

There is 2% difference between the share of jurisdictions that require a largest minimum lot size between 0.5 and 1 acres and those in which the largest minimum lot size is between 1 to 2 acres (15.99% vs 13.98% respectively). Exhibit A.1 shows how the DRI varies with the treatment of MH in state-level zoning laws. In the first row, 173 jurisdictions are in states where cities are required to prohibit outright bans of manufactured homes and must allow them in some area(s) within the city. Within those jurisdictions, a DRI of 1 (lot size requirement of up to 0.5 acres) is most common (36%). In contrast, 175 jurisdictions do not have state laws on zoning preemption regarding MH placement (Level 3). Of these, 30% have a minimum lot-size requirement of up to 0.5 acres.

## Exhibit A.1: Treatment of MH in Zoning Laws and Density Restriction Index

Zoning Laws	DRI					Total
	0	1	2	3	4	
Level 1	6	63	34	30	40	<b>173</b>
	3.47 %	36.42%	19.65%	17.34%	23.12%	<b>100%</b>
Level 2	20	190	56	52	128	<b>446</b>
	4.48%	42.60%	12.56%	11.66%	28.70%	<b>100 %</b>
Level 3	14	52	37	29	43	<b>175</b>
	8%	29.71%	21.14 %	16.57 %	24.57 %	<b>100 %</b>
<b>TOTAL</b>	<b>40</b>	<b>305</b>	<b>127</b>	<b>111</b>	<b>211</b>	<b>794</b>
	<b>5.04%</b>	<b>38.41%</b>	<b>15.99%</b>	<b>13.98%</b>	<b>26.57%</b>	<b>100 %</b>

**Source:** Freddie Mac's calculations using the 2018 WRLURI.

DRI: Density Restrictions Index  
 DRI= 0 if there is no minimum lot size regulation anywhere in the jurisdiction  
 = 1 if there is a minimum, but it is no larger than 0.5 acres  
 =2 if there is a minimum, and the largest one is from 0.5-1.0 acres  
 =3 if there is a minimum, and the largest one is from 1.0-2.0 acres  
 =4 if there is a minimum, and the largest one is for more than 2 acres

Next, Exhibit A.2 shows some statistics about manufactured housing and Wharton Residential Land Use Regulatory Index, 2018 (WRLURI). WRLURI measures how stringent regulation around residential land use is. Higher values of this index indicate stricter regulation around residential land use. Note that the mean of WRLURI varies slightly by levels of treatment of MH in zoning laws (between 0.1 and 0.35 across all three levels).

## Exhibit A.2: Zoning Laws and the Mean WRLURI

WRLURI		
Zoning Laws	Frequency	Mean
Level 1	166	0.10
Level 2	426	0.35
Level 3	168	0.19

**Source:** Freddie Mac's calculations using the 2018 WRLURI survey and 2021 data from the Manufactured Housing Institute.

**Level 1:** Jurisdiction is required to prohibit outright bans and must allow for MH in some areas within the city.

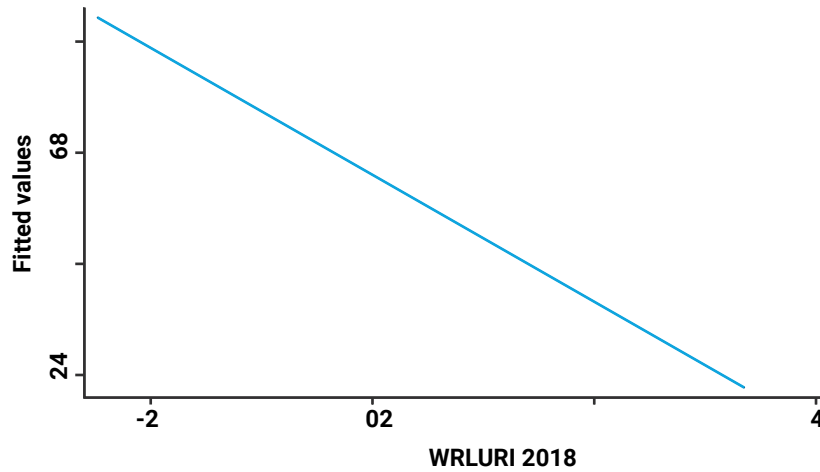
**Level 2:** Jurisdiction is prohibited from outright banning MH but is allowed to impose the same building standards to both manufactured and site-built homes.

**Level 3:** No state laws on zoning preemption for MH owners.

## II. Methodology

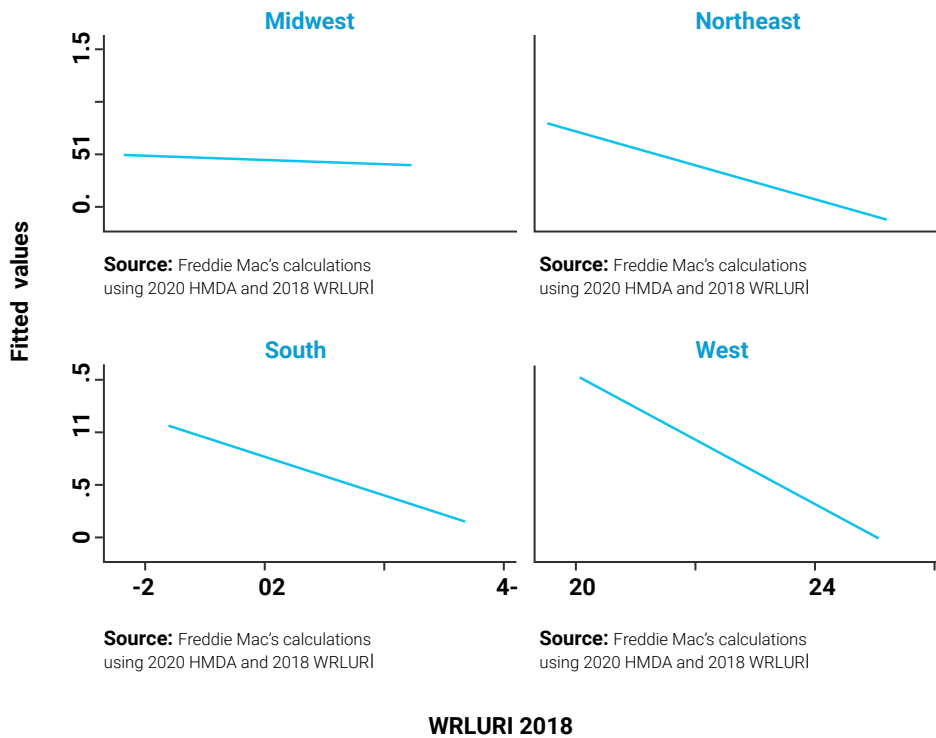
Freddie Mac began by assessing the relationship between zoning and MH loans as a percentage of total loans using a Pearson correlation analysis. Exhibit A.3 plots the linear prediction of MH loans and WRLURI in the overall sample while Exhibit A.4 breaks down the relationship by region. Exhibit A.4 suggests that the relationship between MH loans as a percent of total loans and WRLURI is strongest in the Northeast and the West as the slope is steeper in these regions. These relationships are statistically significant at the 1% level (see Exhibit A.5).

### Exhibit A.3: Linear Prediction of MH as a Percentage of Total Loans by WRLURI



Source: Freddie Mac's calculations using 2018 WRLURI and 2020 HMDA.

### Exhibit A.4: Linear Prediction of MH as a Percentage of Total Loans by WRLURI and by Region





## Exhibit A.5: Correlation Coefficients between WRLURI and MH as a Percentage of Total Loans by Region

SOUTH	NORTHEAST	WEST	MIDWEST
-0.16**	-0.3***	-0.27***	-0.02

\*\*Significant at the 5% level

\*\*\*Significant at the 1% level

Aside from zoning, many factors could influence MH loans as a percentage of total loans. Therefore, correlation analysis alone does not reveal the full picture and could lead to biased results. To better estimate the relationship between zoning and manufactured housing, we leveraged modern machine-learning and statistical tools.

The first step in modeling the relationship between our two variables of interest was to choose relevant covariates that are associated with MH loans as a percentage of total loans. We used machine learning in the variable-selection stage to help us decide which variables to include in the statistical models. The machine-learning model we used is the Least Absolute Shrinkage and Selection Operator (LASSO) with the “post-double-selection” methodology by Belloni et al. (2012, 2013, 2014, 2015 and 2016). This method employs a LASSO twice and has been demonstrated to allow for imperfect selection of controls while providing confidence intervals that are valid uniformly across a large class of models (Belloni et al, 2014, 2016). As a robustness check, we also implemented an elastic net (Zou and Hastie, 2005) and ridge regression (Tikhonov, 1963; Hoerl and Kennard, 1970) and similar variables were selected in all approaches. Given the variables selected by the machine-learning model, we used econometric models to predict the impact of zoning on MH loans as a percent of total loans.

The ordinary Least Squares estimator was considered first. This method is most efficient under exogeneity and when distributional assumptions are not violated. However, MH as a percent of total loans is right skewed (skewness is equal to 3.92) and contains a few zeros. This suggests that the OLS estimator could produce biased and inconsistent results.

