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PLEASE USE THE FOLLOWING CITATION FOR THIS REPORT:

Family Housing Fund. *Housing and Economic Growth in the Twin Cities Region.* Minneapolis: Family Housing Fund, 2019.



The Family Housing Fund thanks Lisa Sturtevant & Associates for developing the methodology and for researching and writing this report.

Executive Summary

There is growing awareness that a lack of a sufficient supply of housing—affordable to all members of the workforce—will

This analysis focuses on the particular housing demand related to future workforce growth and economic growth in the Twin

A NOTE ABOUT THIS REPORT

Cities. As a result, the data in this report shows a piece of the housing demand story, rather than the full picture of housing needs in the region.

It is intended to complement other recent analyses of housing demand in the Twin Cities and should be used in conjunction with reports such as the Metropolitan Council's projections and the summary report of the 2018 Minnesota Taskforce on Housing.

impede the Twin Cities region's ability to attract businesses and talent. Young professionals and working families alike increasingly have a hard time finding housing they can afford in the region, particularly in neighborhoods that are well-connected to employment options, transportation, and other services and amenities.

When workers can't find housing they can afford, the entire community suffers. It has been well-established in the research that having access to affordable and stable housing in good neighborhoods is associated with positive health, education and economic outcomes for individuals and families. 1 But having a sufficient supply of housing affordable to households all along the income spectrum is also critical to supporting a vibrant and sustainable regional economy.

Having a sufficient supply of housing affordable to households all along the income spectrum is critical to supporting a vibrant and sustainable regional economy.

While the Minneapolis-St. Paul metropolitan area currently compares favorably to peer and competitor regions in terms of quality of life and cost of living, recent trends suggest that the region is on a trajectory many other high-quality regions have found themselves on—one where rising housing prices and rents, increased traffic congestion, and widening economic inequality erode a region's competitive advantage.

The Twin Cities region today competes with places like Chicago, Seattle and Denver for workers and currently enjoys an advantage in terms of housing costs and housing availability. But the Twin Cities region will also increasingly compete with Austin, Nashville and St. Louisplaces where housing options are more affordable and diverse than in the Twin Cities region.

WHAT IS THE LINK BETWEEN HOUSING AND REGIONAL ECONOMIC GROWTH?

Housing availability and affordability is critically important to a region's economic health and shared prosperity. If there is an insufficient supply of housing affordable to all income levels, lower-wage workers in the community will be among the first to feel the pressures from higher rents and prices. Retail and restaurant workers, child care workers, nursing assistants and home health aides are among those in the region who feel most acutely the lack of affordable housing. When there is not enough housing affordable to lower-wage workers, these workers are often forced to look for housing further out from employment centers, which creates longer commutes for those workers and more traffic congestion for everyone. As these workers have a harder time living in the community, businesses have a harder time finding workers to hire.

Workers in higher-wage sectors, including the region's professional and technical services industry, have more housing choices; however, even these workers will face affordability challenges if there is not a sufficient supply of housing at the right prices and rents and in the right locations in the region. There is evidence that young workers around the country are beginning to move out of high-cost areas, especially as they look to start a family and buy a home.² The Twin Cities region has attracted workers from some of these higher-cost parts of the country, but the region is beginning to see the risks of not having enough housing to support its growing workforce. If Millennial workers who have flocked to Minnesota in recent years cannot find appropriate and affordable homeownership options, they are apt to leave to find the next best place to settle. And businesses likely will follow.

Even if workers and businesses do not actually leave the community, a lack of housing that is affordable to workers at all income levels still has significant implications for the regional economy. When local workers are forced to spend more on housing, they spend less on goods and services in the local community. As a result, the local economy will not be as strong as it could be. In addition, the region will be less able to support diverse retail, restaurant, recreation and other amenity options.

As the Twin Cities region looks ahead, this is an ideal time to examine how the region can build on and expand its economic competitiveness by ensuring that there is a diversity of housing for a growing and changing

workforce. To help support dialogue around housing solutions as a key element of the region's economic development strategy, this analysis addresses two key questions:

- What is the relationship between housing availability and affordability and regional economic growth in the Twin Cities area?
- What is the potential economic loss in the region if there is an insufficient supply of housing—at the right price and rent levels—to accommodate the full range of future workers?

Summary of Key Findings

There is a significant need for housing across the state of Minnesota and the primary driver of that housing demand is expansion of the employment base in the Minneapolis-St. Paul region.³ Ensuring that there is a sufficient supply of housing available—at the right prices and rents and in the right locations—to accommodate future job growth will be critical to ensuring the vitality and sustainability not only of the regional economy but of the state's long-term economic health.

WHAT IS THE CURRENT HOUSING SHORTAGE IN THE TWIN CITIES REGION?

- According to data from the Bureau of Economic
 Analysis, the relative cost of living in the Minneapolis-St.
 Paul MSA is favorable compared to Chicago, Denver and
 Seattle, but several peer and near-peer regions are
 more affordable even taking into account differences
 in wages across regions. Charlotte, Austin and DallasFt. Worth—all regions the Greater MSP has defined as
 peer regions to the Minneapolis-St. Paul area—have
 lower costs of living. Other regions that Minneapolis-St.
 Paul may be competing with for workers in the future
 are also less expensive, including St. Louis, Indianapolis
 and Nashville.
- There are an estimated 374,259 current workers in the seven-county Twin Cities region who are housing cost burdened, paying more than 30 percent of their income each month for housing costs. This reflects one in five workers. The largest number of cost burdened workers are in the region's Health Care and Social Assistance sector. The highest rate of cost burden is among workers in the region's Arts, Entertainment and Recreation sector.
- There is currently a significant shortage of rental housing that is affordable to low- and moderate-wage working individuals and families. According to data from the 2016 American Community Survey, there is an estimated current gap of more than 63,600 rental units affordable to working households that have incomes less than \$25,000.

HOW MUCH HOUSING DOES THE TWIN CITIES REGION NEED OVER THE NEXT 20 YEARS TO REMAIN ECONOMICALLY COMPETITIVE?

- According to independent economic forecasts along with employment forecasts from the Metropolitan Council, between 2018 and 2038, the MSP metropolitan statistical area is expected to add more than 368,000 new jobs which will spur demand for an estimated 176,710 net new housing units for new workers in the seven-county Twin Cities region. This level of new housing growth is needed to accommodate 167,875 net new working households and assumes a five percent vacancy rate. These are workers that the region would like to attract and reflects a healthy and stable rate of employment growth over time.
- These housing demand forecasts only reflect part of the region's housing needs. These forecasts do not include (a) the demand for housing from individuals not in the labor force (e.g. retirees, persons with disabilities, and students who are not working); (b) the housing needed for replacement workers—that is, workers who move to the region to take an existing job being vacated by someone who is retiring or otherwise leaving a job in the region but not leaving his or her home; or (c) the amount of housing needed to meet current housing gaps in the region. As such, this employment-driven future housing demand reflects only a portion of the new housing that will be needed in the region.
- Specifically, based on analyses of household forecasts produced by the Metropolitan Council, it is estimated that over a 20-year period, the seven-county Twin Cities region is expected to add **273,000 net new households** (including workers in newly-created jobs as well as all others) which suggests a need for 287,368 new housing units assuming a five percent vacancy rate. Thus, our forecasts of housing needed to accommodate net new workers only accounts for 61.5 percent of the overall needed housing unit growth over the next 20 years.

IS THE TWIN CITIES REGION ON PACE TO PRODUCE THE HOUSING THAT IS NEEDED?

