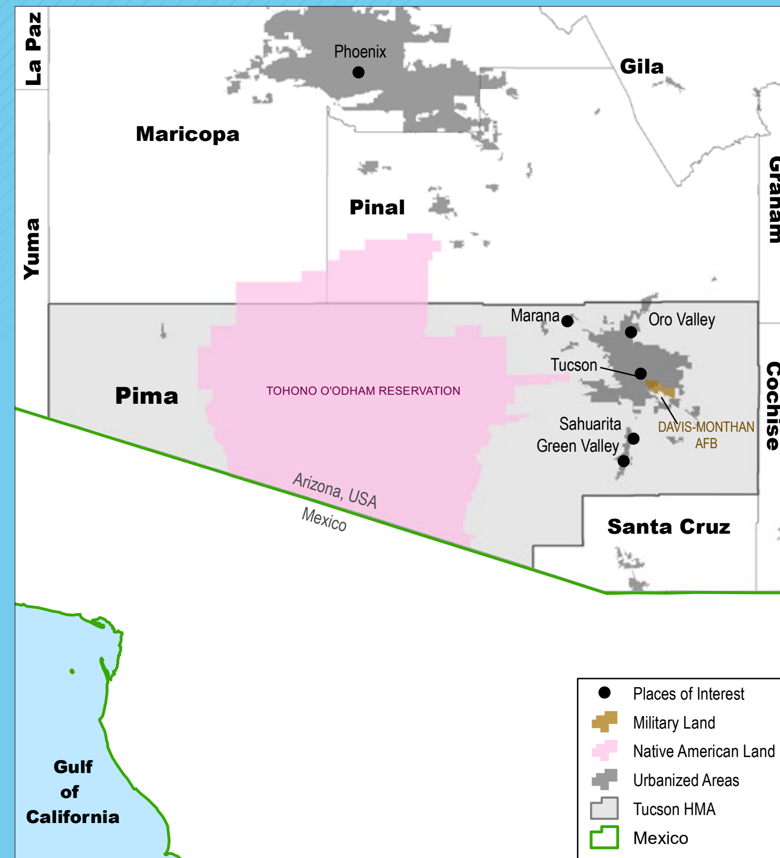
COMPREHENSIVE HOUSING MARKET ANALYSIS

Tucson, Arizona

U.S. Department of Housing and Urban Development,
Office of Policy Development and Research

As of April 1, 2019



Executive Summary

Housing Market Area Description

The Tucson, Arizona Housing Market Area (hereafter, Tucson HMA) includes all towns, cities, villages, and unincorporated areas in Pima County and is coterminous with the Tucson Metropolitan Statistical Area (MSA). The current population of the HMA is estimated at 1.04 million.

The Tucson HMA is along the United States–Mexico border in the Sonoran Desert of Arizona, where a dry, desert climate attracts vacationers and retirees to the area. The HMA is home to 15 percent of the total population in Arizona and is the second most populous metropolitan area in the state, following the Phoenix-Mesa-Scottsdale, AZ (herein Phoenix) MSA. The HMA is home to the University of Arizona (UA) and the Davis-Monthan Air Force Base (AFB).

Tools and Resources

Find interim updates for this metropolitan area, and select geographies nationally at PD&R's Market-at-a-Glance tool.
Additional data for the HMA can be found in this report's supplemental tables.
For information on HUD-supported activity in this area, see the Community Assessment Reporting Tool.

Market Qualifiers

Economy

Stable: with a 1.3-percent job growth rate during the 12 months ending March 2019.

The Tucson HMA has added jobs each year since 2011 following 3 years of job declines from 2008 through 2010, but the number of jobs remains 1 percent below the prerecession high of 385,600 jobs in 2007. During the 12 months ending March 2019, nonfarm payrolls increased by 5,100 jobs, or 1.3 percent, to 382,800, compared with a 3,800-job, or 1.0-percent increase during the 12 months ending March 2018. Nonfarm payrolls increased in 9 of the 11 payroll sectors during the most recent 12 months, with the education and health services and the mining, logging, and construction sectors adding the most jobs. As the economy continues expanding, nonfarm payrolls are expected to increase by an average of 4,600 jobs, or 1.2 percent a year, surpassing the prerecession high during the 3-year forecast period.

Sales Market

Balanced: with the average home sales price increasing 9 percent to $245,100 during the 12 months ending March 2019, compared with a year earlier.

Despite a 5-percent decrease in total home sales, to 20,950 homes during the 12 months ending March 2019 (Metrostudy, Inc., A Hanley Wood Company, with adjustments by the analyst), the sales housing market in the Tucson HMA is currently balanced. The overall sales vacancy rate is estimated at 1.7 percent, down from 2.9 percent in April 2010 when conditions were soft. During the forecast period, demand is estimated for 7,550 new homes. The 800 homes currently under construction in the HMA will satisfy some of the demand.

Rental Market

Balanced: despite increased rental unit construction since 2011.

The rental housing market in the Tucson HMA is currently balanced. The overall rental vacancy rate is estimated at 7.0 percent, down from 11.3 percent in 2010. Conditions in the apartment market are tighter, with a vacancy rate of 4.5 percent during the first quarter of 2019, up slightly from 4.4 percent a year earlier (Reis, Inc.). During the 12 months ending March 2019, the average apartment rent increased 5 percent to $814, faster than the 2-percent increase during the previous 12 months. During the forecast period, demand is estimated for 4,575 new rental units. The 1,725 units under construction are expected to satisfy a portion of this demand.

TABLE OF CONTENTS

3-Year Housing Demand Forecast

		Sales Units	Rental Units
Tucson HMA	Total Demand	7,550	4,575
	Under Construction	800	1,725

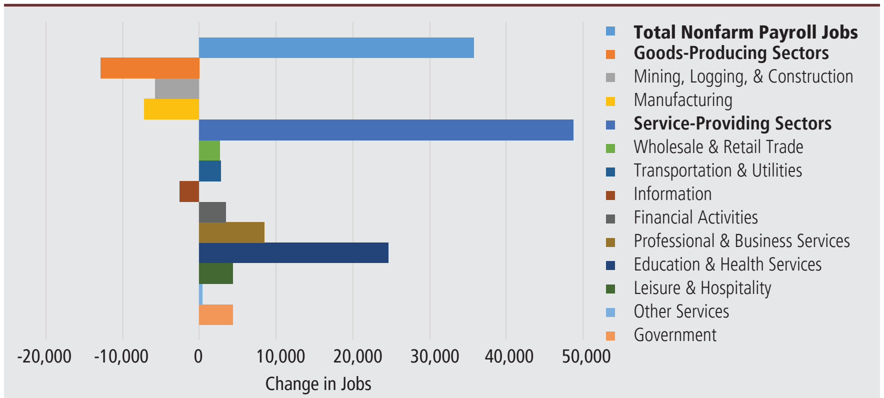
Notes: Total demand represents estimated production necessary to achieve a balanced market at the end of the forecast period. Units under construction as of April 1, 2019. Sales demand includes an estimated demand for 25 mobile homes. The forecast period is April 1, 2019, to April 1, 2022.
Source: Estimates by the analyst

Economic Conditions

Largest sector: Government

Although the government sector has provided generally steady job growth in the HMA since 2001, adding a total 4,400 jobs, or 6.0 percent, the education and health services sector led job growth, increasing by 24,600 jobs, or 58.6 percent (Figure 1).

Figure 1. Sector Growth in the Tucson HMA, 2001 to Current

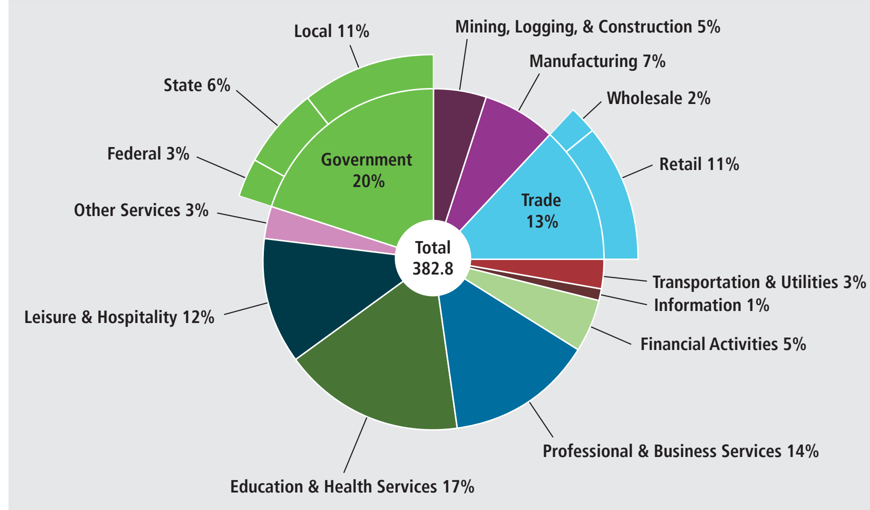


Note: The current date is April 1, 2019.
Source: U.S. Bureau of Labor Statistics

Primary Local Economic Factors

Anchored by the presence of UA and the Davis-Monthan AFB, the government sector is the largest nonfarm payroll sector in the Tucson HMA, accounting for 20 percent of nonfarm payrolls (Figure 2). Approximately 32 percent of the jobs in the sector are in the state government subsector. UA, which is the largest employer in the HMA (Table 1), had an annual economic impact of $3.6 billion on the HMA in 2011 (Tripp Umbach Report). The University of Arizona Health

Figure 2. Current Nonfarm Payroll Jobs in the Tucson HMA, by Sector



Notes: Total nonfarm payroll is in thousands. Percentages may not add to 100 percent due to rounding.
Source: U.S. Bureau of Labor Statistics