In fact, upon further inspection, the distribution of MH as a percentage of total loans is more like a Poisson distribution. Applied researchers sometimes use log normal distribution to handle right-skewed data that exhibit similar traits to ours. However, it is preferable to use Poisson here because it is more robust if the Huber White variance covariance estimator is used (Cameron and Trivedi, 2010; Wooldridge, 2010; Silva and Torenayo 2006). Further, Poisson can handle the zeros whereas the log of zero is infinity. Moreover, the expected value of the log of MH is different from the expected value of MH, further highlighting why Poisson is superior to log normal in this instance. It is important to note that Poisson assumes full participation, meaning that the zeros are natural zeros. In our case, this means that all jurisdictions in the sample participated. Intuitively, one can think of the concept of participation in the following example. In an earned income model where, one is interested in using a set of influencer variables to predict income, a zero in that context means that the individual did not participate in the labor market. Therefore, a statistician would say that, in our earnings example, a zero is not a natural zero and implies there is not full participation as the individuals who earned no income were not part of the labor force.

However, in our case, when MH as a percentage of total loans is equal to zero, it does not necessarily mean that the jurisdiction with the zero did not participate in the mortgage market. A zero simply means that there were no manufactured home loans out of all loans in that jurisdiction. Therefore, it is possible to argue that participation is not an issue and a Poisson with standard errors estimated using the Huber White variance covariance estimator is more suitable.

One may have a different perspective on participation. Given that placement of MH is constrained by zoning laws, it is possible to argue that a jurisdiction with zero percent of MH loans means that the jurisdiction could not participate as zoning in that jurisdiction does not allow placement of MH. Our variable relating to zoning regulations does not allow us to confirm this as no zoning preemption does not necessarily imply prohibition from placing MH in a jurisdiction. One could therefore argue that the share of MH loans in our data is generated by two processes: one that explains what drives whether we see a MH loan and another that predicts the share of MH loans as a percent of total loans. If the likelihood is indeed separable, a zero inflated model is more appropriate.

A zero inflated model is a class of statistical models for data that contains an excess of zeros where the zeros result from a separate data-generation process. The first part of the zero-inflated model uses a binary choice model to predict the probability of a jurisdiction having no MH loans or at least one MH loan. We estimated the model using logistic regression (logit) by penalized maximum likelihood as we ran into a quasi-complete separation issue where some covariates predicted success perfectly.

The second part of the zero inflated model predicts the strictly positive portion of the distribution or the share of MH loans in a jurisdiction. Given that distribution is right skewed, we estimated the model using a Generalized Linear Model (GLM) with Gamma distribution and a log link function.

Exhibits A.6, A.7 and A.8 show the full estimation results while Exhibit A.9 summarizes results for variables that are statistically significant. Recall that zoning laws or the stringency of regulation around residential land use is measured using the WRLURI. Results are consistent across all methods. We found that the more stringent regulation around residential land use is, the lower the percentage of manufactured home loans as a percentage of total loans. The marginal effects on the WRLURI variable that capture the magnitude of the effect of land-use regulation on MH loans as a percentage total loans are reported in the exhibits named above. Our results suggest that a unit increase in WRLURI leads to a decrease in the share of MH loans of about -0.2.

The models also predict that other relevant variables are associated with MH loans as a percentage of total loans. For example, we found that, compared to the South and the Northeast regions, jurisdictions in the West have a higher share of MH loans. In fact, being in the West increases MH as a percentage of total loans by 0.2% to 0.3%. The results also suggest that counties where builders are required to have an affordable housing program to build there tend to have a lower share of MH loans compared to those who don't impose that requirement.

Finally, Exhibit A.10 shows marginal effects from estimation of the logit by penalized maximum likelihood. Results suggest that jurisdictions in the West and Midwest have a higher likelihood of having at least one MH loan relative to those in the South or Northeast. Jurisdictions where builders are required to have an affordable housing program are associated with a higher likelihood of at least one MH loan. Finally, jurisdictions located in states with no state laws on zoning preemption and those that must allow MH in some area within the city have a higher likelihood of at least one MH loan compared to places that must allow MH but can still impose some building standards to MH.



## Exhibit A.6: Estimates from the OLS Estimator

percentmh2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
WRLURI18	-.1768107	.0715267	-2.47	0.014	-.317232	-.0363895
DRI18						
mlls <0.5	.0353539	.1236938	0.29	0.775	-.2074819	.2781897
mlls:0.5-1	.128439	.1433344	0.90	0.371	-.1529552	.4098332
mlls:1-2	.0105818	.1310123	0.08	0.936	-.2466218	.2677853
mlls>2	.0482083	.1261665	0.38	0.702	-.1994818	.2958985
1.OSI18	.0650499	.0670149	0.97	0.332	-.0665139	.1966137
lzai						
1	-.2252898	.1030834	-2.19	0.029	-.4276633	-.0229164
2	-.0478889	.0821766	-0.58	0.560	-.209218	.1134403
4	.1023002	.0953423	1.07	0.284	-.084876	.2894764
5	-.0040524	.1053984	-0.04	0.969	-.2109707	.2028659
lpai						
1	-.1060776	.0722517	-1.47	0.142	-.2479223	.035767
4	-.063731	.0929899	-0.69	0.493	-.2462889	.1188269
5	.0695873	.115646	0.60	0.548	-.1574491	.2966236
1.LAI18	.0001073	.0715671	0.00	0.999	-.1403934	.140608
spii						
3	-.0259173	.0819231	-0.32	0.752	-.1867488	.1349141
4	.0929276	.0941894	0.99	0.324	-.0919852	.2778404
5	-.1348378	.1111058	-1.21	0.225	-.3529608	.0832853
cii						
4	-.0771429	.0658886	-1.17	0.242	-.2064954	.0522096
5	-.0441746	.0879808	-0.50	0.616	-.2168987	.1285495
6	.2049818	.1282011	1.60	0.110	-.0467028	.4566664
1.AHI18	-.1712485	.0735686	-2.33	0.020	-.3156786	-.0268185
region						
1	.2935076	.127198	2.31	0.021	.0437924	.5432229
2	-.1406893	.0682755	-2.06	0.040	-.2747277	-.0066508
4H_Protection						
Level 3	.1040106	.1044602	1.00	0.320	-.1010658	.309087
Level 1	-.2360239	.0581025	-4.06	0.000	-.3500907	-.1219571
_cons	.5931002	.1556097	3.81	0.000	.2876071	.8985933

**Note:** WRLURI: Wharton Residential Land Use Regulatory Index.

DRI: Density Restrictions Index and mlls indicates lot size requirements where mlls<0.5 means the jurisdiction requires a minimum lot size of up to 0.5 acres

OSI: Open Space Index, indicates that some type of mandatory space provision is required.

LZAI: Local Zoning Approval Index, pertains to projects that require some type of variance or change to the local zoning code and takes on values 0-18 (see Gyourko et al., 2019).

LPAI: Local Project Approval Index, pertains to projects that do require some type of variance to the current zoning code and could take on values 0-18 (see Gyourko et al., 2019).

LAI: Local Assembly Index, measures whether the local regulatory environment requires some type of direct democracy involvement of the local population and takes on values 0-2 (see Gyourko et al., 2019).

SPII: State Political Involvement Index, measures how involved is the state legislature in influencing residential building activities and or growth management procedures and ranges from 0 (no involvement) to 5 (very involved)

CII: Court Involvement Index, ranges from 2 to 10 (see Gyourko et al., 2019).

AHI: Affordable Housing Index, means that the county requires a county to have an affordable housing program to build in that jurisdiction.

Region: indicates in which region the jurisdiction is located where a "1" means West and "2" means Midwest.

Dj\_MH\_Protection: measures treatment of MH in state zoning laws where "Level 1" means jurisdiction prohibits outright bans of MH and must allow for MH in some area within the city and "Level 3" means no state laws on zoning preemption.

Subsumed in the intercept are jurisdictions in the South or Northeast, those that must allow MH but could impose building standards but could impose building standards. Also subsumed in the intercept are jurisdictions where builders are not required to have an AHI, those with an LZAI of 0, 3, 6, 7, 8 or 9; jurisdictions with a largest minimum lot size less than 2 acres; jurisdictions with a LPAI equal to 0, 3, 6, 7, 8, 9, 11 or 12; jurisdictions with an SPII of 1 or 2; jurisdictions with a CII of 2, 3, 7, 8, 9 or 10.