The Metropolitan Council household forecasts suggest that the Twin Cities region needs **14,368 new housing** units each year for the next **20** years to meet expected needs for all households (287,368 total units divided by 20). Housing will be needed for retirees,

- persons with disabilities, students and others not in the labor force, as well as workers coming to the region to fill existing jobs that are either currently unfilled or will be vacated by people staying in the region. However, a large share of the new housing needed is associated with growth of the workforce and the need to add new jobs in the region. Simply to accommodate net new workers, the region needs to add 8,836 net new units each year (176,710 total units divided by 20).
- The Twin Cities region is not producing enough housing to meet demand. Over the past five years (2012 to 2017), the region has produced an average of 10,874 units per year when the need is for 14,368 units annually to accommodate the projected number of all new households (working and non-working) over the next two decades. Therefore, there is an expected gap of 3,495 housing units each year. Without a ramp up in housing production, the Twin Cities region will exacerbate the current housing affordability challenges among working households and expand a housing deficit that will put the region's competitive economic position in jeopardy.

IS THE HOUSING THAT IS PRODUCED THE RIGHT TYPE TO MEET THE NEEDS OF FUTURE WORKING HOUSEHOLDS?

- According to these forecasts, future workers in the region will be slightly less likely than current households to be homeowners, with a homeownership rate of 63 percent among future working households compared with a current homeownership rate of 68 percent in the Twin Cities region. The shift reflects the changing age structure and demographic characteristics of the workforce, as well as changing wages and household incomes, all of which suggest slightly lower homeownership rates in the future. Therefore, the housing needed to accommodate future working households will need to include relatively more rental housing than what is in the existing stock.
- These forecasts also suggest a shift towards more multifamily housing (including townhomes, apartments and condominiums) in the Twin Cities region.

 Approximately 43 percent of the net new housing needed over the 2018 to 2038 period is forecasted to be multifamily housing (including both owner-occupied and renter-occupied.) Currently, about

- 40 percent of the region's housing stock is multifamily. As the region plans for housing for new workers, there should be an emphasis on how to produce relatively more multifamily housing, including townhomes, apartments and condominiums.
- About half (45.2 percent) of the rental housing needed to accommodate new workers needs to be at **rents below \$1,250 per month to be affordable**. New rental construction in Minneapolis, St. Paul and other parts of the region is not being produced at this level. According to Zillow, in Minneapolis, apartment buildings built since 2013 have rents ranging from \$1,400 to \$2,000 per month for one-bedroom units. In St. Paul, where there has been less new construction, one-bedroom rents for new units range from \$1,275 to \$1,700.
- About 80 percent of the owner housing needed to accommodate new workers according to these forecasts needs to be **priced below \$350,000**. There is a shortfall of available for-sale in this price range. For example, according to Zillow, only about four out of ten homes listed for sale (42 percent) in Hennepin County are listed below \$350,000.

WHAT ARE THE ECONOMIC IMPACTS OF NOT HAVING SUFFICIENT HOUSING IN THE TWIN CITIES REGION?

housing at a rate of 10,874 units per year, the region will experience an overall shortfall of 3,495 units annually. If it is assumed that the shortfall will be born proportionately by new working households in the future, we can estimate that 61.5 percent of that gap will be a shortfall in housing needed to accommodate net new workers in the region. Therefore, we assume that unless the region ramps up production, there will be an annual gap of 2,149 housing units needed to accommodate the new workforce growth (61.5 percent times 3,495).

- There are significant potential economic losses in the region if the Twin Cities region continues to experience this annual shortfall in housing production. Housing will continue to get more expensive in the region. In addition, if housing is not available and affordable, workers will not be able to move to the region to fill new jobs. If these workers do not come to the region, there are at least two types of economic impacts.
 - First, if new working households do not move to the region, they will not spend money on goods and services in the local economy. Based on our estimates of the impacts of the housing shortfall, the total economic loss associated with unrealized consumer spending in the region will be \$81 million annually, or \$1.6 billion over the 20-year period from 2018 to 2038.
 - Second, without housing for working families, businesses will not be able to create new jobs or will have to leave jobs unfilled. Based on this analysis, the housing shortfall could result in 48,344 fewer jobs in the seven-county Twin Cities region in 2038 than would have been possible with sufficient housing.

Fewer jobs result in slower economic growth. These estimates suggest that the housing shortfall and the resulting slower job growth could result in a loss to the Gross Regional Product of \$215 million annually, or \$4.3 billion over the 20 year period. In other words, with sufficient housing to accommodate all future workers, the Minneapolis-St. Paul regional economy could be \$4.3 billion larger than it will be if the current housing shortfall persists.

Introduction: Housing for the Region's Workforce

In order to grow the economy, the MSP

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This analysis focuses on the particular housing demand related to future workforce growth and economic growth in the Twin Cities. As a result, the data in this report shows a piece of the housing demand story, rather than the full picture of housing needs in the region.

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region and the state of Minnesota, in general, need to attract workers. This means that the region needs sufficient appropriate housing to support workforce attraction and retention and business growth. The region's business leaders are aware of the potential negative implications of a lack of housing. Greater MSP has observed that the region's relative affordability has created a competitive advantage. However, there is also growing recognition that this advantage is not assured unless the region commits to solutions that expand housing options for the growing workforce. According to the 2018 Indicators Dashboard—Taking Stock of MSP's Competitiveness, Greater MSP notes that the region's "relative affordability could be a major competitive advantage for MSP if the region can sustain current trends."

CURRENT UNMET HOUSING NEEDS FOR THE REGION'S WORKFORCE

While the Minneapolis-St. Paul region has been described as a relatively affordable metro area, there are currently hundreds of thousands of workers just in the seven-county Twin Cities region that face difficulties finding housing they can afford. Even as the region plans for ways to attract new workers, it is important to understand the housing gap experienced by current workers in the region.

In the seven-county Twin Cities region, there are an estimated 374,259 workers that are currently living in cost burdened households, spending more than 30 percent of their income on housing each month. This means that one out of every five workers in the Twin Cities region currently struggles to find housing that meets their needs and is at price or rent levels that helps ensure that they have enough money left over at the end of each month to pay for other household necessities, like food, health care and education, as well as to support the local economy through spending on local goods and services.



in the Twin Cities region is housing cost burdened

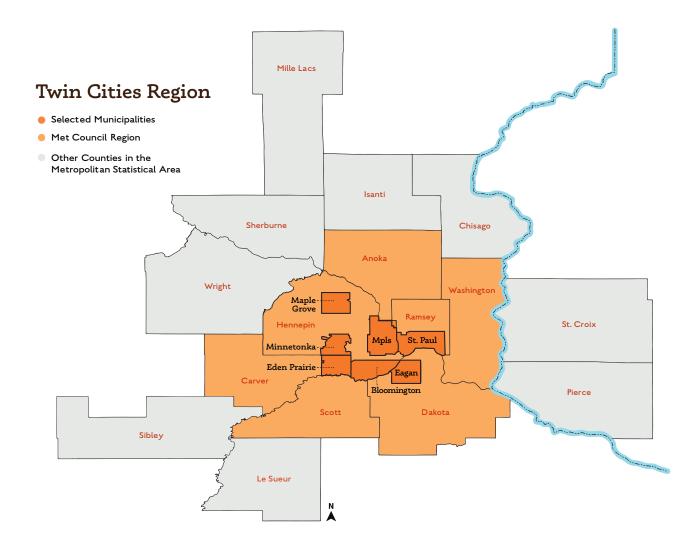
Source: U.S. Census Bureau, 2016 American Community Survey Public Use Microdata Sample (PUMS) file

These cost burdened workers include more than 60,500 individuals working in the region's critical Health Care and Social Assistance sector. Nearly 45,000 work in the Retail Trade sector, about 39,600 are Manufacturing workers, and about 32,500 are workers in the Accommodation and Food Services sector. These cost burdened workers include people who are essential to the growth and sustainability of the local economy, vital to providing residents and visitors high-quality services, and supporting the health and well-being of individuals and families throughout the region.