Table 1. Major Employers in the Tucson HMA

Name of Employer	Nonfarm Payroll Sector	Number of Employees
University of Arizona	Government	12,550
Davis-Monthan Air Force Base	Government	11,750
Raytheon Missile Systems	Manufacturing	11,450
State of Arizona	Government	8,575
Banner Healthcare – University Medical Group	Education & Health Services	6,475
Pima County Government	Government	5,925
Walmart, Inc.	Wholesale & Retail Trade	4,350
City of Tucson	Government	4,100
Tucson Medical Center	Government	4,050
U.S. Customs and Border Protection	Government	NA

NA = data not available.
Notes: Excludes local school districts. Data includes military personnel, who generally are not included in nonfarm payroll survey data.
Source: Pima County Comprehensive Annual Financial Report, Fiscal Year ended June 30, 2018

Network, which is part of UA, had an economic impact of $2.0 billion on the HMA in 2011. In 2016, the UA Health Network merged with Banner Health, one of the largest nonprofit healthcare systems in the country, to form the private company Banner Healthcare-University Medical Group, the fifth largest employer in the HMA. The federal government subsector constitutes nearly 17 percent of all government employment in the HMA. Davis-Monthan AFB, the second largest employer in the HMA, employs 11,750 active duty military and civilian employees and had an economic impact of $1.5 billion on the HMA in 2016 (Davis-Monthan Economic Impact Analysis). The presence of the AFB has supported the HMA's aerospace industry through contracts with Raytheon Missile Systems, the third largest employer in the HMA and one of the largest manufacturers of unmanned aircraft in the nation. In March 2019, Raytheon Missile Systems was awarded a $63.3 million military contract to continue development on the Tactical Boost Glide hypersonic weapons program; the project has been underway for 5 years. Jobs created by the contract are not specified.

Economic Periods of Significance

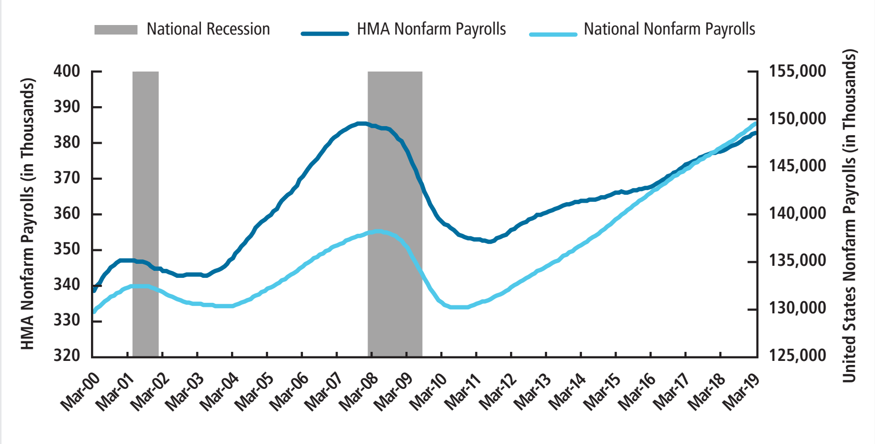
Overview

Since 2001, the economy of the HMA has generally followed national economic trends (Figure 3). From 2001 through 2010, periods of economic growth and contraction in the HMA outpaced growth and contraction for the nation. After the Great Recession, the HMA economy began adding jobs in 2011, at the same time the national economy began expanding, but the HMA has not recovered the total number of jobs lost and has lagged national job growth.

2001 through 2002

During the dot-com recession and after the September 11 attacks in 2001, a reduction in domestic and international air and ground travel occurred, and nonfarm payrolls in the HMA decreased by 2,000 jobs, or 0.6 percent, a year, from 2001 through 2002; more than the 0.5-percent annual rate of loss for the nation. The leisure and hospitality sector led overall job losses in the HMA, decreasing by 1,300 jobs, or 3.3 percent, annually. Manufacturing payrolls declined by 1,200 jobs, or 3.6 percent, annually, partly because of a 550-job layoff at Bombardier Aerospace in 2002—layoffs that resulted from the downturn in the aerospace industry following September 11, 2001. Offsetting some of the losses were gains in 4 of the 11 nonfarm payroll sectors, including the government sector, which added an average of 800 jobs, or 1.1 percent. The local government subsector added an average of 900 jobs, or 2.1 percent, annually, while the state subsector remained unchanged and the federal subsector declined by 100 jobs, or 0.5 percent, a year.

Figure 3. 12-Month Average Nonfarm Payrolls in the Tucson HMA and the Nation



Note: Based on the 12-month moving average.
Sources: U.S. Bureau of Labor Statistics; National Bureau of Economic Research

2003 through 2007

The HMA economy expanded from 2003 through 2007, and nonfarm payrolls increased by an average of 8,500 jobs, or 2.4 percent, annually, reaching a peak of 385,600 jobs in 2007, compared with the average annual growth rate of 1.1 percent in the nation. During this period, the government sector added an average of 600 jobs, or 0.8 percent, a year because the federal and local government subsectors added 300 and 500 jobs, or 2.7 percent and 1.1 percent, respectively. Growth was partly attributed to the founding of the U.S. Department of Homeland Security in March 2003, in response to the September 11 attacks, leading to increased security at international ports of entry nationwide, including in the HMA. Economic expansion during the period was also a result of significant growth in the professional and business services and the education and health services sectors, which were up by respective averages of 2,300 and 2,200 jobs, or 5.0 and 4.7 percent, annually. The leisure and hospitality sector grew by an average of 600 jobs, or 1.5 percent, annually. Job gains in the education and health services and leisure and hospitality sectors were attributed to an influx of retirees and a growing population, particularly through in-migration.

2008 through 2010

The HMA economy contracted from 2008 through 2010, while the national recession and housing crisis began in late-2007 and lasted through mid-2009. From 2008 through 2010, nonfarm payrolls in the HMA decreased by an average of 10,800 jobs, or 2.9 percent, annually compared with the average annual loss of 1.9 percent for the nation. Payrolls in 9 of the 11 payroll sectors in the HMA declined during the period. The mining, logging, and construction sector lost the most jobs, down by an average of 3,800 jobs, or 15.8 percent, annually, with the entire decline resulting from losses in the construction subsector. Residential construction declined in response to the net out-migration of people seeking jobs in larger employment centers, including the Phoenix MSA. During the 3-year downturn, the only two sectors to add jobs were the education and health services and the government sectors, which increased by an average 1,200 and 100 jobs, or 2.1 and 0.1 percent, respectively. In the government sector, the federal subsector added an average 800 jobs, or 6.8 percent, offsetting losses of 100 and 600 jobs, or 0.1 and 1.5 percent, in the state and local government subsectors, respectively.

2011 through 2017

The HMA began to recover in 2011 following the recession, and job growth accelerated in 2016 and 2017. From 2011 through 2015, nonfarm payrolls rose by an average of 2,800 jobs, or 0.8 percent, annually, and accelerated to an average of 5,000 jobs, or 1.4 percent, a year from 2016 through 2017. From 2011 through 2017, job growth in the HMA was slower than the 1.7-percent annual growth rate for the nation. During the 7-year period, job gains in the HMA were led by the education and health services and the leisure and hospitality sectors, which rose by an average 1,000 and 900 jobs, or 1.6 and 2.2 percent, respectively. Job gains during the period were supported by the completion of the $72 million Green Valley Hospital in the summer of 2015, which added 250 jobs. The opening of the hospital addressed increasing demand for health services from the elderly population in the Green Valley area, where approximately 77 percent of the population was 65 years or older (2017 American Community Survey [ACS] 5-year data). In addition, in September 2017, the first new hotel built in downtown Tucson in over 40 years was completed, adding approximately 220 jobs. The $32 million, eight-story, 136 room AC Hotel by Marriott Tucson Downtown is part of the Downtown Revitalization project that began with the completion of the $198.8 million Sun Link Streetcar in 2014. From 2011 through 2017, the government sector declined by an average of 200 jobs, or 0.2 percent, a year because of a 300-job, or 0.7 percent, annual decline in the local government subsector. During this period, jobs in the federal government subsector remained unchanged, while 100 jobs, or 0.6 percent, were added annually in the state government subsector.

Current Conditions—Nonfarm Payrolls

The current rate of job growth in the HMA has slowed slightly from the 2016 through 2017 period, and the total number of jobs remains only 1 percent below the 2007 peak level. During the 12 months ending March 2019, nonfarm payrolls in the HMA increased by 5,100 jobs, or 1.3 percent, to 382,800 (Table 2), compared with the 3,800-job, or 1.0-percent increase during the 12 months ending March 2018. During the period, job gains were supported by the mining, logging, and construction and the manufacturing sectors, which rose by 1,200 and 1,100 jobs, or 6.6 and 4.4 percent, respectively. Together, the two goods-producing sectors accounted for nearly one-half of the total net increase in nonfarm payrolls. Recent gains were supported by Symboticware, Inc., a Canadian mining software company that opened in March 2019, adding 20 jobs. Job gains were also the result of the completion of a $50 million, 150,000 square-foot Caterpillar, Inc. headquarters, the world's largest construction equipment manufacturer, in March 2019. The company moved 200 employees from temporary facilities and is planning to add 300 more employees in the next 5 years. The only two sectors to lose jobs during the past 12 months were the wholesale and retail trade and the leisure and hospitality sectors, down 1,100 and 200 jobs, or 2.2 and 0.4 percent, respectively. Two grocery stores, Albertsons Companies LLC and their subsidiary, Safeway, Inc., along with the Radisson Suites Hotel in Tucson, laid off a combined 200 employees during the period. The government sector regained momentum and increased by 700 jobs, or 0.9 percent. The federal, state, and local government subsectors added 100, 400, and 200 jobs, or 0.5, 0.4, and 0.3 percent, respectively.