## Exhibit A.7: Marginal Effects from Estimation of the Poisson

	dy/dx	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
WRLURI18	-.1772624	.0690118	-2.57	0.010	-.312523	-.0420019
DRI18						
mlls <0.5	.0249892	.1025335	0.24	0.807	-.1759728	.2259513
mlls:0.5-1	.12643	.1260175	1.00	0.316	-.1205598	.3734197
mlls:1-2	-.0026455	.1155323	-0.02	0.982	-.2290847	.2237936
mlls>2	.0522915	.1103542	0.47	0.636	-.1639988	.2685818
1.OSI18	.0702035	.0612167	1.15	0.251	-.0497791	.190186
lzai						
1	-.1852192	.0849826	-2.18	0.029	-.351782	-.0186565
2	-.0409855	.073903	-0.55	0.579	-.1858328	.1038617
4	.1162748	.1097946	1.06	0.290	-.0989187	.3314683
5	-.0038069	.1212585	-0.03	0.975	-.2414692	.2338554
lpai						
1	-.0976242	.0633385	-1.54	0.123	-.2217655	.026517
4	-.0693062	.0965243	-0.72	0.473	-.2584902	.1198779
5	.0621486	.1459144	0.43	0.670	-.2238384	.3481356
1.LAI18	-.0045663	.0665838	-0.07	0.945	-.1350682	.1259356
spii						
3	-.027512	.0845996	-0.33	0.745	-.1933241	.1383001
4	.1111334	.1135056	0.98	0.328	-.1113335	.3336002
5	-.140006	.1009468	-1.39	0.165	-.337858	.057846
cii						
4	-.0762968	.0660577	-1.16	0.248	-.2057674	.0531739
5	-.0623259	.0969359	-0.64	0.520	-.2523167	.1276649
6	.2497506	.1733113	1.44	0.150	-.0899332	.5894345
1.AHI18	-.1940589	.0708376	-2.74	0.006	-.332898	-.0552198
region						
1	.3244913	.1430235	2.27	0.023	.0441704	.6048122
2	-.1262026	.0611648	-2.06	0.039	-.2460835	-.0063218
Dj_MH_Protection						
Level 3	.0944784	.1001589	0.94	0.346	-.1018294	.2907862
Level 1	-.2426815	.0540832	-4.49	0.000	-.3486825	-.1366804

**Note:** See bottom of Exhibit B.6 for dictionary of variables.



## Exhibit A.8: Marginal Effects from Estimation of the Second Part of the Zero Inflated Model

	Delta-method		z	P> z	[95% Conf. Interval]	
	dy/dx	Std. Err.				
WRLURI18	-.1774245	.053309	-3.33	0.001	-.2819082	-.0729409
DRI18						
mlls <0.5	-.0397202	.1042866	-0.38	0.703	-.2441181	.1646778
mlls:0.5-1	.0667021	.1257632	0.53	0.596	-.1797893	.3131934
mlls:1-2	-.0746668	.1143936	-0.65	0.514	-.2988742	.1495406
mlls>2	-.0180246	.1082543	-0.17	0.868	-.2301992	.1941499
1.OSI18	.095971	.0608512	1.58	0.115	-.0232952	.2152373
lzai						
1	-.1480295	.0838265	-1.77	0.077	-.3123265	.0162675
2	-.0130686	.0640124	-0.20	0.838	-.1385306	.1123933
4	.0982112	.1062921	0.92	0.355	-.1101174	.3065398
5	.020533	.1239393	0.17	0.868	-.2223836	.2634496
lpai						
1	-.0656816	.0616875	-1.06	0.287	-.1865869	.0552236
4	-.0524571	.1003948	-0.52	0.601	-.2492273	.1443131
5	.1352532	.1861448	0.73	0.467	-.2295839	.5000903
1.LAI18	-.004767	.058114	-0.08	0.935	-.1186683	.1091344
spi						
3	.0227188	.0777728	0.29	0.770	-.1297132	.1751507
4	.1630397	.1096711	1.49	0.137	-.0519118	.3779911
5	-.1000514	.0915719	-1.09	0.275	-.2795291	.0794263
cii						
4	-.0784245	.062642	-1.25	0.211	-.2012004	.0443515
5	-.0324311	.1038241	-0.31	0.755	-.2359226	.1710604
6	.2162324	.1595691	1.36	0.175	-.0965172	.528982
1.AHI18	-.1439108	.070301	-2.05	0.041	-.2816982	-.0061234
region						
1	.1893632	.1020475	1.86	0.064	-.0106462	.3893726
2	-.1545626	.0734215	-2.11	0.035	-.298466	-.0106591
Dj_MH_Protection						
Level 3	-.007656	.0948155	-0.08	0.936	-.193491	.1781789
Level 1	-.3039355	.0589176	-5.16	0.000	-.4194119	-.1884592

**Note:** See bottom of Exhibit B.6 for dictionary of variables.



## Exhibit A.9: Effect of Regulation around Residential Land Use on MH Loans as a Percentage of Total Loans

	(OLS)	(POISSON)	(ZIM)
	Percent MH	Percent MH	Percent MH
WRLURI18	-.177** (0.072)	-.177*** (0.069)	-.177*** (0.053)
LZAI=1	-.225** (0.103)	-.185** (0.085)	-.148* (0.083)
AHI	-.171** (0.074)	-.194*** (0.070)	-.143* (0.070)
West	.294** (0.127)	.32** (0.143)	.189* (0.102)
Midwest	-.141** (0.068)	-.126** (0.061)	-.154** (0.073)
Level 1 Zoning	-.236*** (0.058)	-.242*** (0.054)	-.303*** (0.059)
Observations	760.000	760.000	742.000
(Pseudo) R <sup>2</sup>	0.088	0.062	

Relevant predictors are reported.  
 ZIM: Second Part of the Zero Inflated Model.  
 Standard errors in parentheses.  
 \*Significant at the 10% level  
 \*\*Significant at the 5% level  
 \*\*\*Significant at the 1% level



## Exhibit A.10: Marginal Effects from Estimation of the First Part of the Zero Inflated Model

	Delta-method		z	P> z	[95% Conf. Interval]	
	dy/dx	Std. Err.				
WRLURI18	-.2307862	.4028125	-0.57	0.567	-1.020284	.5587117
DRI18						
mlls <0.5	.1863587	1.632428	0.11	0.909	-3.013142	3.38586
mlls:0.5-1	.1803554	1.64295	0.11	0.913	-3.039768	3.400479
mlls:1-2	1.416773	1.835497	0.77	0.440	-2.180735	5.01428
mlls>2	1.285721	1.697779	0.76	0.449	-2.041864	4.613306
1.OSI18	-.1430399	.6316315	-0.23	0.821	-1.381015	1.094935
lzai						
1	2.382671	1.564071	1.52	0.128	-.6828523	5.448194
2	1.059561	.6907355	1.53	0.125	-.2942553	2.413378
4	.7939024	.7551735	1.05	0.293	-.6862105	2.274015
5	-.1498566	.9948469	-0.15	0.880	-2.099721	1.800008
lpai						
1	-.9593843	.6252455	-1.53	0.125	-2.184843	.2660744
4	1.379033	1.00602	1.37	0.170	-.592729	3.350796
5	2.989576	1.885831	1.59	0.113	-.7065843	6.685736
1.LAI18	.2154171	.5488036	0.39	0.695	-.8602182	1.291052
spi						
3	-.0973906	.6514382	-0.15	0.881	-1.374186	1.179405
4	.1695992	1.031616	0.16	0.869	-1.852331	2.19153
5	1.025053	1.681524	0.61	0.542	-2.270674	4.32078
cii						
4	-.1017627	.5694582	-0.18	0.858	-1.21788	1.014355
5	-1.422841	1.039321	-1.37	0.171	-3.459873	.6141912
6	.4895217	1.285949	0.38	0.703	-2.030892	3.009936
1.AHI18	-1.46022	.6918453	-2.11	0.035	-2.816212	-.1042286
region						
1	4.072552	1.43739	2.83	0.005	1.25532	6.889785
2	3.698105	1.49614	2.47	0.013	.7657245	6.630486
Dj_MH_Protection						
Level 3	2.178963	.9110614	2.39	0.017	.3933154	3.96461
Level 1	1.971167	.8859884	2.22	0.026	.2346613	3.707672

**Note:** See bottom of Exhibit B.6 for dictionary of variables.

## Appendix B: Additional Exhibits

### Exhibit B.1: List of MH-Friendly Jurisdictions

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>13</sup>
Nashua	Hillsborough County	Boston	city	NH	Northeast	1
Derry	Rockingham County	Boston	town	NH	Northeast	1
Bensenville	DuPage County	Chicago	village	IL	Midwest	1
Westchester	Cook County	Chicago	village	IL	Midwest	1
Niles	Cook County	Chicago	village	IL	Midwest	1
Countryside	Cook County	Chicago	city	IL	Midwest	1
Oak Forest	Cook County	Chicago	city	IL	Midwest	1
Justice	Cook County	Chicago	village	IL	Midwest	1
Schiller Park	Cook County	Chicago	village	IL	Midwest	1
Homewood	Cook County	Chicago	village	IL	Midwest	1
Western Springs	Cook County	Chicago	village	IL	Midwest	1
Evanston	Cook County	Chicago	city	IL	Midwest	1
Mount Prospect	Cook County	Chicago	village	IL	Midwest	1
Palatine	Cook County	Chicago	village	IL	Midwest	1
Brookfield	Cook County	Chicago	village	IL	Midwest	1
Warrenville	DuPage County	Chicago	city	IL	Midwest	1
Addison	DuPage County	Chicago	village	IL	Midwest	1
Bartlett	DuPage County	Chicago	village	IL	Midwest	1
Carol Stream	DuPage County	Chicago	village	IL	Midwest	1
Westmont	DuPage County	Chicago	village	IL	Midwest	1
Elburn	Kane County	Chicago	village	IL	Midwest	1
South Elgin	Kane County	Chicago	village	IL	Midwest	1
Deerfield	Lake County	Chicago	village	IL	Midwest	1
Homer Glen	Will County	Chicago	village	IL	Midwest	1
Plainfield	Will County	Chicago	village	IL	Midwest	1
New Lenox	Will County	Chicago	village	IL	Midwest	1
St. John	Lake County	Chicago	town	IN	Midwest	1
Hammond	Lake County	Chicago	city	IN	Midwest	1