THE MINNEAPOLIS-ST. PAUL METROPOLITAN STATISTICAL AREA (MSA) AND THE SEVEN-COUNTY TWIN CITIES REGION

In this analysis, housing demand forecasts are prepared for municipalities in the core portion of the Minneapolis-St. Paul metropolitan area, which includes seven counties and is consistent with the Metropolitan County region. (See Map below.) However, the demand for housing in this core region will depend on job growth in the broader metropolitan area. Therefore, we analyze employment patterns and forecast employment growth for the larger

16-county Metropolitan-St. Paul metropolitan statistical area (MSA). We present housing demand forecasts for 14 municipalities (seven counties and seven towns and cities) located in the core region which is referred to in the report as the "Twin Cities Region" or the "Seven-County Twin Cities Region."



Source: U.S. Census Bureau, LSA

THERE IS A SERIOUS SHORTAGE OF LOWER-COST RENTAL HOUSING FOR WORKERS IN THE REGION

These 374,259 housing cost burdened workers live in an estimated 277,643 households. According to data from the 2016 American Community Survey, there are 109,273 renter households in the seven-county Twin Cities region that have incomes below \$25,000. Using the standard 30 percent rule, these households can afford housing that costs no more than \$625 per month. In the region, there are only 45,670 rental units with rents below \$625, suggesting a current gap of more than 63,600 rental units affordable to working households that have incomes less than \$25,000 (see Table 2).

The gap at this income level actually understates the lack of available housing. Many higher-income households actually occupy these lower-rent units. More than a quarter of units with rents less than \$625—or an estimated 11,972 units—are occupied by renters that have higher incomes, including more than 3,700 such units occupied by households with incomes of \$75,000 or more. Therefore, these units are not available to the renters with lower incomes.

| TABLE I. HOUSING COST BURDENED WORKERS BY INDUSTRY Seven-County Twin Cities Region | | |
|--|------------------------------------|----------------------------|
| INDUSTRY | NO. OF COST BURDENED WORKERS | RATE OF COST BURDEN (%) |
| Health Care and Social Assistance | 60,555 | 21.2 |
| Retail Trade | 44,680 | 23.8 |
| Manufacturing | 39,614 | 16.8 |
| Accommodation and Food Services | 32,506 | 25.0 |
| Educational Services (public and private) | 29,670 | 17.3 |
| Professional, Scientific, and Technical Services | 26,742 | 16.2 |
| Other Services (except Public Administration) | 22,715 | 24.9 |
| Administrative and Building Services | 22,327 | 27.2 |
| Transportation and Warehousing | 18,017 | 22.9 |
| Construction | 16,284 | 18.3 |
| Arts, Entertainment, and Recreation | 13,812 | 26.0 |
| Finance and Insurance | 13,367 | 10.1 |
| Wholesale Trade | 7,904 | 15.8 |
| Real Estate and Rental and Leasing | 7,838 | 20.8 |
| Information | 6,681 | 15.7 |
| Public Administration | 6,350 | 10.0 |
| Agriculture, Forestry, Fishing and Hunting | 3,529 | 38.1 |
| Utilities | 1,094 | 12.2 |
| Mining | 396 | 38.2 |
| Management of Companies and Enterprises | 178 | 3.8 |
| TOTAL | 374,259 | 19.5 |

Source: U.S. Census Bureau, 2016 American Community Survey Public Use Microdata Sample (PUMS) file

Higher-income households almost always have more choices than lower-income households in how much they spend on housing. Many higher-income households will prefer to spend less on housing. Others may choose higher-cost housing if there are more choices available. Therefore, ensuring that there is sufficient rental housing affordable to households all along the income spectrum—including higher-income households—can help close the significant gaps experienced by lower-income renters.

There is growing evidence that the MSP region's affordability advantage may already be eroding.

There is growing evidence that rising home prices and rents are already beginning to erode the region's affordability advantage. Figure 1 below presents cost of living data from the U.S. Bureau of Labor Statistics for the Minneapolis-St. Paul metropolitan statistical area (MSA) and several other MSAs around the county. According to this data, the relative cost of living in the Minneapolis-St. Paul MSA is favorable compared to Chicago, Denver and Seattle, but several other peer and near-peer regions are more affordable even taking into account differences in wages across regions. Charlotte, Austin and Dallas-Ft. Worth—all regions the Greater MSP has defined as peer regions to the Minneapolis-St. Paul area—have lower costs of living. Other regions that Minneapolis-St. Paul may be competing with for workers in the future are also less expensive, including St. Louis, Indianapolis and Nashville.

If the Minneapolis-St. Paul MSA does not have a sufficient supply of housing affordable to the workforce, it may lose out to other places that do. However, if regional stakeholders work together to expand housing options to meet future housing demand—and to close current housing gaps—the Twin Cities region will be better positioned to ensure robust and sustainable future economic growth.

FUTURE REGIONAL ECONOMIC GROWTH AND HOUSING DEMAND

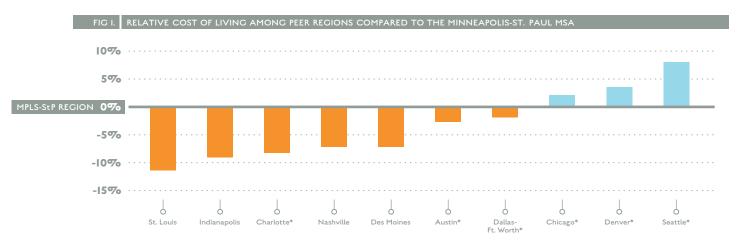
A primary objective of this research is to forecast the amount of housing that will be required to house the Twin Cities region's future workers in order to help ensure that the region can achieve its future economic potential. This analysis starts with job growth as the driver of demand for housing and uses assumptions about workers' wages, age structure and household composition to forecast the amount, type and price of housing that the region will need over the 2018 – 2038 period.

It is important to note that these forecasts only reflect part of the region's housing needs. These forecasts differ from other household and housing unit forecasts for the region that have used different methodologies. These employment-driven housing demand forecasts include only housing for net new workers in the MSA and do not include the demand for housing from individuals not in the labor force (e.g. retirees, persons with disabilities, and students who are not working). These forecasts also do not include the housing needed for replacement workers—that is, workers who move to the region to take an existing job being vacated by someone who is retiring or otherwise leaving a job in

| TABLE 2. CURRENT RENTAL HOUSING GAP Seven-County Twin Cities Region | | | | | | | |
|---|-----------------------------|-----------------------------|--------------|------------------------------------|--|--|--|
| HOUSING INCOME | NO. OF RENTER HOUSEHOLDS | AFFORDABLE MONTHLY RENT* | NO. OF UNITS | GAP (UNITS MINUS HOUSEHOLDS) | | | |
| Less than \$25,000 | 109,273 | Up to \$625 | 45,670 | -63,603 | | | |
| \$25,000 to 49,999 | 108,492 | \$625 to 1,249 | 203,662 | 95,170 | | | |
| \$50,000 to 74,999 | 71,404 | \$1,250 to 1,874 | 93,981 | 22,577 | | | |
| \$75,000 to 99,999 | 39,488 | \$1,875 to 2,499 | 15,860 | -23,628 | | | |
| \$100,000 or more | 41,747 | \$2,500 or More | 11,321 | -30,426 | | | |

Source: U.S. Census Bureau, 2016 American Community Survey Public Use Microdata Sample (PUMS) file. Numbers may not sum due to rounding.

^{*}Based on spending no more than 30 percent of income on housing costs.



Source: U.S. Bureau of Economic Analysis, 2016 Regional Price Parities, published 5/17/18

the region but not leaving his or her home. As such, this employment-driven future housing demand reflects only a portion of the new housing that will be needed in the region.