Table 2. 12-Month Average Nonfarm Payroll Jobs (1,000s) in the Tucson HMA, by Sector

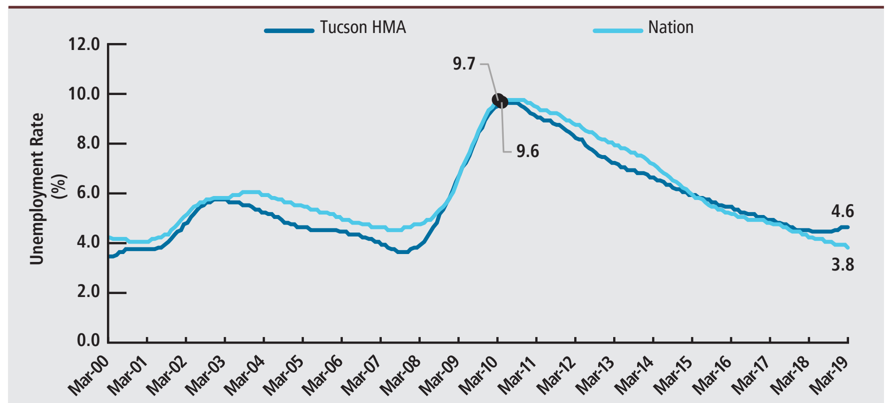
	12 Months Ending March 2018	12 Months Ending March 2019	Absolute Change	Percentage Change
Total Nonfarm Payroll Jobs	377.8	382.8	5.1	1.3
Goods-Producing Sectors	42.3	44.5	2.2	5.3
Mining, Logging, & Construction	17.8	19.0	1.2	6.6
Manufacturing	24.5	25.5	1.1	4.4
Service-Providing Sectors	335.5	338.3	2.8	0.8
Wholesale & Retail Trade	49.9	48.9	-1.1	-2.2
Transportation & Utilities	11.3	11.6	0.3	2.7
Information	5.5	5.6	0.1	2.3
Financial Activities	17.7	18.2	0.5	2.8
Professional & Business Services	51.2	52.1	0.9	1.7
Education & Health Services	65.4	66.6	1.2	1.9
Leisure & Hospitality	44.4	44.3	-0.2	-0.4
Other Services	13.0	13.4	0.4	2.7
Government	77.0	77.7	0.7	0.9

Notes: Based on 12-month averages through March 2018 and March 2019. Numbers may not add to totals due to rounding.
Source: U.S. Bureau of Labor Statistics

Current Conditions—Unemployment

Even as the economy continued expanding during the 12 months ending March 2019, the average unemployment rate increased because labor force growth outpaced employment growth. The unemployment rate was 4.6 percent during the 12 months ending March 2019, up from 4.5 percent during the previous 12 months, but below the recent peak of 9.6 percent from the 12 months ending April through September 2010 (Figure 4). The current unemployment rate is below the 4.8 percent rate for Arizona but above the 3.8-percent national rate.

Figure 4. 12-Month Average Unemployment Rate in the Tucson HMA and the Nation



Source: U.S. Bureau of Labor Statistics

Commuting Patterns

Among employed residents of the HMA, nearly 80 percent work in the HMA, approximately 16 percent work in the Phoenix MSA, and 4 percent work elsewhere. Among jobs in the HMA, 84 percent are filled by residents of the HMA, 10 percent by residents of the Phoenix MSA, and the remainder by residents of other areas.

Employment Forecast

During the 3-year forecast period, job growth is expected to continue in the HMA, increasing by an average of 4,600 jobs, or 1.2 percent, a year. Job growth is expected to be higher in the first year of the forecast period and moderate through the third year. Steady growth is expected to continue in the education and health services and the government sectors and growth is expected to also occur in the professional and business services and the wholesale and retail trade sectors. The opening of GEICO's new $26.5 million, 200,000-square foot regional office in mid-to-late 2019 will consolidate its existing 2,000 employees and add about 700 employees in the next few years. In addition, in January 2019, Amazon.com, Inc. began construction of a 12-acre auxiliary distribution site for independent contractors and flex drivers to load goods for delivery. The distribution center is an addition to an 855,000-square-foot Amazon.com, Inc. warehouse that will open in 2019 and employ more than 1,500 full-time employees. The distribution center will be one of the largest buildings in the city of Tucson, with a capital expenditure of $145 million and is expected to have an economic impact of $600 million on the regional economy over the next 5 years (Sun Corridor, Inc.). The $38 million, 170-room DoubleTree by Hilton will open in downtown Tucson in late 2020, contributing to job gains in the leisure and hospitality sector.

Population and Households

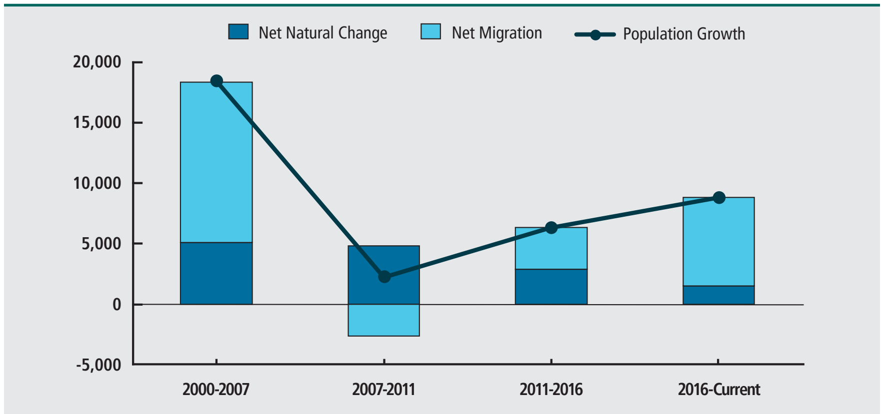
Current population: 1.04 million

> Despite a slowing of net natural change, population growth in the Tucson HMA accelerated since 2016 because of increased net in-migration.

Population Trends

Population trends have generally mirrored economic conditions in the Tucson HMA since 2000. From 2000 to 2007, a period that included economic contraction and expansion, the population of the HMA increased by an average of 18,400, or 2.0 percent, annually (Figure 5; estimates from the Census Bureau and the Arizona Office of Economic Opportunity). Net in-migration averaged 13,300 people a year during the period and net natural change accounted for the remaining annual increase of 5,100 people. Relatively affordable housing attracted people to the HMA from Los Angeles and San Diego Counties in California (Internal Revenue Service tax return data); average home sales prices were approximately 60 percent lower in the Tucson HMA. Weak economic conditions and the impact of the national housing crisis beginning in 2007 caused population growth in the HMA to slow to an average 2,200, or 0.2 percent, a year from 2007 to 2011. Population growth during the period was attributed to an average net natural change of 4,825 people a year, which more than offset average net out-migration of 2,625 people annually. From 2007 to 2011, most net out-migration was to Maricopa and Pinal Counties, both part of the Phoenix MSA, because historically low housing prices attracted HMA residents who were previously commuting to be closer to their jobs. When the HMA economy began expanding, population growth increased to an average 6,275, or 0.6 percent, annually from 2011 to 2016. During the period, net in-migration resumed, averaging 3,400 people annually while net natural change slowed to an average of 2,875 people a year. Even though net natural change has slowed further, to an average of 1,500 people a year since 2016, population growth accelerated to an average 8,750, or 0.9 percent, a year because net in-migration increased to an average 7,250 people annually as job growth accelerated. Migration into the HMA from 2015 to 2016 was primarily from neighboring Maricopa and Pinal Counties and Cochise County, the latter of which is part of the Sierra Vista-Douglas MSA (Table 3).

Figure 5. Components of Population Change in the Tucson HMA, 2000 Through the Forecast



Notes: Net natural change and net migration totals are average annual totals over the time period. The forecast period is April 1, 2019, to April 1, 2022.
Sources: U.S. Census Bureau; U.S. Bureau of Labor Statistics; Arizona Office of Economic Opportunity; current to forecast—estimates by the analyst

Table 3. County-to-County Migration Flows in the Tucson HMA, 2015–2016

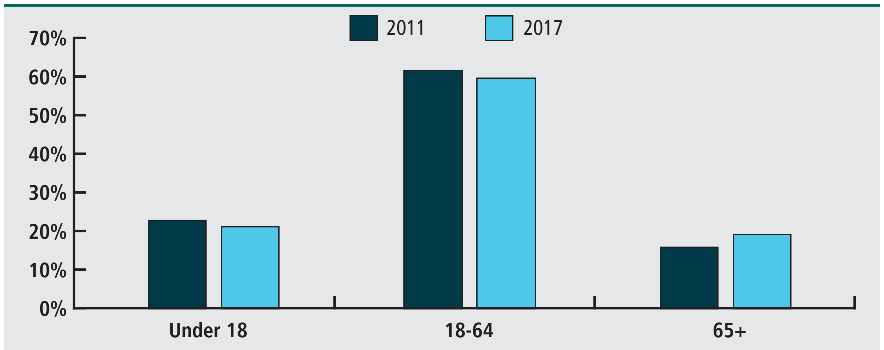
Into the HMA	Maricopa County, AZ	3,804
	Cochise County, AZ	1,479
	Pinal County, AZ	1,117
	Santa Cruz County, AZ	1,090
	San Diego County, CA	872
Out of the HMA	Maricopa County, AZ	5,347
	Pinal County, AZ	1,395
	Cochise County, AZ	989
	Santa Cruz County, AZ	805
	San Diego County, CA	740

Source: Missouri Census Data Center, Single County IRS Migration Profile

Age Cohort Trends

Overall population growth from 2011 through 2017 was mostly the result of an increase in the retirement age portion of the population, generally defined as residents aged 65 and older. This age cohort increased by an average of 6,325, or 3.7 percent, annually (ACS 1-year estimates) during the period. The dry, desert climate of the HMA, relatively affordable housing markets, and services provided by Davis-Monthan AFB to retired military personnel have attracted or retained retired civilian and military personnel. Approximately 19,500 military retirees reside in the HMA (Davis-Monthan Economic Impact Analysis, 2016). From 2011 through 2017, the working age population in the HMA, those aged 18 to 64 years, increased by an average of 600 people, or 0.1 percent, a year, while the portion of the population aged 18 years and younger declined by an average of 1,275 people, or 0.6 percent, a year. The rising share of residents aged 65 and older, which increased from 16 to 19 percent of the total population during the period, is partly the cause of slowing net natural change (Figure 6).