<sup>13</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>14</sup>
Oxford	Butler County	Cincinnati	city	OH	Midwest	1
Blue Ash	Hamilton County	Cincinnati	city	OH	Midwest	1
Mariemont	Hamilton County	Cincinnati	village	OH	Midwest	1
Silverton	Hamilton County	Cincinnati	village	OH	Midwest	1
Fairview Park	Cuyahoga County	Cleveland	city	OH	Midwest	1
Berea	Cuyahoga County	Cleveland	city	OH	Midwest	1
South Euclid	Cuyahoga County	Cleveland	city	OH	Midwest	1
Painesville	Lake County	Cleveland	city	OH	Midwest	1
Medina	Medina County	Cleveland	city	OH	Midwest	1
Ravenna	Portage County	Cleveland	city	OH	Midwest	1
Concord	Delaware County	Columbus	township	OH	Midwest	1
Westerville	Franklin County	Columbus	city	OH	Midwest	1
Gahanna	Franklin County	Columbus	city	OH	Midwest	1
Worthington	Franklin County	Columbus	city	OH	Midwest	1
Circleville	Pickaway County	Columbus	city	OH	Midwest	1
Davison	Genesee County	Detroit	township	MI	Midwest	1
Grand Blanc	Genesee County	Detroit	township	MI	Midwest	1
Sterling Heights	Macomb County	Detroit	city	MI	Midwest	1
Mount Clemens	Macomb County	Detroit	city	MI	Midwest	1
Macomb	Macomb County	Detroit	township	MI	Midwest	1
Troy	Oakland County	Detroit	city	MI	Midwest	1
Oak Park	Oakland County	Detroit	city	MI	Midwest	1
West Bloomfield	Oakland County	Detroit	township	MI	Midwest	1
Lake Orion	Oakland County	Detroit	village	MI	Midwest	1
Fenton	Oakland County	Detroit	city	MI	Midwest	1
Wixom	Oakland County	Detroit	city	MI	Midwest	1
Ferndale	Oakland County	Detroit	city	MI	Midwest	1
Port Huron	St. Clair County	Detroit	township	MI	Midwest	1
Riverview	Wayne County	Detroit	city	MI	Midwest	1
Woodhaven	Wayne County	Detroit	city	MI	Midwest	1
Trenton	Wayne County	Detroit	city	MI	Midwest	1

<sup>14</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>15</sup>
Grosse Pointe Woods	Wayne County	Detroit	city	MI	Midwest	1
Rockford	Kent County	Grand Rapids	city	MI	Midwest	1
Grandville	Kent County	Grand Rapids	city	MI	Midwest	1
Byron	Kent County	Grand Rapids	township	MI	Midwest	1
Fernandina Beach	Nassau County	Jacksonville	city	FL	South	1
Merriam	Johnson County	Kansas City	city	KS	Midwest	1
El Segundo	Los Angeles County	Los Angeles	city	CA	West	1
Lakewood	Los Angeles County	Los Angeles	city	CA	West	1
Bellflower	Los Angeles County	Los Angeles	city	CA	West	1
San Fernando	Los Angeles County	Los Angeles	city	CA	West	1
Bell	Los Angeles County	Los Angeles	city	CA	West	1
Paramount	Los Angeles County	Los Angeles	city	CA	West	1
Bell Gardens	Los Angeles County	Los Angeles	city	CA	West	1
Garden Grove	Orange County	Los Angeles	city	CA	West	1
Fontana	San Bernardino County	Los Angeles	city	CA	West	1
Ontario	San Bernardino County	Los Angeles	city	CA	West	1
Clarksville	Clark County	Louisville	town	IN	Midwest	1
North Lauderdale	Broward County	Miami	city	FL	South	1
Miramar	Broward County	Miami	city	FL	South	1
Sunny Isles Beach	Miami-Dade County	Miami	city	FL	South	1
North Miami Beach	Miami-Dade County	Miami	city	FL	South	1
Miami Shores	Miami-Dade County	Miami	village	FL	South	1
Lantana	Palm Beach County	Miami	town	FL	South	1
Saint Michael	Wright County	Minneapolis	city	MN	Midwest	1
Waconia	Carver County	Minneapolis	city	MN	Midwest	1
Mendota Heights	Dakota County	Minneapolis	city	MN	Midwest	1
Apple Valley	Dakota County	Minneapolis	city	MN	Midwest	1
Crystal	Hennepin County	Minneapolis	city	MN	Midwest	1
New Hope	Hennepin County	Minneapolis	city	MN	Midwest	1

<sup>15</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.



COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>16</sup>
Brooklyn Center	Hennepin County	Minneapolis	city	MN	Midwest	1
Robbinsdale	Hennepin County	Minneapolis	city	MN	Midwest	1
Roseville	Ramsey County	Minneapolis	city	MN	Midwest	1
Bayport	Washington County	Minneapolis	city	MN	Midwest	1
Woodbury	Washington County	Minneapolis	city	MN	Midwest	1
Monticello	Wright County	Minneapolis	city	MN	Midwest	1
Mount Juliet	Wilson County	Nashville	city	TN	South	1
East Haven	New Haven County	New Haven	town	CT	Northeast	1
Ocoee	Orange County	Orlando	city	FL	South	1
Port Hueneme	Ventura County	Oxnard	city	CA	West	1
Citrus Heights	Sacramento County	Sacramento	city	CA	West	1
South Salt Lake	Salt Lake County	Salt Lake City	city	UT	West	1
National City	San Diego County	San Diego	city	CA	West	1
Dublin	Alameda County	San Francisco	city	CA	West	1
Alton	Madison County	St. Louis	city	IL	Midwest	1
Glen Carbon	Madison County	St. Louis	village	IL	Midwest	1
Edwardsville	Madison County	St. Louis	city	IL	Midwest	1
Highland	Madison County	St. Louis	city	IL	Midwest	1
Clearwater	Pinellas County	Tampa	city	FL	South	1
Hampton	Rockingham County	Boston	town	NH	Northeast	2
Dover	Strafford County	Boston	city	NH	Northeast	2
North Collins	Erie County	Buffalo	town	NY	Northeast	2
Springville	Erie County	Buffalo	village	NY	Northeast	2
Elma	Erie County	Buffalo	town	NY	Northeast	2
Porter	Niagara County	Buffalo	town	NY	Northeast	2
Somerset	Niagara County	Buffalo	town	NY	Northeast	2
Niagara Falls	Niagara County	Buffalo	city	NY	Northeast	2
Statesville	Iredell County	Charlotte	city	NC	South	2
Huntersville	Mecklenburg County	Charlotte	town	NC	South	2
Waxhaw	Union County	Charlotte	town	NC	South	2
Glendale Heights	DuPage County	Chicago	village	IL	Midwest	2

<sup>16</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>17</sup>
Northfield	Cook County	Chicago	village	IL	Midwest	2
Park Ridge	Cook County	Chicago	city	IL	Midwest	2
Streamwood	Cook County	Chicago	village	IL	Midwest	2
Flossmoor	Cook County	Chicago	village	IL	Midwest	2
Hoffman Estates	Cook County	Chicago	village	IL	Midwest	2
Wilmette	Cook County	Chicago	village	IL	Midwest	2
River Forest	Cook County	Chicago	village	IL	Midwest	2
Northbrook	Cook County	Chicago	village	IL	Midwest	2
Elmhurst	DuPage County	Chicago	city	IL	Midwest	2
West Chicago	DuPage County	Chicago	city	IL	Midwest	2
Woodridge	DuPage County	Chicago	village	IL	Midwest	2
Hinsdale	DuPage County	Chicago	village	IL	Midwest	2
St. Charles	DuPage County	Chicago	city	IL	Midwest	2
Geneva	Kane County	Chicago	city	IL	Midwest	2
Carpentersville	Kane County	Chicago	village	IL	Midwest	2
Yorkville	Kendall County	Chicago	city	IL	Midwest	2
Wauconda	Lake County	Chicago	village	IL	Midwest	2
Lincolnshire	Lake County	Chicago	village	IL	Midwest	2
Vernon Hills	Lake County	Chicago	village	IL	Midwest	2
Grayslake	Lake County	Chicago	village	IL	Midwest	2
Joliet	Will County	Chicago	city	IL	Midwest	2
Romeoville	Will County	Chicago	village	IL	Midwest	2
De Motte	Jasper County	Chicago	town	IN	Midwest	2
Crown Point	Lake County	Chicago	city	IN	Midwest	2
Symmes	Hamilton County	Cincinnati	township	OH	Midwest	2
Middletown	Butler County	Cincinnati	city	OH	Midwest	2
Cincinnati	Hamilton County	Cincinnati	city	OH	Midwest	2
Montgomery	Hamilton County	Cincinnati	city	OH	Midwest	2
Madeira	Hamilton County	Cincinnati	city	OH	Midwest	2
Lebanon	Warren County	Cincinnati	city	OH	Midwest	2
Springboro	Warren County	Cincinnati	city	OH	Midwest	2