This analysis does take into account other household forecasts, specifically those prepared by the Metropolitan Council. Those forecasts are discussed in more detail below.

These employment-driven housing demand forecasts have been developed to examine four specific questions:

- 1. How much housing will be needed to house the region's new workers? These forecasts estimate the number of housing units that will be needed to house the region's net new workers between 2018 and 2038. Note that these forecasts do not account for the full supply of housing that will be needed to close current housing gaps and ensure housing availability for non-working households (e.g., seniors, persons with disabilities and students) or for replacement workers, second homeowners and investors in the region. Therefore, these employment-driven housing demand forecasts should be considered only a portion of the total housing needed to be produced in the region over the next two decades.
- 2. Where should this housing be located? With the goal of keeping levels of traffic congestion from worsening over the next two decades and to ensure the region's competitive advantage in terms of housing plus transportation costs, the housing demand forecasts explicitly link the location of needed housing for new workers to the locations of new jobs, at the county and municipal level.

- **3. What types of housing units will be needed?** In addition to understanding the overall amount of housing needed, these forecasts assess the demand for detached single-family homes and multifamily housing (i.e., townhomes, apartments and condominiums), as well as the demand for owner and rental housing within each of these housing types from new workers.
- **4. What prices and rents will new workers be able to afford?** The housing available to the region's future workforce must be priced at levels that are affordable. The forecasts take the wages of new jobs into account, along with assumptions about household composition and workers per household, to forecast housing demand at different price and rent levels.

EMPLOYMENT FORECASTS

These housing demand forecasts for the seven-county Twin Cities region are driven by expected job growth in the broader Minneapolis-St. Paul MSA. According to forecasts based on data from the Metropolitan Council, the Minneapolis-St. Paul MSA is forecasted to add 368,432 net new jobs between 2018 and 2038, an increase of about 18 percent. The seven-county core region is expected to add 272,435 jobs over the 20-year period, accounting for nearly three-quarters of the larger metropolitan area's future job growth (Table 3).

The biggest increase in employment is forecasted for Hennepin County where the city of Minneapolis is expected to add 41,091 jobs and the rest of the County is expected to add 90,929 jobs over the next 20 years. Hennepin County is home to about 44 percent of total current jobs in the MSA (with Minneapolis accounting

^{*}Peer regions as defined by Greater MSP

for 15 percent) but is only expected to account for 36 percent of job growth over the next two decades (with Minneapolis accounting for 11 percent).

The seven-county core of the MSA is expected to add jobs at a somewhat slower rate than the overall MSA, with an increase of 16 percent over the 2018-2038 period. The fastest job growth in the Twin Cities region is forecasted for Carver and Scott counties, which are expected to experience increases in employment of 38 and 26 percent, respectively, over the next two decades.

The fastest growing employment sector in the MSA over the next 20 years is expected to be the Professional and Technical Services sector. Metro-wide, this sector is expected to add 91,925 net new jobs, increasing by 73 percent between 2018 and 2038. Jobs in the Professional and Technical Services sector include accountants, architects, engineers, computer programmers and analysts, and scientific researchers, among many others. An important related industry, the Administrative Support and Building Services sector, has the second fastest job

growth at 33 percent, adding 41,443 net new jobs over the next 20 years. Many of these jobs are critical to supporting professional services occupations, as well as office-based employment, more generally. Occupations such as administrative assistants, travel arrangement and reservation services, office clerks, security guards, janitors, and landscapers and groundskeepers are all in this sector. Together, jobs in the Administrative Support and Building Services sector account for 12 percent of all jobs in 2018 but will account for 16 percent of the MSA's jobs in 2038.

The MSA's Construction sector is also expected to experience fast growth, adding 31,711 net new jobs between 2018 and 2038 for an overall increase of 29 percent. Construction jobs include construction or project managers, construction equipment operators, plumbers, masons, elevator installers and repairers, and solar panel installers, among a wide range of other jobs that support the building of new housing, commercial space, roads, bridges, rail lines and other infrastructure.

| TABLE 3. EXPECTED JOB GROWTH BY LOCATION Minneapolis-St. Paul MSA 2018-2038 | | | | | | | |
|--|-----------|-----------|-----------|---------|----------|--|--|
| JURISDICTION | 2018 | 2028 | 2038 | CHANGE | % CHANGE | | |
| Hennepin County | 892,472 | 956,340 | 1,024,492 | 132,020 | 14.8% | | |
| - Minneapolis | 304,308 | 323,780 | 345,399 | 41,091 | 13.5% | | |
| - Rest of Hennepin County | 588,164 | 632,560 | 679,093 | 90,929 | 15.5% | | |
| Ramsey County | 348,744 | 368,913 | 388,167 | 39,423 | 11.3% | | |
| - St. Paul | 190,662 | 200,669 | 210,837 | 20,175 | 10.6% | | |
| - Rest of Ramsey County | 158,082 | 168,244 | 177,330 | 19,248 | 12.2% | | |
| Dakota | 194,798 | 212,329 | 229,572 | 34,774 | 17.9% | | |
| Anoka | 122,815 | 132,901 | 142,858 | 20,042 | 16.3% | | |
| Washington | 84,860 | 93,707 | 102,600 | 17,740 | 20.9% | | |
| Scott | 52,731 | 60,097 | 66,675 | 13,944 | 26.4% | | |
| Carver | 38,211 | 46,363 | 52,703 | 14,491 | 37.9% | | |
| Seven-County Region | 1,734,631 | 1,870,650 | 2,007,066 | 272,435 | 15.7% | | |
| Rest of the MSA | 279,481 | 326,329 | 375,478 | 95,997 | 34.3% | | |
| MSA Total | 2,014,112 | 2,196,979 | 2,382,544 | 368,432 | 18.3% | | |

Source: U.S. Census Bureau, 2016 American Community Survey Public Use Microdata Sample (PUMS) file. Numbers may not sum due to rounding.

^{*}Based on spending no more than 30 percent of income on housing costs.

The Health Care and Social Services sector will also add jobs quickly, increasing by 27 percent between 2018 and 2038, or adding 78,789 net new jobs. The fastest growing occupations in the Health Care and Social Services sector are expected to be home health aides, personal care aides, physician assistants, nurse practitioners, physical therapist assistants, and genetic counselors. Indeed, these health care jobs are among the fastest growing jobs in any sector both regionally and across the country.

The structure of the Minneapolis-St. Paul metropolitan area economy is projected to change slightly over the next 20 years, with a somewhat greater share of Professional and Technical Services and Health Care

jobs and a somewhat smaller share of Manufacturing, Wholesale Trade and Retail Trade jobs. The types of the jobs the region will add has important implications for the characteristics of the future workforce, the wages and household incomes of future working households, and ultimately the types and prices of housing that will be needed to meet workers' needs.

HOW MUCH HOUSING WILL BE NEEDED FOR FUTURE WORKERS?