Figure 6. Population by Age in the Tucson HMA

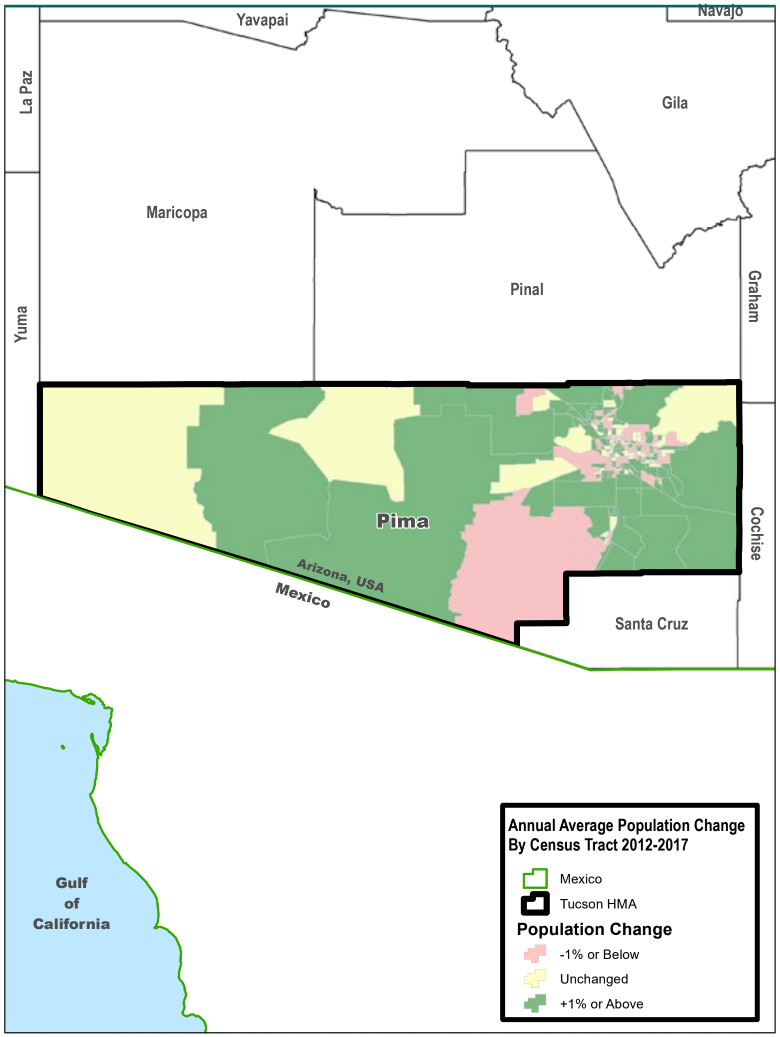


Source: 2011 and 2017 American Community Survey, 1-year data

Population by Geography

The population of the HMA is generally concentrated in the eastern portion of the county, where the city of Tucson is located; approximately 550,000 residents, or more than 50 percent of the HMA population, reside in the city of Tucson. Since 2011, the population of the city of Tucson has expanded by an average of 2,850, or 0.5 percent, a year, slower than respective averages of 1.2, 2.4, and 3.8 percent, annually, in the towns of Oro Valley, Sahuarita, and Marana, the fastest growing jurisdictions in the HMA (Map 1). The western portion of the HMA is generally Indian Reservation land and covers approximately 42 percent of the HMA.

Map 1. Annual Average Population Change by Census Tract in the Tucson HMA, 2012–2017



Source: U.S. Census Bureau

Household Trends

Household growth in the HMA has generally followed trends in population growth, with faster growth occurring during the 2000s and slower growth occurring since 2010 (Table 4). Since 2010, the number of households increased by an average of 3,250, or 0.8 percent, annually, to an estimated 417,800 as of April 1, 2019. From 2000 through 2010, the number of households increased from 332,350 to 388,660, reflecting an average annual increase of 5,625 households, or 1.6 percent.

Table 4. Tucson HMA Population and Household Quick Facts

		2010	Current	Forecast
Population Quick Facts	Population	980,263	1,042,000	1,068,000
	Average Annual Change	13,650	6,825	8,800
	Percentage Change	1.5	0.7	0.8
		2010	Current	Forecast
Household Quick Facts	Households	388,660	417,800	429,300
	Average Annual Change	5,625	3,250	3,825
	Percentage Change	1.6	0.8	0.9

Note: Average annual changes and percentage changes are based on averages from 2010 to current and current to forecast. The forecast period is from the current date (April 1, 2019), to April 1, 2022.
Sources: 2010—2010 Census; current and forecast—estimates by the analyst

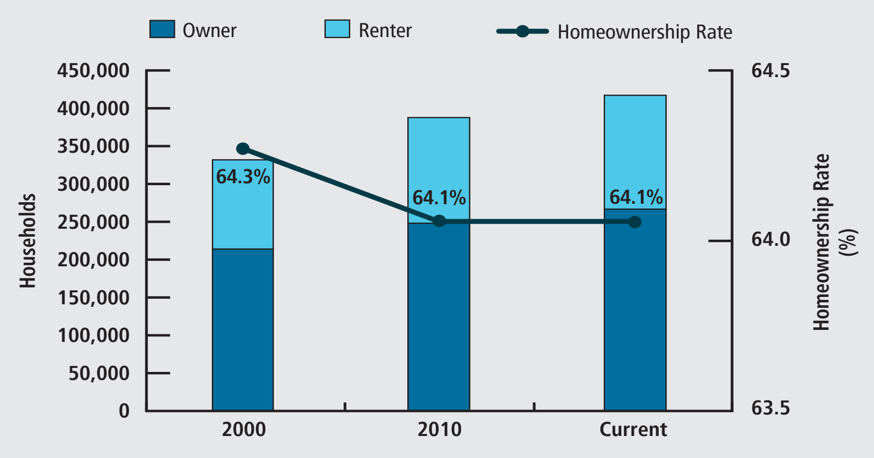
Households by Tenure

Renter and owner household growth since April 2010 have increased at rates similar to the 2000-to-2010 period. This is partly because the effects of the local housing downturn at the end of the previous decade have largely been mitigated. Since 2010, 64 percent of new households were owner households, contributing to a current homeownership rate of 64.1 percent (Figure 7). By comparison, from 2000 to 2010, 63 percent of all new households were owner households, and the homeownership rate declined slightly from 64.3 percent.

Population and Household Growth Forecast

Population growth is expected to continue during the 3-year forecast period but at a slower rate than since 2016 as job growth moderates. The population of the HMA is expected to increase by an average of 8,800, or 0.8 percent, annually during the next 3 years, to 1.07 million. Population growth will be highest in the first year but slow during the second and third years of the forecast period as net in-migration slows. The majority of population growth will consist of the retirement age portion of the population, while the working age population is expected to increase at a slower rate, and the population aged 18 years and younger is expected to continue to decline. During the 3-year forecast period, the number of households is expected to increase by an average of 3,825, or 0.9 percent, annually, faster than the rate of population growth because of a declining household size, reaching 429,300 by April 1, 2022.

Figure 7. Households by Tenure and Homeownership Rate in the Tucson HMA



Sources: 2000 and 2010—2000 Census and 2010 Census; current—estimates by the analyst

Home Sales Market Conditions

Market Conditions: Balanced

Sales housing market conditions in the Tucson HMA have been improving since 2011.

Current Conditions

The sales housing market in the Tucson HMA is currently balanced, with an estimated vacancy rate of 1.7 percent (Table 5), down from 2.9 percent in April 2010. The HMA was significantly impacted by the housing crisis because of substantial overbuilding and lenient mortgage lending standards during the mid-2000s. A lower level of home construction and more stringent lending standards since 2008 have allowed the absorption of excess inventory. As of March 2019, a 1.4-months' supply of homes was available for sale, unchanged from a year earlier and down from a peak of 3.6-months' worth of supply in 2011 (Multiple Listing Service of Southern Arizona), 1 year after foreclosure rates peaked.

Table 5. Home Sales Quick Facts in the Tucson HMA

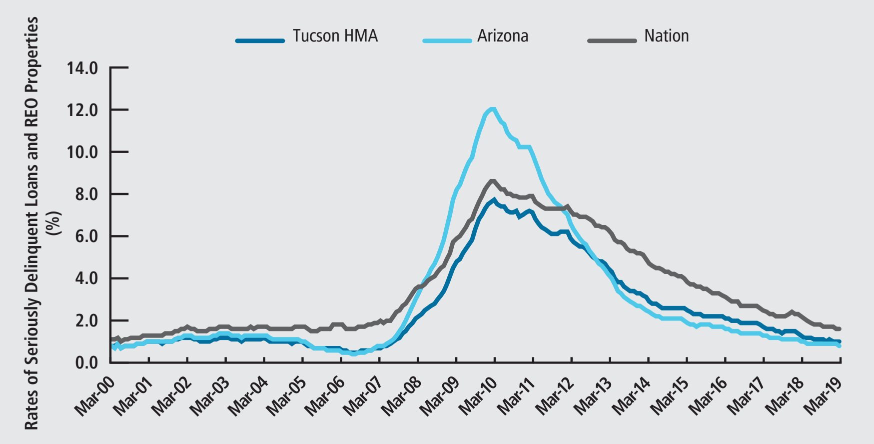
Home Sales Quick Facts		Tucson HMA	Nation
	Vacancy Rate	1.7%	NA
	Months of Inventory	1.4	3.1
	Total Home Sales	20,950	5,926,000
	1-Year Change	-4.9%	-4.0%
	New Home Sales Price	$323,400	$380,000
	1-Year Change	2%	1%
	Existing Home Sales Price	$236,100	$290,500
	1-Year Change	10%	4%
	Mortgage Delinquency Rate	1.0%	1.6%

NA = data not available.
Notes: Vacancy rate is as of the current date (April 1, 2019); home sales and prices are for the 12 months ending March 2019; and months of inventory and mortgage delinquency data are as of February 2019.
Sources: CoreLogic, Inc.; Metrostudy, A Hanley Wood Company, with adjustments by the analyst; Multiple Listing Service of Southern Arizona

REO Sales and Delinquent Mortgages

The housing crisis had a significant effect on the HMA sales market, but it fared better than Arizona and the nation during the housing crisis and has improved since 2011. For context, the percentage of seriously delinquent mortgage loans and real estate owned (REO) properties peaked at 7.7 percent in the HMA in February 2010, one month after the 12.0 and 8.6 percent peak rates in Arizona and the nation, respectively, in January 2010 (CoreLogic, Inc.). As of March 2019, the rate of seriously delinquent loans and REO properties in the HMA was 1.0 percent, down from 1.3 percent a year ago; that proportion is below the 1.6 percent rate for the nation but above the 0.8-percent rate for Arizona (Figure 8).