<sup>17</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>18</sup>
Broadview Heights	Cuyahoga County	Cleveland	city	OH	Midwest	2
Beachwood	Cuyahoga County	Cleveland	city	OH	Midwest	2
Mayfield Heights	Cuyahoga County	Cleveland	city	OH	Midwest	2
Mentor	Lake County	Cleveland	city	OH	Midwest	2
Delaware	Delaware County	Columbus	city	OH	Midwest	2
Federal Heights	Adams County	Denver	city	CO	West	2
Thornton	Adams County	Denver	city	CO	West	2
Aurora	Arapahoe County	Denver	city	CO	West	2
Superior	Boulder County	Denver	town	CO	West	2
Parker	Douglas County	Denver	town	CO	West	2
Lone Tree	Douglas County	Denver	city	CO	West	2
Castle Rock	Douglas County	Denver	town	CO	West	2
Lakewood	Jefferson County	Denver	city	CO	West	2
Wheat Ridge	Jefferson County	Denver	city	CO	West	2
Greeley	Weld County	Denver	city	CO	West	2
Erie	Weld County	Denver	town	CO	West	2
Gaines	Genesee County	Detroit	township	MI	Midwest	2
Shelby	Macomb County	Detroit	township	MI	Midwest	2
Utica	Macomb County	Detroit	city	MI	Midwest	2
Birmingham	Oakland County	Detroit	city	MI	Midwest	2
Highland	Oakland County	Detroit	township	MI	Midwest	2
Waterford	Oakland County	Detroit	township	MI	Midwest	2
Beverly Hills	Oakland County	Detroit	village	MI	Midwest	2
Clawson	Oakland County	Detroit	city	MI	Midwest	2
Van Buren	Wayne County	Detroit	township	MI	Midwest	2
Grand Rapids	Kent County	Grand Rapids	township	MI	Midwest	2
Walker	Kent County	Grand Rapids	city	MI	Midwest	2
Gaines	Kent County	Grand Rapids	township	MI	Midwest	2
Winston-Salem	Forsyth County	Greensboro	city	NC	South	2
Greensboro	Guilford County	Greensboro	city	NC	South	2
Plainville	Hartford County	Hartford	town	CT	Northeast	2

<sup>18</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>19</sup>
South Windsor	Hartford County	Hartford	town	CT	Northeast	2
Bloomfield	Hartford County	Hartford	town	CT	Northeast	2
Marlborough	Hartford County	Hartford	town	CT	Northeast	2
Columbia	Tolland County	Hartford	town	CT	Northeast	2
Ellington	Tolland County	Hartford	town	CT	Northeast	2
Andover	Tolland County	Hartford	town	CT	Northeast	2
Avon	Hendricks County	Indianapolis	town	IN	Midwest	2
Greenfield	Hancock County	Indianapolis	city	IN	Midwest	2
Plainfield	Hendricks County	Indianapolis	town	IN	Midwest	2
Greenwood	Johnson County	Indianapolis	city	IN	Midwest	2
Beech Grove	Marion County	Indianapolis	city	IN	Midwest	2
Shelbyville	Shelby County	Indianapolis	city	IN	Midwest	2
Gardner	Johnson County	Kansas City	city	KS	Midwest	2
Leavenworth	Leavenworth County	Kansas City	city	KS	Midwest	2
La Mirada	Los Angeles County	Los Angeles	city	CA	West	2
Monterey Park	Los Angeles County	Los Angeles	city	CA	West	2
Whittier	Los Angeles County	Los Angeles	city	CA	West	2
Arcadia	Los Angeles County	Los Angeles	city	CA	West	2
Carson	Los Angeles County	Los Angeles	city	CA	West	2
Pomona	Los Angeles County	Los Angeles	city	CA	West	2
Palmdale	Los Angeles County	Los Angeles	city	CA	West	2
Baldwin Park	Los Angeles County	Los Angeles	city	CA	West	2
Commerce	Los Angeles County	Los Angeles	city	CA	West	2
Lomita	Los Angeles County	Los Angeles	city	CA	West	2
South Gate	Los Angeles County	Los Angeles	city	CA	West	2
Downey	Los Angeles County	Los Angeles	city	CA	West	2
San Marino	Los Angeles County	Los Angeles	city	CA	West	2
Laguna Hills	Orange County	Los Angeles	city	CA	West	2
Stanton	Orange County	Los Angeles	city	CA	West	2
Rancho Santa Margarita	Orange County	Los Angeles	city	CA	West	2

<sup>19</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>20</sup>
Placentia	Orange County	Los Angeles	city	CA	West	2
Seal Beach	Orange County	Los Angeles	city	CA	West	2
La Habra	Orange County	Los Angeles	city	CA	West	2
Fullerton	Orange County	Los Angeles	city	CA	West	2
Beaumont	Riverside County	Los Angeles	city	CA	West	2
La Quinta	Riverside County	Los Angeles	city	CA	West	2
Coachella	Riverside County	Los Angeles	city	CA	West	2
Colton	San Bernardino County	Los Angeles	city	CA	West	2
Upland	San Bernardino County	Los Angeles	city	CA	West	2
South Miami	Miami-Dade County	Miami	city	FL	South	2
Davie	Broward County	Miami	town	FL	South	2
Deerfield Beach	Broward County	Miami	city	FL	South	2
Hollywood	Broward County	Miami	city	FL	South	2
Plantation	Broward County	Miami	city	FL	South	2
Pompano Beach	Broward County	Miami	city	FL	South	2
Aventura	Miami-Dade County	Miami	city	FL	South	2
Champlin	Hennepin County	Minneapolis	city	MN	Midwest	2
Elko New Market	Scott County	Minneapolis	city	MN	Midwest	2
Ham Lake	Anoka County	Minneapolis	city	MN	Midwest	2
Chanhausen	Carver County	Minneapolis	city	MN	Midwest	2
South St. Paul	Dakota County	Minneapolis	city	MN	Midwest	2
Princeton	Mille Lacs County	Minneapolis	city	MN	Midwest	2
North Oaks	Ramsey County	Minneapolis	city	MN	Midwest	2
New Brighton	Ramsey County	Minneapolis	city	MN	Midwest	2
Goodlettsville	Davidson County	Nashville	city	TN	South	2
Springfield	Robertson County	Nashville	city	TN	South	2
Murfreesboro	Rutherford County	Nashville	city	TN	South	2
Cheshire	New Haven County	New Haven	town	CT	Northeast	2
New Haven	New Haven County	New Haven	city	CT	Northeast	2

<sup>20</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.



COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>21</sup>
Edgewater	Bergen County	New York	borough	NJ	Northeast	2
Bloomfield	Essex County	New York	township	NJ	Northeast	2
Peekskill	Westchester County	New York	city	NY	Northeast	2
Newburgh	Orange County	New York	city	NY	Northeast	2
Rye	Westchester County	New York	city	NY	Northeast	2
Williamsburg	Williamsburg city County	Norfolk-Virginia Beach	city	VA	South	2
Mount Dora	Lake County	Orlando	city	FL	South	2
Orlando	Orange County	Orlando	city	FL	South	2
Maitland	Orange County	Orlando	city	FL	South	2
Kissimmee	Osceola County	Orlando	city	FL	South	2
Sandy	Clackamas County	Portland OR	city	OR	West	2
Milwaukie	Clackamas County	Portland OR	city	OR	West	2
St. Helens	Columbia County	Portland OR	city	OR	West	2
Troutdale	Multnomah County	Portland OR	city	OR	West	2
Portland	Multnomah County	Portland OR	city	OR	West	2
Hillsboro	Washington County	Portland OR	city	OR	West	2
Camas	Clark County	Portland OR	city	WA	West	2
Clayton	Johnston County	Raleigh	town	NC	South	2
Smithfield	Johnston County	Raleigh	town	NC	South	2
Raleigh	Wake County	Raleigh	city	NC	South	2
Colonial Heights	Colonial Heights city County	Richmond	city	VA	South	2
Hopewell	Hopewell city County	Richmond	city	VA	South	2
Hilton	Monroe County	Rochester	village	NY	Northeast	2
Fairport	Monroe County	Rochester	village	NY	Northeast	2
Farmington	Ontario County	Rochester	town	NY	Northeast	2
Canandaigua	Ontario County	Rochester	city	NY	Northeast	2
Macedon	Wayne County	Rochester	town	NY	Northeast	2
Walworth	Wayne County	Rochester	town	NY	Northeast	2
Galen	Wayne County	Rochester	town	NY	Northeast	2