According to these employment-driven housing demand forecasts, the seven-county Twin Cities region will add 167,875 net new working households between 2018 and 2038 and therefore will need 176,710 total

| TABLE 4. EXPECTED JOB GROWTH BY INDUSTRY Minneapolis-St. Paul MSA 2018-2038 | | | | | |
|---|--------------|----------|--|--|--|
| | 2018-2038 | | | | |
| INDUSTRY | NET NEW JOBS | % CHANGE | | | |
| Professional, Scientific, and Technical Services | 91,295 | 72.6% | | | |
| Health Care and Social Assistance | 78,789 | 27.3% | | | |
| Administrative and Building Services | 41,443 | 33.4% | | | |
| Construction | 31,711 | 29.2% | | | |
| Public Administration | 22,380 | 20.7% | | | |
| Accommodation and Food Services | 21,323 | 13.2% | | | |
| Finance and Insurance | 18,660 | 17.9% | | | |
| Educational Services (public and private) | 16,292 | 11.6% | | | |
| Retail Trade | 15,138 | 7.9% | | | |
| Other Services (except Public Administration) | 13,787 | 18.3% | | | |
| Information | 11,790 | 29.0% | | | |
| Arts, Entertainment, and Recreation | 9,356 | 21.9% | | | |
| Manufacturing | 3,199 | 1.6% | | | |
| Transportation and Warehousing | 2,893 | 3.9% | | | |
| Wholesale Trade | 2,584 | 2.8% | | | |
| Real Estate and Rental and Leasing | 1,422 | 3.5% | | | |
| Mining | 217 | 14.5% | | | |
| Agriculture, Forestry, Fishing and Hunting | 5 | 0.0% | | | |
| Utilities | (1,537) | -18.0% | | | |
| Management of Companies and Enterprises | (12,356) | -17.8% | | | |
| TOTAL MSA | 368,432 | 18.3% | | | |

Source: LSA, Metropolitan Council THRIVE Forecasts. Housing unit forecasts assume a 5-percent residential vacancy rate.

new workforce housing units for this population. (The additional units are to achieve a five-percent vacancy rate.) This level of housing needed excludes any housing production required to close current housing gaps or to house non-working households.

These housing demand forecasts are based on a number of assumptions related to the age distribution and household composition of the future workforce, as well as assumptions about jurisdiction-to-jurisdiction commuting patterns. The assumption about commuting patterns is key to forecasting where future workers will live within the region. The housing demand forecasts produced for each jurisdiction reflect the housing needed

to accommodate a share of future workers with jobs in that jurisdiction, as well as a share of workers who work elsewhere in the region. These shares are based on current jurisdiction-to-jurisdiction commuting patterns.

These forecasts suggest that the seven-County Twin Cities region needs to add 8,836 housing units each year over the 2018 to 2038 period simply to accommodate net new job growth. Based on this analysis and on a review of forecasts produced by the Metropolitan Council, the number of new homes needed to accommodate net new workers in the Twin Cities region is about 61.5 percent of the total demand for new housing expected over the next two decades.

| | LSA, 2018-20 | 38 ANNUAL | MET COUNCIL, 20 | 20-2040 ANNUAL |
|---------------------------|-------------------------------|---------------------------------------|---|----------------------------------|
| JURISDICTION | NET NEW WORKING HOUSEHOLDS | NET NEW WORKFORCE HOUSING UNITS | NET NEW HOUSEHOLDS (WORKING AND NOT WORKING) | NET NEW HOUSING UNITS (TOTAL) |
| Hennepin County | 3,383 | 3,561 | 3,627 | 3,818 |
| - Minneapolis | 944 | 994 | 1,010 | 1,063 |
| - Maple Grove | 304 | 320 | 325 | 342 |
| - Eden Prairie | 276 | 290 | 295 | 311 |
| - Minnetonka | 190 | 200 | 205 | 216 |
| - Bloomington | 147 | 155 | 158 | 166 |
| - Rest of Hennepin County | 1,522 | 1,602 | 1,635 | 1,721 |
| Ramsey County | 1,249 | 1,315 | 1,130 | 1,189 |
| - St. Paul | 707 | 744 | 635 | 668 |
| - Rest of Ramsey County | 542 | 571 | 495 | 521 |
| Dakota County | 1,219 | 1,283 | 1,686 | 1,774 |
| - Eagan | 94 | 99 | 130 | 137 |
| - Rest of Dakota County | 1,125 | 1,184 | 1,556 | 1,637 |
| Anoka County | 980 | 1,032 | 1,754 | 1,846 |
| Washington County | 683 | 719 | 1,391 | 1,464 |
| Scott County | 495 | 521 | 949 | 998 |
| Carver County | 385 | 405 | 1,083 | 1,139 |
| MSA Total | 8,394 | 8,836 | 13,650 | 14,368 |

 $Source: LSA, \ \ Metropolitan\ Council\ THRIVE\ Forecasts.\ Housing\ unit\ forecasts\ assume\ a\ 5-percent\ residential\ vacancy\ rate.$

WHERE SHOULD NEW HOUSING BE LOCATED?

The location of expected future jobs and assumptions about jurisdiction-to-jurisdiction commuting patterns are key drivers of where new housing will be needed within the region to accommodate growth in the workforce. Because the Twin Cities region functions as both a regional labor market and housing market, it is logical that regional job growth will lead to housing demand in municipalities throughout the region.

The largest number of housing units needed for new workers is forecasted for Hennepin County, which is not particularly surprising given the expected job growth in Minneapolis and the rest of the County and the current commuting patterns which include significant flows out of Hennepin County to jobs in other parts of the MSA. About 40 percent of expected employment-driven housing demand will be in Hennepin County, with a total need for 71,214 net new housing units in the County over the

2018 to 2038 period. About 28 percent of the housing demand forecasted for Hennepin County is in the city of Minneapolis with the remainder in the rest of the County.

These forecasts suggest a need for 26,302 new housing units in Ramsey County to accommodate net new workers, with about 57 percent of those new units forecasted for St. Paul and 43 percent for the rest of Ramsey County. Dakota County is forecasted to need about 25,653 units while Anoka County is forecasted to need 20,632 net new housing units over the 2018 to 2038 period for net new working households.

These forecasts do not suggest specific locations within the jurisdictions where housing is most needed, but the goal of encouraging competitive housing plus transportation costs suggest that housing near transit, transportation and employment centers would be most advantageous.

| JURISDICTION | | | |
|---------------------------|-----------|-----------|-----------|
| | 2018-2028 | 2028-2038 | 2018-2038 |
| Hennepin County | 35,349 | 35,866 | 71,214 |
| - Minneapolis | 9,446 | 10,435 | 19,881 |
| - Maple Grove | 3,056 | 3,339 | 6,395 |
| - Eden Prairie | 2,778 | 3,026 | 5,804 |
| - Minnetonka | 2,223 | 1,774 | 3,997 |
| - Bloomington | 1,482 | 1,617 | 3,099 |
| - Rest of Hennepin County | 16,364 | 15,674 | 32,037 |
| Ramsey County | 13,320 | 12,982 | 26,302 |
| - St. Paul | 7,066 | 7,821 | 14,886 |
| - Rest of Ramsey County | 6,254 | 5,162 | 11,415 |
| Dakota County | 12,870 | 12,783 | 25,653 |
| - Eagan | 985 | 993 | 1,979 |
| - Rest of Dakota County | 11,885 | 11,790 | 23,674 |
| Anoka County | 10,691 | 9,941 | 20,632 |
| Washington County | 7,312 | 7,068 | 14,379 |
| Scott County | 5,425 | 5,005 | 10,429 |
| Carver County | 4,367 | 3,733 | 8,100 |
| 7-County Region | 89,333 | 87,377 | 176,710 |

Source: LSA

WHAT TYPES OF HOUSING WILL BE NEEDED?

These regional employment-driven housing demand forecasts include estimates of future housing needed for new workers by housing type and tenure—single-family owner, single-family renter, multifamily owner and multifamily renter. The multifamily category includes townhomes and duplexes, as well as units in apartment and condominium buildings.

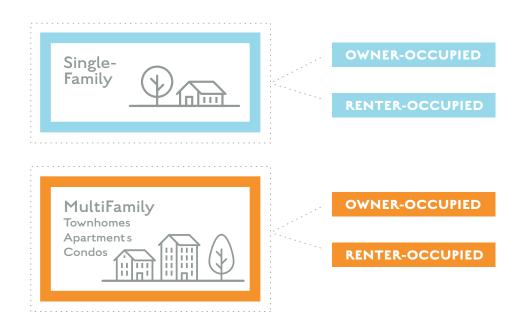
The type and tenure of housing that will be needed in the region over the next 20 years reflects both the wages of future jobs, as well as the characteristics of the future workforce and preferences of future households. These forecasts include estimates of worker households by age, household income and household composition, which are the key drivers to forecasting the types of housing that future households will need.