Figure 8. Rates of Seriously Delinquent Loans and REO Properties in the Tucson HMA



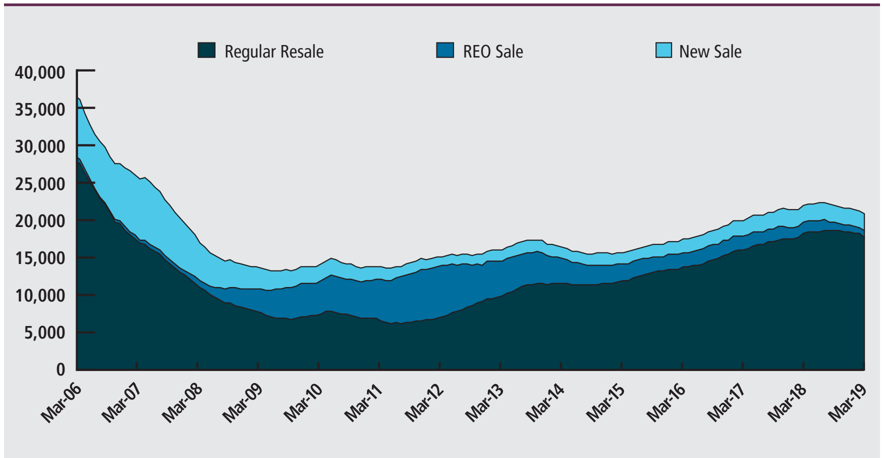
REO = real estate owned.
Source: CoreLogic, Inc.

Existing Home Sales and Prices

Existing home sales in the HMA have increased from the number of homes sold during the local housing market downturn in the late 2000s but are below the level reached in 2005, when economic conditions and population growth were stronger and lending standards more lenient (Figure 9). In 2005, existing home sales totaled 30,350, but declined by an average 3,700 homes, or 17 percent, a year to 11,850 sold in 2010, when the local housing market was weak (Metrostudy, Inc., A Hanley Wood Company, with adjustments by the analyst). The decline in existing sales from 2006 through 2010 reflected an average annual reduction of 4,575 sales, or 25 percent, a year in regular resale home sales, but a rise in REO home sales from 670 in 2005 to 5,050 in 2010. The sales market in the HMA began improving in 2011, when job growth and net in-migration resumed, and existing homes sales increased at an average annual rate of 7 percent, to 19,100, from 2011 through 2017. During the 12 months ending March 2019, 18,650 existing homes sold, down 5 percent from 19,650 homes sold during the previous 12-month period. Existing homes accounted for 89 percent of all homes sold in the HMA during the 12 months ending March 2019. Since 2011, regular resales increased by an average 1,325 homes, or 12 percent, a year, whereas REO sales declined by an average 500, or 19 percent, annually.

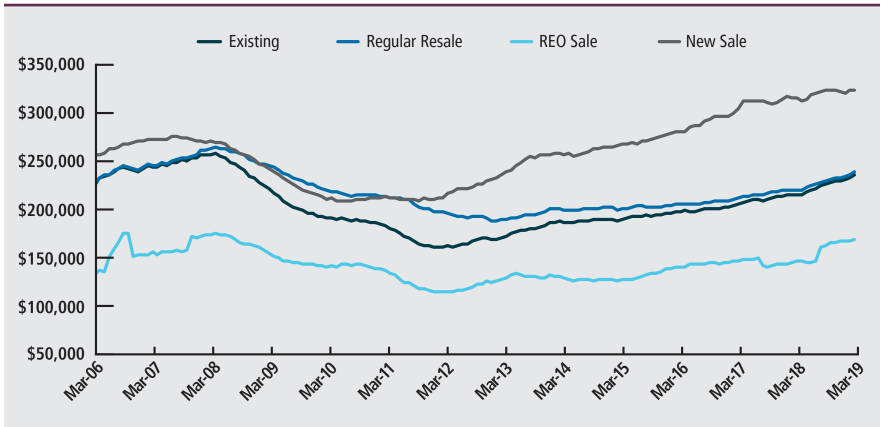
The average existing home sales price in the HMA rose every year since 2012 but is 9 percent below the peak of $258,100 from the 12 months ending March 2008 (Figure 10). During the 12 months ending March 2019, the average existing home sales price rose 10 percent, to $236,000. By comparison, the existing home sales price grew an average of 5 percent a year from 2012 through 2017. The current home sales price in the HMA is 46 percent higher than the recent low of $161,300 during the 12 months ending February 2011, when REO sales constituted 44 percent of existing sales and sold at a discount of 36 percent compared with a regular resale home. Currently, REO

Figure 9. 12-Month Sales Totals by Type in the Tucson HMA



REO = real estate owned.
Source: Metrostudy, A Hanley Wood Company, with adjustments by the analyst

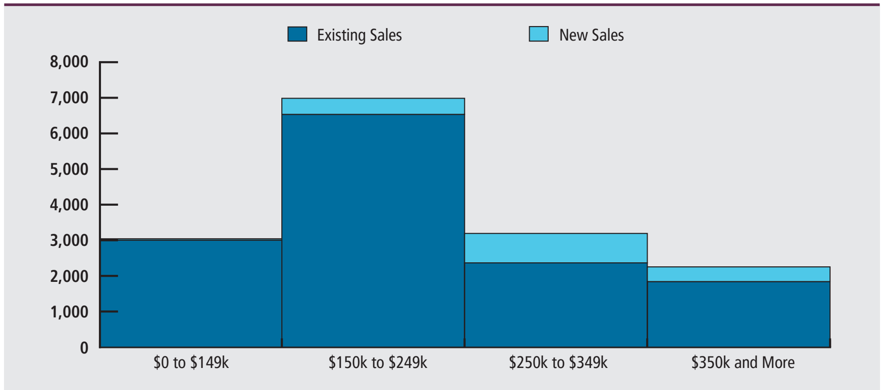
Figure 10. 12-Month Average Sales Price by Type of Sale in the Tucson HMA



REO = real estate owned.
Source: Metrostudy, A Hanley Wood Company, with adjustments by the analyst

sales account for 5 percent of existing sales and sell for 29 percent less than a regular resale home. Nearly one-half of existing homes sold during the 12 months ending March 2019 were priced between $150,000 and $249,999 (Figure 11).

Figure 11. Sales by Price Range During the 12 Months Ending March 2019 in the Tucson HMA



Source: Metrostudy, A Hanley Wood Company

Absentee Sales

The proportion of existing absentee-owner sales, a segment of the market which includes second homes and investments, was 14 percent during the 12 months ending March 2019, up from 6 percent during the previous 12 months (Metrostudy, A Hanley Wood Company). The surge in existing absentee-owner sales during the 12 months ending March 2019 is partly attributed to investors purchasing homes for short-term rentals because of a 2017 Arizona law stating that jurisdictions cannot place any restrictions on short-term rentals. The percentage of homes purchased by absentee owners in the HMA was previously highest from 2005 through 2007 at an average of 11 percent, and lowest from 2008 through 2011 at an average of 3 percent when jobs were contracting, and population growth was low because of net out-migration. By comparison, when economic conditions began to improve, absentee-owner purchases rose, making up 7 percent of existing home sales from 2010 through 2017, partly because of increased investor purchases of distressed properties.

New Home Sales and Prices

Similar to existing home sales, new home sales peaked in 2005 at 8,525 homes sold. New home sales declined each of the 6 subsequent years, by an average 1,200 homes, or 27 percent, annually to 1,300 homes sold in 2011, in response to the national recession. New home sales rose slightly to an average of 1,575 a year from 2012 through 2015, before increasing to an annual average of 2,175 homes sold from 2016 through 2017, when population growth accelerated. During the 12 months ending March 2019, approximately 2,275 new homes sold, down 3 percent from the 2,350 new homes sold during the previous 12 months.

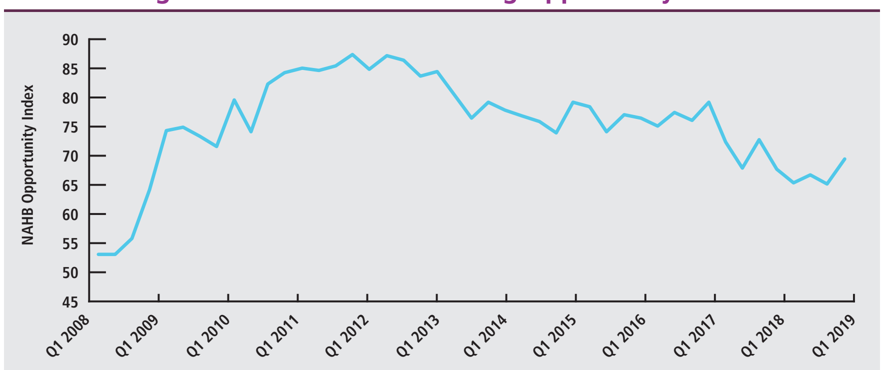
The average new home sales price has increased every year since 2012. During the 12 months ending March 2019, the average sales price of a new home increased by $7,000, or 2 percent, to $323,500 compared with an average increase of $17,500, or 7 percent, annually from 2012 through 2017. Before that, the average new home sales price decreased by an average $7,200, or 3 percent, a year from 2006 through 2011 to $209,800. During the 12 months ending March 2019, nearly one-half of new home sales were priced between $250,000 and $349,999.