<sup>21</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>22</sup>
Lincoln	Placer County	Sacramento	city	CA	West	2
Rocklin	Placer County	Sacramento	city	CA	West	2
Cottonwood Heights	Salt Lake County	Salt Lake City	city	UT	West	2
El Cajon	San Diego County	San Diego	city	CA	West	2
La Mesa	San Diego County	San Diego	city	CA	West	2
Emeryville	Alameda County	San Francisco	city	CA	West	2
San Leandro	Alameda County	San Francisco	city	CA	West	2
Concord	Contra Costa County	San Francisco	city	CA	West	2
San Ramon	Contra Costa County	San Francisco	city	CA	West	2
East Palo Alto	San Mateo County	San Francisco	city	CA	West	2
Des Moines	King County	Seattle	city	WA	West	2
Burien	King County	Seattle	city	WA	West	2
Mercer Island	King County	Seattle	city	WA	West	2
Edmonds	Snohomish County	Seattle	city	WA	West	2
Monroe	Snohomish County	Seattle	city	WA	West	2
Arlington	Snohomish County	Seattle	city	WA	West	2
Everett	Snohomish County	Seattle	city	WA	West	2
Collinsville	Madison County	St. Louis	city	IL	Midwest	2
Chouteau	Madison County	St. Louis	township	IL	Midwest	2
O'Fallon	St. Clair County	St. Louis	city	IL	Midwest	2
Largo	Pinellas County	Tampa	city	FL	South	2
Culpeper	Culpeper County	Washington	town	VA	South	2
Vienna	Fairfax County	Washington	town	VA	South	2
Fairfax	Fairfax city County	Washington	city	VA	South	2
Manassas	Manassas city County	Washington	city	VA	South	2
Union City	Fulton County	Atlanta	city	GA	South	3
Canton	Cherokee County	Atlanta	city	GA	South	3
Marietta	Cobb County	Atlanta	city	GA	South	3
Smyrna	Cobb County	Atlanta	city	GA	South	3
Kennesaw	Cobb County	Atlanta	city	GA	South	3

<sup>22</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>23</sup>
Newnan	Coweta County	Atlanta	city	GA	South	3
Decatur	DeKalb County	Atlanta	city	GA	South	3
Johns Creek	Fulton County	Atlanta	city	GA	South	3
Milton	Fulton County	Atlanta	city	GA	South	3
Sugar Hill	Gwinnett County	Atlanta	city	GA	South	3
Lawrenceville	Gwinnett County	Atlanta	city	GA	South	3
Snellville	Gwinnett County	Atlanta	city	GA	South	3
Duluth	Gwinnett County	Atlanta	city	GA	South	3
McDonough	Henry County	Atlanta	city	GA	South	3
Covington	Newton County	Atlanta	city	GA	South	3
San Marcos	Hays County	Austin	city	TX	South	3
Aberdeen	Harford County	Baltimore	city	MD	South	3
Homewood	Jefferson County	Birmingham	city	AL	South	3
Vestavia Hills	Jefferson County	Birmingham	city	AL	South	3
Mansfield	Bristol County	Boston	town	MA	Northeast	3
Somerset	Bristol County	Boston	town	MA	Northeast	3
Andover	Essex County	Boston	town	MA	Northeast	3
Medford	Middlesex County	Boston	city	MA	Northeast	3
Holliston	Middlesex County	Boston	town	MA	Northeast	3
Ashland	Middlesex County	Boston	town	MA	Northeast	3
Lexington	Middlesex County	Boston	town	MA	Northeast	3
Burlington	Middlesex County	Boston	town	MA	Northeast	3
Hopkinton	Middlesex County	Boston	town	MA	Northeast	3
Woburn	Middlesex County	Boston	city	MA	Northeast	3
Weymouth	Norfolk County	Boston	city	MA	Northeast	3
Norwood	Norfolk County	Boston	town	MA	Northeast	3
Norwell	Plymouth County	Boston	town	MA	Northeast	3
Whitman	Plymouth County	Boston	town	MA	Northeast	3
Revere	Suffolk County	Boston	city	MA	Northeast	3
Fitchburg	Worcester County	Boston	city	MA	Northeast	3
Barre	Worcester County	Boston	town	MA	Northeast	3

<sup>23</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>24</sup>
Fort Mill	York County	Charlotte	town	SC	South	3
Florence	Boone County	Cincinnati	city	KY	South	3
Newport	Campbell County	Cincinnati	city	KY	South	3
Covington	Kenton County	Cincinnati	city	KY	South	3
Allen	Collin County	Dallas-Fort Worth	city	TX	South	3
Richardson	Dallas County	Dallas-Fort Worth	city	TX	South	3
Duncanville	Dallas County	Dallas-Fort Worth	city	TX	South	3
Sachse	Dallas County	Dallas-Fort Worth	city	TX	South	3
Coppell	Dallas County	Dallas-Fort Worth	city	TX	South	3
Mesquite	Dallas County	Dallas-Fort Worth	city	TX	South	3
Grand Prairie	Dallas County	Dallas-Fort Worth	city	TX	South	3
Addison	Dallas County	Dallas-Fort Worth	town	TX	South	3
Lancaster	Dallas County	Dallas-Fort Worth	city	TX	South	3
Carrollton	Denton County	Dallas-Fort Worth	city	TX	South	3
Little Elm	Denton County	Dallas-Fort Worth	city	TX	South	3
Greenville	Hunt County	Dallas-Fort Worth	city	TX	South	3
Forney	Kaufman County	Dallas-Fort Worth	city	TX	South	3
Weatherford	Parker County	Dallas-Fort Worth	city	TX	South	3
Benbrook	Tarrant County	Dallas-Fort Worth	city	TX	South	3
Euless	Tarrant County	Dallas-Fort Worth	city	TX	South	3
Hurst	Tarrant County	Dallas-Fort Worth	city	TX	South	3
Arlington	Tarrant County	Dallas-Fort Worth	city	TX	South	3
Watauga	Tarrant County	Dallas-Fort Worth	city	TX	South	3
Bedford	Tarrant County	Dallas-Fort Worth	city	TX	South	3
Hagerstown	Washington County	Hagerstown	city	MD	South	3
Freeport	Brazoria County	Houston	city	TX	South	3
Rosenberg	Fort Bend County	Houston	city	TX	South	3
Pasadena	Harris County	Houston	city	TX	South	3
Conroe	Montgomery County	Houston	city	TX	South	3
Kansas City	Cass County	Kansas City	city	MO	Midwest	3
Gladstone	Clay County	Kansas City	city	MO	Midwest	3

<sup>24</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>25</sup>
Lake Havasu City	Mohave County	Las Vegas	city	AZ	West	3
Shepherdsville	Bullitt County	Louisville	city	KY	South	3
Cedarburg	Ozaukee County	Milwaukee	city	WI	Midwest	3
Mequon	Ozaukee County	Milwaukee	city	WI	Midwest	3
Norway	Racine County	Milwaukee	town	WI	Midwest	3
Racine	Racine County	Milwaukee	city	WI	Midwest	3
Rochester	Racine County	Milwaukee	village	WI	Midwest	3
Sussex	Waukesha County	Milwaukee	village	WI	Midwest	3
Hartland	Waukesha County	Milwaukee	village	WI	Midwest	3
Oconomowoc	Waukesha County	Milwaukee	city	WI	Midwest	3
Brookfield	Waukesha County	Milwaukee	city	WI	Midwest	3
River Falls	Pierce County	Minneapolis	city	WI	Midwest	3
Chickasha	Grady County	Oklahoma City	city	OK	South	3
Guthrie	Logan County	Oklahoma City	city	OK	South	3
Edmond	Oklahoma County	Oklahoma City	city	OK	South	3
Choctaw	Oklahoma County	Oklahoma City	city	OK	South	3
Warminster	Bucks County	Philadelphia	township	PA	Northeast	3
Phoenixville	Chester County	Philadelphia	borough	PA	Northeast	3
West Chester	Chester County	Philadelphia	borough	PA	Northeast	3
West Goshen	Chester County	Philadelphia	township	PA	Northeast	3
Marple	Delaware County	Philadelphia	township	PA	Northeast	3
Avondale	Maricopa County	Phoenix	city	AZ	West	3
Surprise	Maricopa County	Phoenix	city	AZ	West	3
Eloy	Pinal County	Phoenix	city	AZ	West	3
Harrison	Allegheny County	Pittsburgh	township	PA	Northeast	3
Wilksburg	Allegheny County	Pittsburgh	borough	PA	Northeast	3
Plum	Allegheny County	Pittsburgh	borough	PA	Northeast	3
Upper St. Clair	Allegheny County	Pittsburgh	township	PA	Northeast	3
Penn Hills	Allegheny County	Pittsburgh	township	PA	Northeast	3
Monroeville	Allegheny County	Pittsburgh	city	PA	Northeast	3
West Mifflin	Allegheny County	Pittsburgh	borough	PA	Northeast	3

<sup>25</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.