These regional forecasts of housing type and tenure reflect a shift compared to the current housing stock. Across the seven-county region, approximately 68 percent of current households are homeowners. These forecasts suggest that new workers in the region will be slightly less

likely to be homeowners, with a homeownership rate of 63.3 percent. The shift reflects the changing age structure and demographic characteristics of the workforce, as well as changing wages and household incomes, all of which suggest slightly lower homeownership rates.

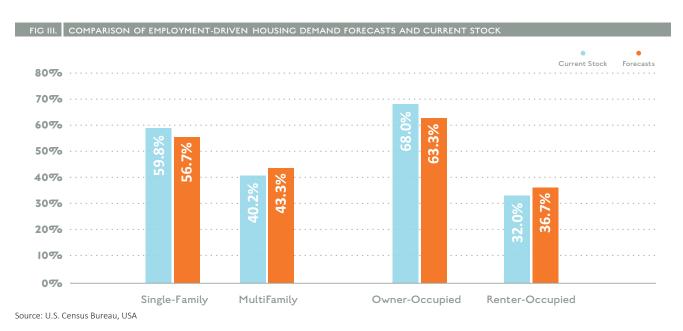
Approximately 43.3 percent of the housing needed for net new workers is forecasted to be multifamily housing (including both owner-occupied and renter-occupied). Currently in the seven-county Twin Cities region, about 40 percent of the housing stock is multifamily. Again, the shift in housing demand reflects the changing socioeconomic characteristics of future working households in the region. These forecasts do not suggest as strong a shift towards multifamily as suggested by forecasts from the Metropolitan Council, among others. This more conservative estimate is based on a review of housing market trends in recent years and an assessment of stable, long-term housing preferences for among different household types, and an assumption of no dramatic changes in housing preferences in the coming two decades.

FIG 2. HOUSING TYPES



HOUSING TYPE HOUSING TENURE Hennepin County 71,214 39,463 31,751 44,490 26,724 - Minneapolis 19,881 8,806 11,075 9,442 10,439 - Maple Grove 6,395 4,239 2,156 5,418 978 - Eden Prairie 5,804 3,190 2,614 4,223 1,582 - Minnetonka 3,997 2,281 1,716 2,814 1,182 2,095 1,004 - Bloomington 3,099 1,856 1,244 - Rest of Hennepin County 32,037 19,091 12,947 20,498 11,539 9,680 Ramsey County 26,302 14,822 11,480 16,622 - St. Paul 14,886 7,651 7,235 7,839 7,047 - Rest of Ramsey County 11,415 7,171 4,244 8,783 2,633 Dakota County 25,653 14,801 10,852 16,347 9,306 - Eagan 1,979 1,047 932 1,172 807 - Rest of Dakota County 23,674 13,754 9,920 15,175 8,500 Anoka County 20,632 11,777 8,856 13,131 7,502 Washington County 14,379 8,178 6,202 9,098 5,282 Scott County 10,429 6,316 4,113 6,923 3,506 Carver County 8,100 4,843 3,257 5,287 2,813 7-County Region 176,710 100,199 76,511 111,896 64,814

Percent of Total



56.7

43.3

63.3

36.7

100.0

^{*}For net new working households.

WHAT PRICES AND RENTS WILL FUTURE WORKING HOUSEHOLDS BE ABLE TO AFFORD?

To ensure that new workers are able to live in the Twin Cities region, housing must be available at the right prices and rents. While the Minneapolis-St. Paul metropolitan area will continue to attract many high-wage, professional jobs over the next 20 years, the new workers coming to the region will have wages all along the income spectrum and there will be fast growth in sectors with lower wages,

including the Health Care and Social Assistance sector. Workers in these sectors often already have a hard time finding housing they can afford in the region and they are the households most likely to see rising housing plus transportation costs if there is not sufficient price-appropriate housing near jobs and transit options.

In addition to changes in the wage structure in the economy, a growing share of workers in the Twin Cities

| NDUSTRY SECTOR | NET NEW JOBS 2018-2038 | MEDIAN WAG (2016 \$S) |
|--|---------------------------|--------------------------|
| Professional, Scientific, and Technical Services | 91,295 | 62,000 |
| Health Care and Social Assistance | 78,789 | 35,000 |
| Administrative and Building Services | 41,443 | 26,000 |
| Construction | 31,711 | 50,000 |
| Public Administration | 22,380 | 52,000 |
| Accommodation and Food Services | 21,323 | 12,600 |
| Finance and Insurance | 18,660 | 65,000 |
| Educational Services (public and private) | 16,292 | 38,000 |
| Retail Trade | 15,138 | 24,000 |
| Other Services (except Public Administration) | 13,787 | 29,000 |
| nformation | 11,790 | 50,000 |
| Arts, Entertainment, and Recreation | 9,356 | 18,000 |
| Manufacturing | 3,199 | 50,000 |
| Fransportation and Warehousing | 2,893 | 38,000 |
| Nholesale Trade | 2,584 | 50,000 |
| Real Estate and Rental and Leasing | 1,422 | 39,000 |
| Mining | 217 | 70,000 |
| Agriculture, Forestry, Fishing and Hunting | 5 | 26,000 |
| Jtilities | (1,537) | 54,000 |
| Management of Companies and Enterprises | (12,356) | 56,000 |

Source: LSA, U.S. Census Bureau, 2016 American Community Survey PUMS file

region will live alone and will therefore have only one income. As a result, these employment-driven housing demand forecasts suggest that the Twin Cities region will need a substantial amount of housing at relatively moderate prices and rents to accommodate future working households.

Of the 368,452 net new jobs that are forecasted for the Minneapolis-St. Paul MSA, the strongest job growth numerically will be in the Professional and Technical Services sector which is expected to add 91,295 net new jobs throughout the MSA between 2018 and 2038. This sector will account for about a quarter of net new job growth in the MSA. Jobs in the Professional and Technical Services sector tend to have higher wages than many other sectors. In the seven-county Twin Cities region, the median wage for the Professional and Technical Services sector is \$62,000 compared to an overall median wage of \$40,000. However, there also will be strong job growth

in sectors with lower wages. For example, the Health Care and Social Assistance sector is expected to add 78,789 net new jobs in the MSA over the 2018 to 2038 period, with a median wage of just \$35,000. There will be 41,443 net new jobs added in the Administrative and Business Services sector, and jobs in that sector pay a median wage of just \$26,000.

Using data on wages by industry and assumptions about household composition and workers per household, we estimate the household incomes of future working households forecasted by this model. The largest share of net new working households—38.6 percent or 64,716 households—will have incomes between \$50,000 and \$74,999. The next largest share are households with incomes between \$25,000 and \$49,999 which account for 26.4 percent of net new working households or 44,401 households.

| TABLE 9. NET NEW WORKING HOUSEHOLDS BY HOUSEHOLD INCOME (2016 \$S), 2018-2038 Seven-County Twin Cities Region | | | | | | |
|--|----------------------|----------------------|--|--|--|--|
| HOUSEHOLD INCOME | NUMBER OF HOUSEHOLDS | PERCENT OF TOTAL (%) | | | | |
| Less than \$25,000 | 10,974 | 6.5 | | | | |
| \$25,000 to 49,999 | 44,401 | 26.4 | | | | |
| \$50,000 to 74,999 | 64,716 | 38.6 | | | | |
| \$75,000 to 99,999 | 26,690 | 15.9 | | | | |
| \$100,000 to 149,999 | 18,223 | 10.9 | | | | |
| \$150,000 or more | 2,871 | 1.7 | | | | |
| Total Working Households | 167,875 | 100.0 | | | | |

Affordable rents and prices are based on the household's income. It was assumed that renters would spend no more than 30 percent of their income on monthly rent, while it was assumed that future homeowners could afford to buy a home priced at no more than 3.5 times the annual household income.