Housing Affordability

Homeownership in the Tucson HMA is affordable, although the affordability of buying a home in the HMA has generally trended downwards since the early 2010s, when a large number of distressed home sales were on the market during the foreclosure crisis. Many of those homes have since been sold, putting upward pressure on sales prices despite only moderate income growth in the HMA. The National Association of Home Builders' (NAHB) Housing Opportunity

Index (HOI) for the HMA, which represents the share of homes sold that would have been affordable to a family earning the local median income, was 69.5 during the first quarter of 2019, up from 67.7 during the first quarter of 2018 (Figure 12). The recent increase was likely because median income growth outpaced median home price growth, up by 5 and 4 percent, respectively. During the first quarter of 2019, according to the HOI, the Tucson HMA was more affordable than 106, or 45 percent, of the 237 ranked metropolitan areas in the nation. Despite the recent increase in affordability, the HOI is below the high of 85.1 reached during the first quarter of 2011, when a relatively large number of distressed homes for sale placed downward pressure on home prices. The number has declined every year since the peak. During the first quarter of 2011, for-sale housing in the HMA was more affordable than 176, or 74 percent, of the ranked metropolitan areas in the nation. The rapid absorption of distressed properties has contributed significantly to the decline in affordability as home prices in the HMA have increased at a faster rate than income since the early 2010s. The median home price in the HMA increased 20 percent from the first quarter of 2011 through the first quarter of 2017, as compared to a cumulative increase of only 1 percent for the median income during the same period.

Figure 12. Tucson HMA Housing Opportunity Index

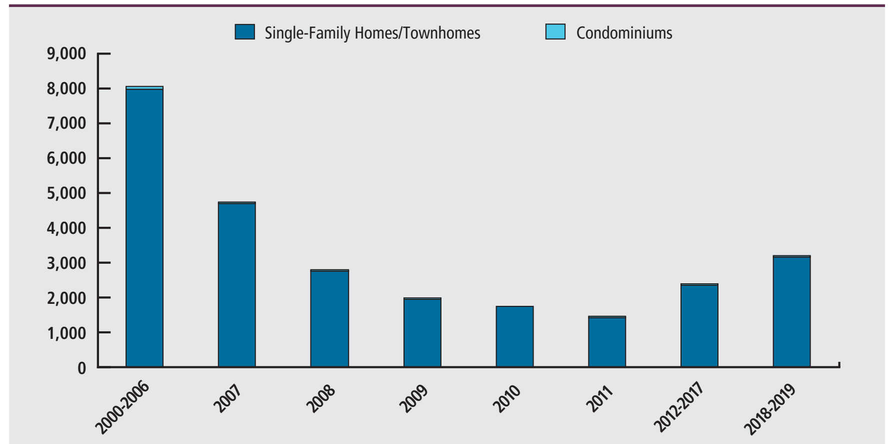


NAHB = National Association of Home Builders. Q1 = first quarter.
Source: NAHB/Wells Fargo

Sales Construction Activity

Homebuilding activity, as measured by the number of for-sale homes permitted, has increased since 2012 but has been at relatively low levels since the late 2000s, compared with the early-to-mid 2000s (Figure 13). From 2000 through 2006, strong population growth contributed to an average of 8,050 for-sale homes permitted, annually. Permitting of homes fell to 4,725 in 2007, and declined further by an average of 830 homes, or 26 percent, annually, to 1,400 homes in 2011 in response to the local economic contraction and housing market downturn. Even with improved economic conditions and increased population growth, homebuilding activity increased only moderately, to an average 2,350 homes a year from 2012 through 2017. During the 12 months ending March 2019, 3,175 homes were permitted, up from the 3,000 homes permitted during the previous 12-month period (preliminary data, with adjustments by the analyst). Since 2000, approximately 1 percent of total sales construction activity has been condominiums.

Figure 13. Average Annual Sales Permitting Activity in the Tucson HMA



Notes: Includes single-family homes, townhomes, and condominiums. Data for 2019 are through March.
Sources: U.S. Census Bureau, Building Permits Survey; 2000 through 2017—final data and estimates by the analyst; 2018 and 2019—preliminary data and estimates by the analyst

During the 12 months ending March 2019, approximately 80 percent of home construction activity was concentrated in the unincorporated areas of the HMA, in the town of Marana and in the city of Tucson. In unincorporated Green Valley, 25 miles south of the city of Tucson, construction is underway at Quail Creek. The subdivision is a 55 and older active adult retirement community. Construction began in 1998, with over 2,000 homes completed and 4,000 expected at buildout. Prices for recently completed two-bedroom, two-bathroom homes start at $308,700. Recent new home construction in Marana includes several projects that stalled during the late 2000s because of the economic downturn. Those projects include Saguaro Bloom, a 2,400-home subdivision planned in 2006. In 2013, construction of the first 250 homes started, and currently there are two plats under construction with a total of 559 homes. Prices start at $254,000 for a three-bedroom home and $312,000 for a four-bedroom home. Additional construction in Marana is occurring in the Dove Mountain community. Subdivisions in the community include Mattamy Homes at Golden Barrel Place and Blue Agave, with 204 homes sold and 364 homes expected at buildout. Single-family home prices range from $269,000 to $408,000 for 1,604 to 3,048 square foot homes. In the city of Tucson, construction began at the La Estancia master-planned community in 2016. Currently, approximately 700 homes are completed, and 2,500 homes are expected at buildout. Prices start at $210,500 for a three-bedroom home and $248,500 for a four-bedroom home.

Forecast

During the next 3 years, demand is expected for an estimated 7,550 new homes in the HMA (Table 6). The 800 homes currently under construction are expected to satisfy a portion of the estimated demand during the forecast period. Most of the demand will be for new homes priced under $350,000. Demand is estimated to decrease each year of the forecast, as job gains and net in-migration moderate.

Table 6. Demand for New Sales Units in the Tucson HMA During the Forecast Period

	Sales Units
Demand	7,550 Units
Under Construction	800 Units

Note: The forecast period is from April 1, 2019, to April 1, 2022.
Source: Estimates by the analyst

Rental Market Conditions

Market Conditions: Balanced

Conditions in the overall rental market are balanced, and apartment market conditions are tight.

Current Conditions and Recent Trends

Overall rental market conditions are currently balanced in the Tucson HMA. The vacancy rate for all rental units is estimated at 7.0 percent, down from 11.3 percent in April 2010 (Table 7). The higher vacancy rates in the HMA reflect the large number of vacation and other short-term rental properties that are captured in the available-for-rent data. Rental market conditions have improved since 2010 because strict lending standards increased demand for rental units, including for single-family homes. Single-family homes represented 29 percent of renter-occupied units in 2000 and rose to 40 percent in 2010 (ACS 1-year data), the same year foreclosure rates peaked. The share of single-family homes in the rental inventory grew to 43 percent in 2017, partly because of increased absentee owner sales. Multifamily buildings with five or more units, typically apartments, accounted for 41 percent of all occupied rental units in the HMA in 2017, down from 43 percent in 2010.

The apartment market is tight and has generally been tightening since 2009. During the first quarter of 2019, the apartment vacancy rate was 4.5 percent, compared with 4.4 percent during the first quarter of 2018 (Figure 14), and below the 4.8-percent rate for the nation (Reis, Inc.). The average apartment rent in the HMA increased by $42, or 5 percent, to $814 during the first quarter of 2019 from a year earlier. By comparison, the average rent increased 4 percent, to $1,451, nationally during the same time. From 2000 through 2006, when readily available access to mortgage credit contributed to a higher propensity for homeownership, the apartment vacancy rate in the HMA ranged from 5.9 to 8.9 percent. Even with stricter lending standards after 2006, demand for apartments

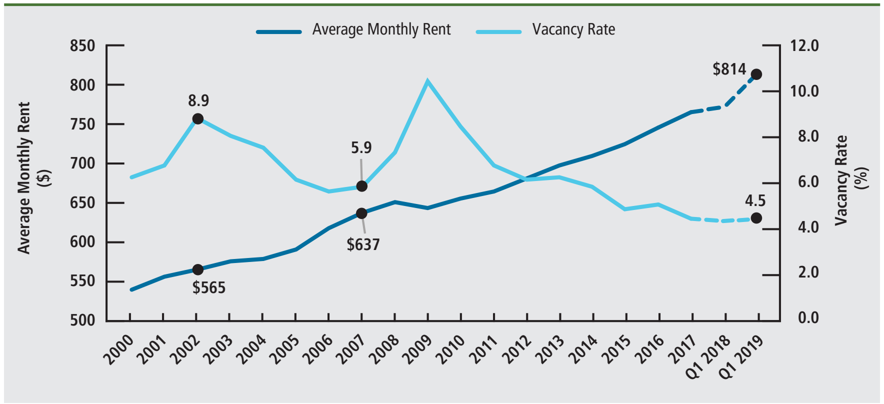
Table 7. Rental and Apartment Market Quick Facts in the Tucson HMA

		2010 (%)	Current (%)
Rental Market Quick Facts	Rental Vacancy Rate	11.3	7.0
	Occupied Rental Units by Structure		
	Single-Family Attached & Detached	40	42
	Multifamily (2–4 Units)	11	11
	Multifamily (5+ Units)	43	41
	Other (Including Mobile Homes)	6	6

		Current	YoY Change
Apartment Market Quick Facts	Apartment Vacancy Rate	4.5%	-0.1
	Average Rent	$814	5%
	Studio	$575	4%
	One-Bedroom	$715	4%
	Two-Bedroom	$923	5%
	Three-Bedroom	$1,227	7%

YoY = year-over-year.
Notes: The current date is April 1, 2019.
Sources: American Community Survey, 1-year data; Reis, Inc.