COMMUNITY	COUNTY	METROPOLITAN AREA	JURISDICTION TYPE	STATE	REGION	MH FRIENDLY TIERS <sup>26</sup>
Wilkins	Allegheny County	Pittsburgh	township	PA	Northeast	3
Bethel Park	Allegheny County	Pittsburgh	city	PA	Northeast	3
Center	Beaver County	Pittsburgh	township	PA	Northeast	3
Cranberry	Butler County	Pittsburgh	township	PA	Northeast	3
Butler	Butler County	Pittsburgh	township	PA	Northeast	3
North Strabane	Washington County	Pittsburgh	township	PA	Northeast	3
Donora	Washington County	Pittsburgh	borough	PA	Northeast	3
Lincoln	Providence County	Providence	town	RI	Northeast	3
Tiverton	Newport County	Providence	town	RI	Northeast	3
Universal City	Bexar County	San Antonio	city	TX	South	3
Schertz	Guadalupe County	San Antonio	city	TX	South	3
Seguin	Guadalupe County	San Antonio	city	TX	South	3
St. Peters	St. Charles County	St. Louis	city	MO	Midwest	3
O'Fallon	St. Charles County	St. Louis	city	MO	Midwest	3
St. Charles	St. Charles County	St. Louis	city	MO	Midwest	3
Shrewsbury	St. Louis County	St. Louis	city	MO	Midwest	3
Manchester	St. Louis County	St. Louis	city	MO	Midwest	3
Ballwin	St. Louis County	St. Louis	city	MO	Midwest	3
Clayton	St. Louis County	St. Louis	city	MO	Midwest	3
Maryland Heights	St. Louis County	St. Louis	city	MO	Midwest	3
Richmond Heights	St. Louis County	St. Louis	city	MO	Midwest	3
Creve Coeur	St. Louis County	St. Louis	city	MO	Midwest	3
Hyattsville	Prince Georges County	Washington	city	MD	South	3

<sup>26</sup>Note that all jurisdictions in Tier 1 are also in Tiers 2 and 3, all jurisdictions in Tier 2 are in Tier 3, however the opposite is not true. In other words, jurisdictions labeled in the table as Tier 2 are those that are in Tier 2 but not in Tier 1 and those labeled as Tier 3 are jurisdictions in Tier 3 but not in Tiers 1 and 2. Therefore, all jurisdictions in the table are in Tier 3. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

## Exhibit B.2: MH Market Opportunities by Metropolitan Area

METROPOLITAN AREA <sup>27</sup>	"MORTGAGE-READY" CONSUMERS	LMI "MORTGAGE-READY" CONSUMERS
Akron, OH	71,000	51,000
Atlanta-Sandy Springs-Roswell, GA	705,000	545,000
Austin-Round Rock, TX	323,000	263,000
Baltimore-Columbia-Towson, MD	329,000	290,000
Birmingham-Hoover, AL	95,000	65,000
Boston-Cambridge-Newton, MA-NH	837,000	754,000
Boulder, CO	54,000	47,000
Buffalo-Cheektowaga-Niagara Falls, NY	131,000	99,000
Charlotte-Concord-Gastonia, NC-SC	292,000	219,000
Chicago-Naperville-Elgin, IL-IN-WI	1,295,000	1,030,000
Cincinnati, OH-KY-IN	221,000	172,000
Cleveland-Elyria, OH	211,000	147,000
Columbus, OH	249,000	196,000
Dallas-Fort Worth-Arlington, TX	897,000	687,000
Denver-Aurora-Lakewood, CO	418,000	348,000
Detroit-Warren-Dearborn, MI	498,000	369,000
Flint, MI	32,000	21,000
Grand Rapids-Wyoming, MI	117,000	89,000
Greeley, CO	34,000	27,000
Greensboro-High Point, NC	70,000	49,000
Hagerstown-Martinsburg, MD-WV	23,000	18,000
Hartford-West Hartford-East Hartford, CT	149,000	131,000
Houston-The Woodlands-Sugar Land, TX	811,000	600,000
Indianapolis-Carmel-Anderson, IN	202,000	153,000
Jacksonville, FL	156,000	110,000
Kansas City, MO-KS	229,000	180,000
Lake Havasu City-Kingman, AZ	13,000	7,000
Los Angeles-Long Beach-Anaheim, CA	2,417,000	1,833,000
Louisville/Jefferson County, KY-IN	115,000	87,000
Manchester-Nashua, NH	56,000	50,000

<sup>27</sup> Some metropolitan areas cover multiple MH-friendly jurisdictions and may be in multiple states.

METROPOLITAN AREA <sup>28</sup>	"MORTGAGE-READY" CONSUMERS	LMI "MORTGAGE-READY" CONSUMERS
Miami-Fort Lauderdale-West Palm Beach, FL	874,000	574,000
Milwaukee-Waukesha-West Allis, WI	182,000	143,000
Minneapolis-St. Paul-Bloomington, MN-WI	478,000	421,000
Nashville-Davidson--Murfreesboro--Franklin, TN	222,000	166,000
New Haven-Milford, CT	108,000	92,000
New York-Newark-Jersey City, NY-NJ-PA	3,398,000	2,797,000
Oklahoma City, OK	126,000	91,000
Orlando-Kissimmee-Sanford, FL	331,000	226,000
Oxnard-Thousand Oaks-Ventura, CA	128,000	110,000
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	750,000	639,000
Phoenix-Mesa-Scottsdale, AZ	530,000	395,000
Pittsburgh, PA	264,000	197,000
Portland-Vancouver-Hillsboro, OR-WA	365,000	302,000
Providence-Warwick, RI-MA	196,000	167,000
Racine, WI	17,000	15,000
Raleigh, NC	182,000	152,000
Richmond, VA	138,000	113,000
Riverside-San Bernardino-Ontario, CA	564,000	445,000
Rochester, NY	120,000	89,000
Sacramento--Roseville--Arden-Arcade, CA	324,000	265,000
Salt Lake City, UT	177,000	146,000
San Antonio-New Braunfels, TX	237,000	167,000
San Diego-Carlsbad, CA	568,000	459,000
San Francisco-Oakland-Hayward, CA	923,000	815,000
Seattle-Tacoma-Bellevue, WA	670,000	588,000
St. Louis, MO-IL	276,000	211,000
Tampa-St. Petersburg-Clearwater, FL	326,000	214,000

<sup>28</sup> Some metropolitan areas cover multiple MH-friendly jurisdictions and may be in multiple states.

METROPOLITAN AREA <sup>29</sup>	"MORTGAGE-READY" CONSUMERS	LMI "MORTGAGE-READY" CONSUMERS
Virginia Beach-Norfolk-Newport News, VA-NC	176,000	136,000
Washington-Arlington-Alexandria, DC-VA-MD-WV	985,000	890,000
Winston-Salem, NC	57,000	39,000
Worcester, MA-CT	118,000	104,000

**Note:** "Mortgage ready" numbers are rounded up to the nearest thousand. LMI refers to consumers with incomes below 100% of the Area Median Income.

**Source:** Mortgage-readiness is based on Freddie Mac calculations using anonymized credit bureau data for January 2021. MH-friendly areas are based on a review of zoning data retrieved from the National Longitudinal Land Use Survey 2019, the Manufactured Housing Institute, the Wharton Residential Land Use Regulatory Index 2018, and the U.S. Department of Housing and Urban Development.

### Exhibit B.3: Detailed Profile of MH Friendly Metropolitan Areas

STATE	METROPOLITAN AREA	REGION	HOME-OWNERSHIP RATE	INCOME	WHITE RESIDENTS (%)	HISPANIC RESIDENTS (%)	BLACK RESIDENTS (%)	ASIAN RESIDENTS (%)	AMERICAN INDIAN RESIDENTS (%)	BLACK AND HISPANIC "MORTGAGE READY" CONSUMERS
CA	Los Angeles-Long Beach-Anaheim, CA	West	48.5	69,805	28.5	44.6	6.1	16.7	0.2	44.5
CA	Oxnard-Thousand Oaks-Ventura, CA	West	62.8	67,422	42.8	43.3	1.6	7.7	0.2	45.1
CA	Riverside-San Bernardino-Ontario, CA	West	65.8	45,365	29.4	51.6	7.0	7.7	0.4	56.8
CA	Sacramento-Roseville-Arden-Arcade, CA	West	63.4	61,852	48.3	22.2	6.6	15.4	0.5	25.9
CA	San Diego-Carlsbad, CA	West	57.8	66,266	43.1	33.9	4.4	12.5	0.4	35.9

<sup>29</sup> Some metropolitan areas cover multiple MH-friendly jurisdictions and may be in multiple states.