According to these regional employment-driven housing demand forecasts, the Twin Cities region will need to add a total of 111,896 new owner-occupied units for net new working households, which accounts for 63.3 percent

of the total employment-driven housing demand in the region. There is a substantial need for moderately-priced homeownership opportunities. The existing inventory of homes for sale is not well-matched to this need. For example, about 82 percent of the demand for owner-occupied housing regionwide is for homes priced below \$350,000. By comparison, according to the region's Multiple Listing Service (MLS), less than half of homes on the market in the seven-county region have list prices below \$350,000. Fifty-one percent are priced at \$350,000 or higher, including 28 percent that are priced at \$525,000 or higher.

| TABLE 10. HOUSEHOLD INCOME AND MAXIMUM HOME PRICES AND RENTS | | | | | | |
|--|-----------------------|-------------------|--|--|--|--|
| HOUSEHOLD INCOME | HOME PRICE | RENT | | | | |
| Less than \$25,000 | Less than \$87,500 | Less than \$625 | | | | |
| \$25,000 to 49,999 | \$87,500 - \$174,999 | \$625 - \$1,249 | | | | |
| \$50,000 to 74,999 | \$175,000 - \$262,499 | \$1,250 - \$1,874 | | | | |
| \$75,000 to 99,999 | \$262,500 - \$349,999 | \$1,875- \$2,499 | | | | |
| \$100,000 or more | \$350,000 or More | \$2,500 or More | | | | |

| TABLE II. FORECASTS OF OWNER-OCCUPIED EMPLOYMENT-DRIVEN HOUSING DEMAND BY PRICE LEVEL Seven-County Twin Cities Region 2018-2038 : ; | | | | | | |
|---|-----------------------------------|-----------------------|-------------------------|--------------------------|--------------------------|----------------------|
| JURISDICTION | TOTAL OWNER- OCCUPIED UNITS | LESS THAN \$87,500 | \$87,500 - \$174,999 | \$175,000 - \$262,499 | \$262,500 - \$349,999 | \$350,000 OR MORE |
| Hennepin County | 44,490 | 1,800 | 9,934 | 17,508 | 7,720 | 7,528 |
| Ramsey County | 16,622 | 611 | 4,046 | 6,151 | 3,191 | 2,624 |
| Dakota County | 16,347 | 512 | 3,404 | 6,187 | 3,189 | 3,055 |
| Anoka County | 13,131 | 468 | 2,955 | 4,903 | 2,588 | 2,216 |
| Washington County | 9,098 | 303 | 2,578 | 2,961 | 1,895 | 1,360 |
| Scott County | 6,923 | 172 | 1,134 | 2,491 | 1,184 | 1,941 |
| Carver County | 5,287 | 199 | 900 | 1,759 | 929 | 1,500 |
| Twin Cities Region | 111,896 | 4,064 | 24,951 | 41,959 | 20,697 | 20,225 |
| Percent of Total | 100.0 | 3.6 | 22.3 | 37.5 | 18.5 | 18.1 |

Source: LSA

Note: Numbers may not sum to total due to rounding.

Specific tenure and price data are available only at the County level.

The need for lower-cost housing for net new working households is even more pronounced in the forecasts of renter-occupied housing. According to these forecasts, there will be a need for 64,814 new rental units across the seven-county region, including 11.6 percent with rents below \$625 per month. About one-third (33.6 percent) of the new workforce rental demand is for units with rents between \$625 and \$1,249 per month and another 40.4 percent is for rental units with rents between \$1,250 and \$1,874.

But these employment-driven housing demand forecasts also include a need for rental units at higher rents, including 14.5 percent with rents at or above \$1,875 per month. According to these forecasts, 12 percent of future rental housing demand from new working households will be for housing that rents for \$1,875 per month or more, but only seven percent of the Twin Cities current rental housing stock is at that rent level. Many higher-income renters will choose to rent lower-priced units if they are available, but these forecasts suggest that there is a need for rental housing at all rent levels to accommodate future workers in the Twin Cities region.

| TABLE 12. FORECASTS OF RENTER-OCCUPIED EMPLOYMENT-DRIVEN HOUSING DEMAND BY RENT LEVEL 2018-2038 | | | | | | |
|---|------------------------------------|--------------------|-------------------------|-------------------|-------------------------|--------------------|
| | TOTAL RENTER- OCCUPIED UNITS | LESS THAN \$625 | \$625 - \$I,24 9 | \$1,250 - \$1,874 | \$1,875- \$2,499 | \$2,500 OR MORE |
| Hennepin County | 26,724 | 3,322 | 8,945 | 10,833 | 2,895 | 729 |
| Ramsey County | 9,680 | 1,115 | 3,310 | 3,879 | 1,110 | 266 |
| Dakota County | 9,306 | 939 | 3,109 | 3,901 | 1,066 | 292 |
| Anoka County | 7,502 | 870 | 2,493 | 3,021 | 887 | 231 |
| Washington County | 5,282 | 556 | 2,062 | 1,862 | 667 | 135 |
| Scott County | 3,506 | 319 | 1,019 | 1,562 | 422 | 185 |
| Carver County | 2,813 | 367 | 849 | 1,105 | 352 | 141 |
| Twin Cities Region | 64,814 | 7,487 | 21,787 | 26,162 | 7,399 | 1,979 |
| Percent of Total | 100.0 | 11.6 | 33.6 | 40.4 | 11.4 | 3.1 |

Source: LSA

Note: Numbers may not sum to total due to rounding.

Specific tenure and price data are available only at the County level.

Estimates of the Costs of Not Meeting Future Housing Demand

Based on the forecasts of future housing needs in the region, the seven-county
Twin Cities area needs to increase housing production to ensure that future workers
can find appropriate, affordable housing near growing employment centers. This
section analyzes the potential economic losses in the region associated with insufficient
housing. Specifically, this analysis seeks to answer the following questions:

- What is the impact in terms of **lost consumer spending** in the **local economy** if housing is not available and new workers choose not to move to the region?
- What is the impact to the Twin Cities region in terms of **lost business income** if housing is not available and new workers choose not to move to the region?

The Metropolitan Council household forecasts suggest that the Twin Cities region needs 14,368 new housing units each year for the next 20 years to meet expected needs. Housing will be needed for retirees, persons with disabilities, students and others not in the labor force, as well as workers coming to the region to fill existing jobs that are either currently unfilled or will be vacated by people staying in the region. However, a large share of the new housing is associated with growth of the workforce and the need to add new jobs in the region. To accommodate net new workers, we forecast that the region needs to see 8,836 net new units each year.

The Twin Cities region is not producing enough housing to meet current or future demand. Over the past five years (2012 to 2017), the region has produced an average of 10,874 units per year when the need is 14,368 units annually to accommodate the projected number of new households (working and non-working) over the next two decades. Therefore, there is an expected gap of 3,495 housing units each year. Without a ramp up in housing production, the current housing affordability challenges in the region will be exacerbated and the current housing deficit will be expanded which will put the region's competitive economic position in jeopardy.

If it is assumed that the shortfall will be born proportionately by new working households in the future, we can estimate that 61.5 percent of the gap will be a shortfall in housing needed to accommodate net new

workers in the region. Therefore, we assume that unless the region ramps up production, there will be an annual gap of 2,149 housing units needed to accommodate the new workforce (61.5 percent times 3,495).