Figure 14. Apartment Rents and Vacancy Rates in the Tucson HMA



Q1 = first quarter.
Source: Reis, Inc.

decreased because of poor economic conditions and net out-migration, and the apartment vacancy rate increased to 10.5 percent by 2009. From 2001 through 2009, the average rent increased an average of $12, or 2 percent, a year, to $644. By 2010, homeownership had declined in response to the housing crisis and demand for apartments increased, helping to reduce the apartment vacancy rate to 8.5 percent. Although home sales and apartment construction began increasing in 2011, the apartment market vacancy rate further declined to 4.5 percent by 2017 because of improving economic conditions and resumed net in-migration. From 2010 through 2017, the average rent increased an average of $15, or 2 percent, a year, to $766.

Student Housing

The University of Arizona has a significant effect on the rental market in the HMA and the area surrounding the campus in downtown Tucson. From fall 2011 through fall 2018, enrollment rose by an average of 800 students, or 2.2 percent, a year. Of the 40,200 students (excluding online students) enrolled at UA during fall 2018, approximately 6,500 are housed in on-campus dormitories. The remaining 33,700 students who live off campus account for approximately 6 percent of renter households in the HMA. Since 2011, approximately 30 percent of rental construction in the HMA has been student apartments, mainly near the Sun Link Streetcar. Even with a significant portion of rental construction being student apartments, the vacancy rate for market-rate apartment properties in the Reis, Inc.-defined Central Tucson/University North market area has generally declined every year since 2011 to a low of 3.5 percent during the first quarter of 2019. During the period, the average rent increased $14, or 2 percent, a year. Currently, the UA Honor College Dormitory is under construction. When the new dormitory is complete in the summer of 2019, approximately 1,050 students will be housed at the property and could reduce demand for market-rate apartment properties.

Military Housing

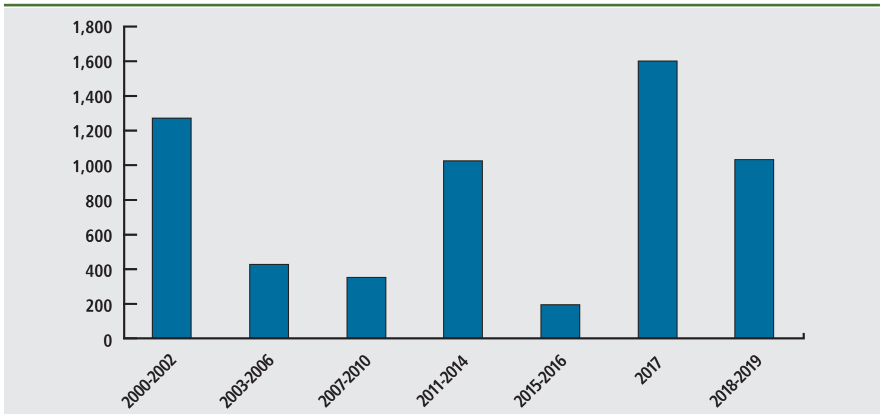
Davis-Monthan AFB has a smaller but noteworthy effect on the rental market in the HMA and the area surrounding the AFB. As of 2016, approximately 2,875 active duty personnel lived on base in the 775-bed, eight-building Unaccompanied Housing option or in one of three privately-operated neighborhoods, with 1,175 two-to-five-bedroom single-family and duplex homes. The remaining 8,875 active duty and civilian employees who live off-base account for approximately 2 percent of renter households in the HMA. In the East Tucson and Pantano market areas, immediately surrounding the AFB, market-rate apartment vacancy rates during the first quarter of 2019 were 4.3 and 4.0 percent, up respectively from 4.2 and 3.7 percent during the first quarter of 2018, but down from 13.3 and 11.5 percent in 2009. Rents in the two market areas rose an average of 2 percent a year since 2009.

Rental Construction Activity

Rental construction activity, as measured by the number of rental units permitted, has exceeded the peak levels attained in the early 2000s partly because of increased net in-migration. From 2000 through 2002, an average of 1,275 rental units were permitted annually (Figure 15) before decreasing to an average of 420 units permitted annually from 2003 through 2006 when homeownership was more attainable. The onset of the Great Recession led to net out-migration from the HMA, and rental construction activity fell further, averaging 350 rental units permitted annually from 2007 through 2010. Rental construction activity increased to an average 1,025 units a year from 2011 through 2014 as economic conditions improved. Rental permitting subsequently declined to an average 190 units a year during 2015 and 2016, to allow for the absorption of recently completed units, before increasing to 1,600 units in 2017 as the rental market continued to tighten. During the 12 months ending March

2019, 1,050 units were permitted, compared with the 1,525 units permitted during the previous 12 months (preliminary estimates, with adjustments by the analyst).

Figure 15. Average Annual Rental Permitting Activity in the Tucson HMA

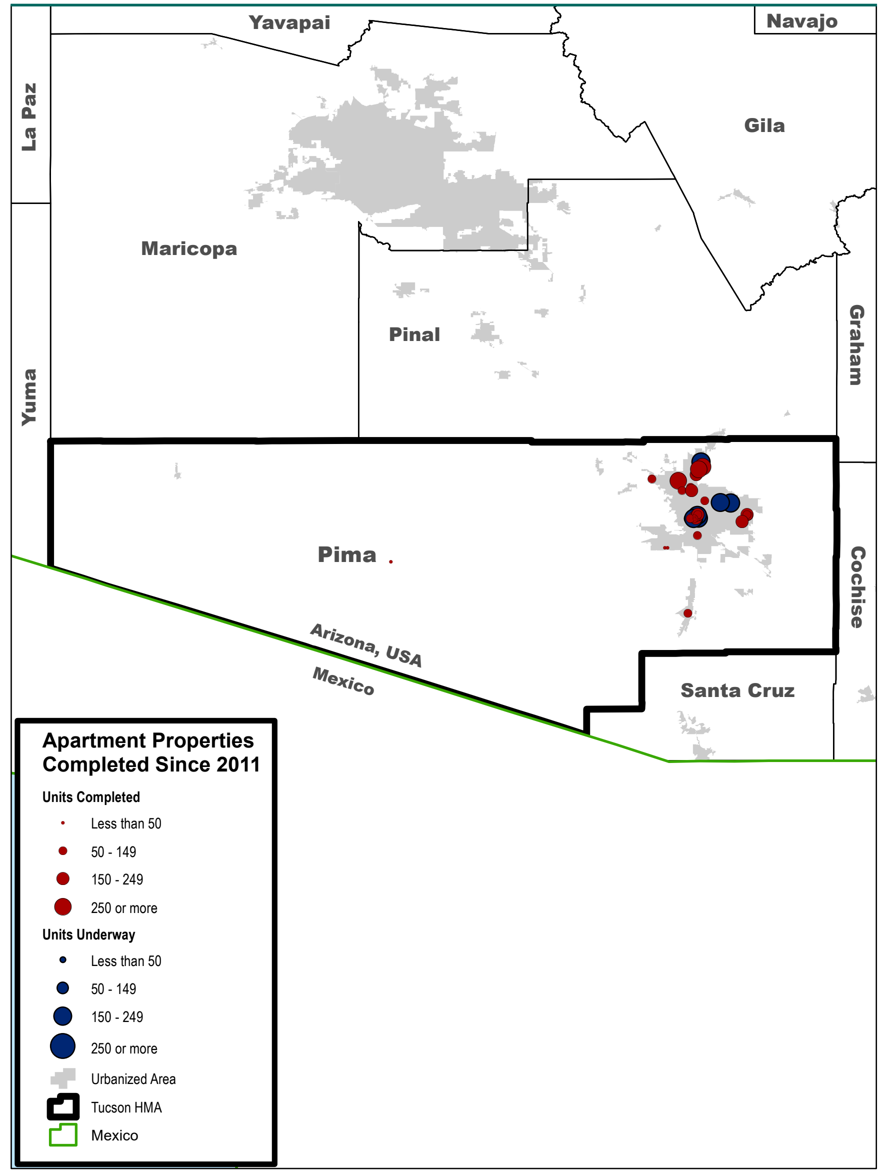


Notes: Includes apartments and units designed for rental occupancy. Data for 2019 are through March.
Sources: U.S. Census Bureau, Building Permits Survey; 2000 through 2017—final data and estimates by the analyst; 2018 and 2019—preliminary data and estimates by the analyst

Recent Completions

Recent rental development in the HMA has been concentrated in the city of Tucson, particularly downtown near UA and the northern Tucson market areas (Map 2). Recent apartment completions include the 240-unit Pima Canyon Luxury Rentals in northern Tucson, completed in January 2019. Rents for one-, two-, and three-bedroom units start at $1,014, $1,265, and $1,505, respectively. Currently, of the 1,725 units under construction in the HMA, 56 percent are market-rate units. One of the largest properties underway is the 244-unit Flin Apartments in downtown Tucson. When complete in January 2021, the property will feature studio, one-, two-, and three-bedroom units; rents have not been published. In addition, three properties with 360 units, or

Map 2. Apartment Properties Completed Since 2011



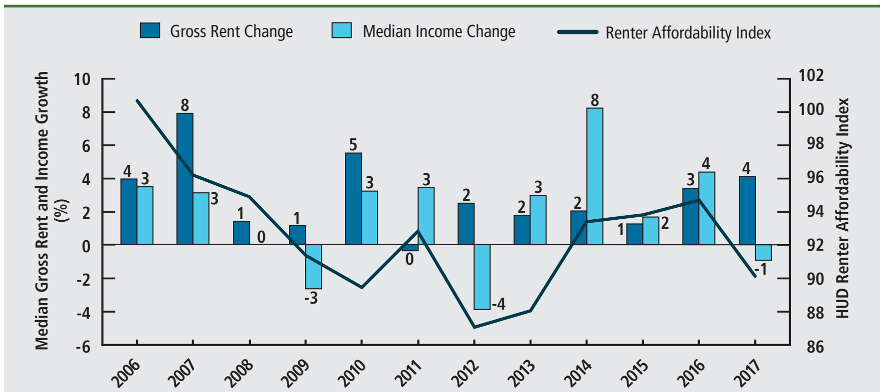
Source: McGraw-Hill Construction Pipeline database, with adjustments by the analyst

21 percent of all units under construction, are student apartments near UA. When complete in the fall of 2019, the properties will feature nearly 1,300 beds. The growing aging population has also affected the rental market, and 23 percent of units under construction are senior housing. In northern Tucson, Hacienda at the Canyon will feature 226 assisted-living and independent units when it opens in May 2019. Approximately 20 miles northwest of the Hacienda at the Canyon, in the town of Oro Valley, 167 assisted-living units are also underway at the All Seasons.