STATE	METROPOLITAN AREA	REGION	HOME-OWNERSHIP RATE	INCOME	WHITE RESIDENTS (%)	HISPANIC RESIDENTS (%)	BLACK RESIDENTS (%)	ASIAN RESIDENTS (%)	AMERICAN INDIAN RESIDENTS (%)	BLACK AND HISPANIC "MORTGAGE READY" CONSUMERS
CA	San Francisco-Oakland-Hayward, CA	West	53.0	111,050	36.2	22.9	6.8	27.9	0.2	26.5
CT	New Haven-Milford, CT	Northeast	63.4	60,092	58.9	19.7	12.8	4.3	0.2	27.2
FL	Jacksonville, FL	South	64.8	55,125	59.4	10.2	20.8	4.2	0.2	26.4
FL	Miami-Fort Lauderdale-West Palm Beach, FL	South	60.6	64,190	29.1	45.9	18.8	2.6	0.1	62.9
FL	Orlando-Kissimmee-Sanford, FL	South	64.2	48,223	43.5	32.0	14.5	4.6	0.2	44.1
FL	Tampa-St. Petersburg-Clearwater, FL	South	72.2	52,291	59.5	20.5	11.2	3.9	0.2	29.8
IL	Chicago-Naperville-Elgin, IL-IN-WI	Midwest	66.0	67,671	50.2	23.3	16.1	7.1	0.1	31.0
IL	St. Louis, MO-IL	Midwest	71.1	60,844	70.3	3.8	17.8	2.9	0.2	15.3
IN	Louisville/Jefferson County, KY-IN	Midwest	69.3	55,676	71.5	6.5	14.6	2.5	0.2	16.8
KS	Kansas City, MO-KS	Midwest	66.7	58,057	68.5	10.5	11.8	3.2	0.4	17.9
MI	Detroit-Warren-Dearborn, MI	Midwest	66.7	58,356	63.7	5.0	21.7	4.8	0.2	17.6
MI	Flint, MI	Midwest	56.9	46,152	72.3	3.6	19.6	1.0	0.5	15.6
MI	Grand Rapids-Wyoming, MI	Midwest	71.8	54,037	75.7	10.2	6.7	2.8	0.3	14.6

STATE	METROPOLITAN AREA	REGION	HOME-OWNERSHIP RATE	INCOME	WHITE RESIDENTS (%)	HISPANIC RESIDENTS (%)	BLACK RESIDENTS (%)	ASIAN RESIDENTS (%)	AMERICAN INDIAN RESIDENTS (%)	BLACK AND HISPANIC "MORTGAGE READY" CONSUMERS
MN	Minneapolis-St. Paul-Bloomington, MN-WI	Midwest	73.0	67,214	71.8	6.6	9.0	7.2	0.5	13.6
NH	Boston-Cambridge-Newton, MA-NH	Northeast	61.2	85,724	66.6	11.8	6.9	8.6	0.1	18.9
NH	Manchester-Nashua, NH	Northeast	67.1	66,548	83.7	7.3	2.4	3.9	0.2	10.1
OH	Akron, OH	Midwest	69.5	54,843	76.4	2.4	12.4	3.7	0.1	10.6
OH	Cincinnati, OH-KY-IN	Midwest	71.1	59,607	75.9	4.2	12.0	3.1	0.1	13.1
OH	Cleveland-Elyria, OH	Midwest	66.3	58,846	67.4	6.4	19.3	2.6	0.1	17.0
OH	Columbus, OH	Midwest	65.6	56,252	69.1	5.2	15.5	4.9	0.2	17.8
TN	Nashville-Davidson--Murfreesboro--Franklin, TN	South	69.8	62,076	68.3	9.7	14.2	3.1	0.2	24.0
UT	Salt Lake City, UT	West	68.0	58,008	68.3	19.2	1.8	5.8	0.6	18.7
CO	Boulder, CO	West	61.6	79,649	77.1	14.0	1.1	4.9	0.3	12.4
CO	Denver-Aurora-Lakewood, CO	West	62.9	69,822	61.2	23.3	5.3	4.7	0.5	23.0
CO	Greeley, CO	West	64.3	52,054	65.6	29.4	1.1	1.6	0.3	30.1
CT	Hartford-West Hartford-East Hartford, CT	Northeast	70.1	67,343	63.9	15.5	10.8	5.5	0.1	20.0
IN	Indianapolis-Carmel-Anderson, IN	Midwest	70.0	60,431	68.2	8.4	14.8	3.9	0.2	21.4



STATE	METROPOLITAN AREA	REGION	HOME-OWNERSHIP RATE	INCOME	WHITE RESIDENTS (%)	HISPANIC RESIDENTS (%)	BLACK RESIDENTS (%)	ASIAN RESIDENTS (%)	AMERICAN INDIAN RESIDENTS (%)	BLACK AND HISPANIC "MORTGAGE READY" CONSUMERS
NC	Charlotte-Concord-Gastonia, NC-SC	South	73.3	56,682	57.8	11.7	21.5	4.3	0.3	31.3
NC	Greensboro-High Point, NC	South	65.8	47,171	55.1	10.0	26.4	4.1	0.4	35.6
NC	Raleigh, NC	South	68.2	60,884	58.3	12.0	17.9	7.0	0.3	27.7
NC	Winston-Salem, NC	South	53.5	48,151	65.4	11.5	17.0	1.8	0.3	28.7
NJ	New York-Newark-Jersey City, NY-NJ-PA	Northeast	50.9	82,322	43.3	25.2	14.9	12.4	0.2	33.0
NY	Buffalo-Cheektowaga-Niagara Falls, NY	Northeast	70.1	55,777	73.0	5.8	12.5	4.2	0.6	11.8
NY	Rochester, NY	Northeast	67.5	56,477	72.9	8.2	11.1	3.2	0.2	13.2
OR	Portland-Vancouver-Hillsboro, OR-WA	West	62.5	62,603	68.7	13.2	2.9	7.6	0.6	15.9
VA	Richmond, VA	South	66.5	61,148	55.3	7.9	27.4	4.4	0.3	31.8
VA	Virginia Beach-Norfolk-Newport News, VA-NC	South	65.8	53,310	52.3	7.5	29.6	4.2	0.3	37.5
VA	Washington-Arlington-Alexandria, DC-VA-MD-WV	South	67.9	76,771	42.3	17.1	24.1	10.9	0.2	37.2
WA	Seattle-Tacoma-Bellevue, WA	West	59.4	80,420	57.9	11.2	6.0	16.3	0.7	15.4

STATE	METROPOLITAN AREA	REGION	HOME-OWNERSHIP RATE	INCOME	WHITE RESIDENTS (%)	HISPANIC RESIDENTS (%)	BLACK RESIDENTS (%)	ASIAN RESIDENTS (%)	AMERICAN INDIAN RESIDENTS (%)	BLACK AND HISPANIC "MORTGAGE READY" CONSUMERS
AL	Birmingham-Hoover, AL	South	76.0	55,074	59.4	5.8	29.3	1.8	0.2	28.8
AZ	Lake Havasu City-Kingman, AZ	West	70.4	36,529	76.6	16.9	0.7	1.0	1.8	22.0
AZ	Phoenix-Mesa-Scottsdale, AZ	West	67.9	51,851	53.6	30.4	5.5	4.4	1.8	31.8
GA	Atlanta-Sandy Springs-Roswell, GA	South	66.4	58,773	43.7	12.0	33.2	6.6	0.2	40.3
MA	Providence-Warwick, RI-MA	Northeast	64.8	60,897	71.6	14.1	4.7	3.1	0.3	20.5
MA	Worcester, MA-CT	Northeast	65.9	61,741	71.8	12.9	4.7	4.9	0.2	18.0
MD	Baltimore-Columbia-Towson, MD	South	70.7	66,695	52.7	7.6	28.2	6.3	0.2	29.6
MD	Hagerstown-Martinsburg, MD-WV	South	69.3	47,759	82	4.5	8.6	1.4	0.1	14.2
OK	Oklahoma City, OK	South	68.3	52,688	59.3	14.9	10.1	3.3	3.5	22.5
PA	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	Northeast	69.2	69,705	59.1	10.2	19.8	6.6	0.1	22.5
PA	Pittsburgh, PA	Northeast	69.8	63,675	82.2	2.2	8.3	2.9	0.1	9.1
TX	Austin-Round Rock, TX	South	65.4	64,913	49.6	31.9	6.6	7.1	0.2	28.7
TX	Dallas-Fort Worth-Arlington, TX	South	64.7	61,554	42.8	29.3	15.7	8.0	0.3	35.1

STATE	METROPOLITAN AREA	REGION	HOME-OWNERSHIP RATE	INCOME	WHITE RESIDENTS (%)	HISPANIC RESIDENTS (%)	BLACK RESIDENTS (%)	ASIAN RESIDENTS (%)	AMERICAN INDIAN RESIDENTS (%)	BLACK AND HISPANIC "MORTGAGE READY" CONSUMERS
TX	Houston-The Woodlands-Sugar Land, TX	South	65.3	59,893	33.7	37.5	17.0	8.3	0.2	44.5
TX	San Antonio-New Braunfels, TX	South	64.2	50,022	32.8	54.3	6.5	2.9	0.2	49.8
WI	Milwaukee-Waukesha-West Allis, WI	Midwest	58.5	60,499	64.1	11.6	15.9	4.2	0.3	18.9
WI	Racine, WI	Midwest	68.2	53,094	71.1	13.6	11.2	1.3	0.5	20.1

**Note:** Income refers to income per capita.

**Source:** See Reference Section for a list of data sources for income, homeownership rate and race. Mortgage-readiness is based on Freddie Mac calculations using anonymized credit bureau data for January 2021.