The potential economic losses associated with not meeting future workforce housing needs in the Twin Cities region are summarized in Table 13 below. We have made several simplifying assumptions to calculate these losses, which are described in the table. The table first presents estimates of the lost consumer spending in the region over the 2018 to 2038 period (Part 1), while the estimates of lost business income are reported in the lower half of the table. All estimates are reported in 2018 dollars (Part 2).

Row A is the estimated annual workforce housing gap over the 2018 to 2038 period. This gap was estimated based on forecasts of overall housing unit growth, the share of housing units needed to accommodate net new working households, and a comparison to annual residential construction activity over the past five years (2012 to 2017). Based on these analyses, there could be an annual gap of 2,149 housing units regionwide for new workers, assuming residential construction does not increase beyond levels experienced over the past five years.

Row B is the number of households that theoretically would not be accommodated in the region over the 20-year period without a sufficient supply of housing—that is, without that housing gap being filled. This is a total of 40,831 new working households potentially lost to the region.

Rows C and D calculate the total household incomes and expenditures associated with the 40,831 households. It is estimated that these households would have combined spending of \$2.3 billion over 20 years. Based on a review

of Consumer Expenditure Survey data, it is assumed that 69 percent of that household spending would take place in the region (Row D).

Row F calculates the total lost regional household spending at \$1.6 billion over the 20-year period, or \$81 million annually. In other words, if there is an insufficient increase in the production of housing to accommodate workforce growth, it is possible that the Twin Cities region could lose out on more than \$81 million each year in consumer spending in the region.

Part 2 summarizes potential lost Gross Regional Product (GRP) associated with the potential loss of jobs if sufficient workforce housing is not available in the region. Based on

these forecasts, if the estimated workforce housing gap is not closed, it is possible that the Twin Cities region could lose out on 48,344 jobs over the 2018 to 2038 period (row H). Row I provides a distribution of the industry sectors of the potential job losses and Row J uses data from the U.S. Bureau of Economic Analysis to estimate the economic productivity associated with a job in each of these sectors. Those measures of productivity are summed to estimate a preliminary potential loss in GRP over the 20-year period. A portion of that GRP (an estimated 15 percent) is already accounted for in the lost consumer spending (Row L). Row M provides a final estimate of lost GRP to the region in the amount of \$4.3 billion over 20 years or approximately \$215 million each year.

CONSUMER SPENDING LOST FROM THE TWIN CITIES REGIONAL ECONOMY 2,149 A. Annual Household Gap **B.** Household Gap (2018 to 2038) 40,831 C. Households Gap by Household Income <\$50,000 13,433 \$50,000 to \$99,999 22,212 \$100,000 to \$149,999 4,430 \$150,000+ 755 D. Estimated Total Household Incomes for "Missing Households" <\$50,000 470.171.788 \$50,000 to \$99,999 1,366,050,138 \$100,000 to \$149,999 443,019,010 \$150,000+ 72,705,136 2,351,946,071 0.69 E. Percent of Expenses Spent in the Twin Cities Region \$1,622,842,789 20-year period F. Consumer Spending Loss to the MSP Economy if Sufficient **Housing is Not Svailable** \$81,142,139 annual

PART II.

ECONOMIC OUTPUT (GROSS REGIONAL PRODUCT) LOST FROM THE MSP ECONOMY

| G. Jobs That Would Have Been Filled if Sufficient Housing Was Aavailable | 65,330 |
|---|--|
| H. Job Losses in the 7-County MSA | 48,344 |
| I. Jobs Lost by Industry Sector | |
| Accommodation and Food Services | 2,697 |
| Administrative and Building Services | 5,241 |
| Agriculture, Forestry, Fishing and Hunting | 1 |
| Arts, Entertainment, and Recreation | 1,183 |
| Construction | 4,010 |
| Educational Services (public and private) | 2,060 |
| Finance and Insurance | 2,360 |
| Health Care and Social Assistance | 9,964 |
| Information | 1,491 |
| Management of Companies and Enterprises | 0 |
| Manufacturing | 405 |
| Mining | 27 |
| Other Services (except Public Administration) | 1,744 |
| Professional, Scientific, and Technical Services | 11,545 |
| Public Administration | 2,830 |
| Real Estate and Rental and Leasing | 180 |
| Retail Trade | 1,914 |
| Transportation and Warehousing | 366 |
| Utilities | 0 |
| Wholesale Trade | 327 |
| Agriculture, Forestry, Fishing and Hunting Arts, Entertainment, and Recreation Construction Educational Services (public and private) Finance and Insurance Health Care and Social Assistance Information Management of Companies and Enterprises Manufacturing Mining Other Services (except Public Administration) Professional, Scientific, and Technical Services Public Administration Real Estate and Rental and Leasing Retail Trade | \$31,317 \$124,505 \$86,565 \$32,018 \$140,761 \$63,438 \$210,393 \$148,199 \$151,658 \$103,040 \$39,134 \$148,199 \$86,229 \$312,492 \$56,648 |
| Transportation and Warehousing | \$87,680 |
| Utilities | \$440,381 |
| Wholesale Trade | \$162,972 |
| K. Preliminary GRP Loss to the MSP Economy | \$4,559,531,675 |
| L. Household Spending Above That Contributes to GRP Loss | \$243,426,418 |
| M. Final Estimated GRP Loss to the MSP Economy if Sufficient Housing is Not Provided (2018 to 2038) | \$4,316,105,257 20-year period |
| | \$215,805,263 annual |

Moving Forward: Investing In The Region's Economic Prosperity

The Minneapolis-St. Paul region is a great place to live and work. Compared to some of its peer and competitor regions, the Twin Cities area has benefited from a high quality of life and a favorable cost of living. However, recent trends suggest that housing affordability is a growing concern for many working families. In addition, the Twin Cities region is on a path of growing unaffordability and inequality that many other high-quality regions have found themselves on.

According to this analysis, there is a significant potential loss to the region's economy if there is a not sufficient housing available at the right prices and rents and in the right locations to meet the needs of the growing workforce. However, there are ways to help ensure that the Twin Cities region is prepared to meet workforce housing demand. By building public-private partnerships, working regionally and approaching housing as a key economic development issue, the region can be successful in maintaining its competitive advantage through its diverse, affordable housing options and high quality of life.

At a time when other regions are committing hundreds of millions of dollars in public subsidy to attract private investment and jobs, a much better investment in the Minneapolis-St. Paul region's economic development is to invest in housing and other infrastructure to support the current economy and to continue to attract new economic activity.

Moving forward, it is the hope that this analysis brings together stakeholders from across the region—including housing developers, advocates, elected officials, employers, citizens and others—to work together to find practical, effective solutions for building and preserving housing so that new workers as well as existing residents can find appropriate, affordable housing in this great community.

END NOTES

- ¹ See, for example, Brennan, Maya, Lisa Sturtevant and Patrick Reed. 2014. The Impacts of Affordable Housing on Education. Washington DC: National Housing Conference; and Viveiros, Janet, Mindy Ault and Nabihah Maqbool. 2015. The Impacts of Affordable Housing on Health: A Research Summary. Washington DC: National Housing Conference; Chetty, Raj and Nathaniel Hendren. 2015. The Impacts of Neighborhoods on Intergenerational Mobility: Childhood Exposure Effects and County-Level Estimates. National Bureau of Economic Research Working Paper.
- ² Grabar, Henry. 2018. You Can Learn a Lot About an American City by Who's Leaving It. Online https://slate.com/business/2018/04/you-can-learn-a-lot-about-an-american-city-by-whos-leaving-it.html.
- ³ Norton, Gabriela and Atticus Jaramillo. 2017. State of the State's Housing: 2017. St. Paul: Minnesota Housing Partnership.