Housing Affordability

Rental housing is becoming more expensive in the Tucson HMA and rental affordability has generally trended downward since 2006 because rent growth has outpaced income growth; however, affordability is similar to levels during the most recent national recession. From 2006 through 2010, the median gross monthly rent in the HMA rose 17 percent to $768 in 2010. During the same period, the median household income for renter households increased 4 percent to $27,457. As a result, the HUD Rental Affordability Index (RAI), a measure of median renter household income relative to qualifying income for the median-priced rental unit, trended downwards (Figure 16). The index was 89.4 during 2010, down from 100.7

Figure 16. Tucson HMA Rental Affordability



Source: American Community Survey, 1-year data

in 2006. From 2011 through 2017, the median gross monthly rent and the median household income for renter households increased 16 and 13 percent to $887 and $31,967, respectively. As a result, the HUD RAI decreased slightly to 90.1 in 2017 from 92.8 in 2011.

During the 2011-through-2015 period, an estimated 21.6 percent of all renter households in the HMA were cost-burdened, spending between 30 and 49 percent of their income on rent, while 25.4 percent were severely cost-burdened, spending more than 50 percent of income towards rent (Table 8). By comparison, nationwide,

Table 8. Percentage of Cost-Burdened Renter Households by Income in the Tucson HMA and the Nation, 2011–2015

	Cost Burdened		Severely Cost Burdened	
	Tucson HMA	Nation	Tucson HMA	Nation
Renter Households with Income <50% AMFI	23.7	25.7	56.7	50.2
Total Renter Households	21.6	22.0	25.4	23.8

AMFI = Area Median Family Income.
Notes: "Cost-burdened" are those households who spend 30–49 percent of their income on rent. "Severely cost-burdened" are those households who spend more than 50 percent of their income on rent.
Sources: Consolidated Planning/CHAS Data; 2011–2015 American Community Survey 5-year estimates (huduser.gov)

22.0 and 23.8 percent of renter households were cost-burdened and severely cost-burdened, respectively. Cost-burdens are particularly notable for lower-income renter households in the HMA. For renter households with incomes less than 50 percent of the Area Median Family Income (AMFI), a slightly higher proportion, 23.7 percent, were paying between 30 and 49 percent of their incomes toward rent but a majority of households at these income levels, or 56.7 percent, were severely cost-burdened. Nationwide, a smaller proportion of households were severely cost-burdened, at 50.2 percent.

The Low-Income Housing Tax Credit (LIHTC) program is the primary source of funding for new affordable rental housing in the nation. From 2011 through 2016, 336 LIHTC units were placed in service in the Tucson HMA, with all those units reserved for households with incomes at or below 60 percent of the Median Family Income (MFI) (HUD LIHTC database). During the period, nearly one-half of the income-restricted construction was reserved for age-restricted units to help address affordability concerns among the aging population. By comparison, from 2000 through 2010, 490 new LIHTC units were placed in service in the HMA, with all units reserved for households with incomes at or below 60 percent of MFI. During this period, 14 percent of units were reserved for seniors. The most recently completed LIHTC property in the HMA was the 44-unit Downtown Motor Apartments that opened in February 2017 and is fully occupied. The project has 35 one-bedroom and 9 two-bedroom units, of which 16 are reserved for households with incomes below 40 percent MFI, 20 for households with incomes below 50 percent MFI, and 8 for households with incomes below 60 percent MFI.

In addition to LIHTC, income-eligible residents may qualify for project-based rental assistance (PBRA) or housing choice vouchers (HCV) through the local public housing authority (PHA). PHAs within the HMA managed approximately 5,275 HCVs in 2018 (Table 9); waitlists are closed until further notice. Within the Tucson HMA, there are nearly 3,500 subsidized units through PBRA and other programs. The number of households that are receiving federal rental assistance and that have an HCV in the HMA has increased by 2.6 and 1.0 percent, respectively, since 2010. The inflation-adjusted rent subsidy from HUD declined 10.8 percent since 2010; during the same time, the inflation-adjusted tenant contribution for HCV declined 2.6 percent.

In the HMA, approximately 1,375 people were homeless in 2018, of which 26 percent were unsheltered homeless (2018 Point-in-Time Count). The HMA rate is lower than the 41 percent share of unsheltered homeless in Arizona. Approximately 14 percent of the state's homeless population is in the HMA. Homelessness in the HMA has decreased since 2010 when 3,643 persons were homeless, and the share of unsheltered homelessness was higher, at nearly 50 percent. Part of the decline is the result of the July 2014 approval by the PHA Commission of a referral based homeless preference program for up to 10 percent of the public housing and HCV program portfolios.

Table 9. Picture of Subsidized Households in the Tucson HMA and the Nation, 2018

	Tucson HMA	Tucson HMA Change Since 2010 (%)	National Count	National HMA Change Since 2010 (%)
Total Assisted Households	8,746	2.6	4,628,247	4.5
Total Housing Voucher Households	5,276	1.0	2,276,722	11.6
Average HCV Tenant Monthly Contribution	$285	-2.6	$379	1.2
Average Monthly HUD Subsidy	$611	-10.8	$793	-1.4

HCV = housing choice voucher.
Note: Dollar changes are inflation adjusted using the Consumer Price Index for All Urban Consumers (CPI-U).
Source: Assisted Housing, national and local (huduser.gov)

Forecast

Demand is estimated for an additional 4,575 rental units during the 3-year forecast period (Table 10). Similar to demand in the sales market, demand in the rental market is expected to slow slightly by the end of the third year as economic growth and net in-migration moderate. The 1,725 units currently under construction will meet a portion of the expected rental housing demand.

Table 10. Demand for New Rental Units in the Tucson HMA During the Forecast Period

Rental Units	
Demand	4,575 Units
Under Construction	1,725 Units

Note: The forecast period is April 1, 2019, to April 1, 2022.
Source: Estimates by the analyst

Terminology Definitions and Notes

A. Definitions

Demand	The demand estimates in the analysis are not a forecast of building activity. They are the estimates of the total housing production needed to achieve a balanced market at the end of the 3-year forecast period given conditions on the as-of date of the analysis, growth, losses, and excess vacancies. The estimates do not account for units currently under construction or units in the development pipeline.
Other Vacant Units	In this analysis conducted by the U.S. Department of Housing and Urban Development (HUD), other vacant units include all vacant units that are not available for sale or for rent. The term, therefore, includes units rented or sold but not occupied; held for seasonal, recreational, or occasional use; used by migrant workers; and the category specified as "other" vacant by the U.S. Census Bureau.
Homebuilding Activity/ Building Permits	Building permits do not necessarily reflect all residential building activity that occurs in an HMA. Some units are constructed or created without a building permit or are issued a different type of building permit. For example, some units classified as commercial structures are not reflected in the residential building permits. As a result, the analyst, through diligent fieldwork, makes an estimate of this additional construction activity. Some of these estimates are included in the discussions of single-family and multifamily building permits.
Distressed	Short sales and real estate owned (REO) sales.
Seriously Delinquent Mortgages	Mortgages 90+ days delinquent or in foreclosure.

Home Sales/ Home Sales Prices	Includes single-family home, townhome, and condominium sales.
Rental Market/ Rental Vacancy Rate	Includes apartments and other rental units such as single-family homes, multifamily homes, and mobile homes.
Forecast Period	4/1/2019–4/1/2022—Estimates by the analyst.
Cost Burdened	Spending more than 30 percent of household income on housing costs.
Net Natural Change	Resident births minus resident deaths.
Months' Supply	The ratio of houses for sale to houses sold. The months' supply indicates how long the current for-sale inventory would last given the current sales rate if no additional new houses were built.
Student Apartments	Apartments designed and marketed to, but not limited to student residence and typically located close to a university campus. Leasing cycles and lease terms may be focused on the academic year.
Senior Housing	Housing units limited to residence by older adults, typically age 55 and older. Properties classified as senior apartments, independent living facilities, continuing care retirement communities, or assisted living are considered senior housing.

B. Notes on Geography

1.	The metropolitan statistical area definition noted in this report is based on the delineations established by the Office of Management and Budget (OMB) in the OMB Bulletin dated February 28, 2013.
2.	Urbanized areas are defined using the U.S. Census Bureau's 2010 Census Urban and Rural Classification and the Urban Area Criteria.
3.	The census tracts referenced in this report are from the 2010 Census.

C. Additional Notes

1.	The National Association of Home Builders (NAHB) Housing Opportunity Index represents the share of homes sold in the HMA that would have been affordable to a family earning the local median income, based on standard mortgage underwriting criteria.
2.	This analysis has been prepared for the assistance and guidance of HUD in its operations. The factual information, findings, and conclusions may also be useful to builders, mortgagees, and others concerned with local housing market conditions and trends. The analysis does not purport to make determinations regarding the acceptability of any mortgage insurance proposals that may be under consideration by the Department.
3.	The factual framework for this analysis follows the guidelines and methods developed by the Economic and Market Analysis Division within HUD. The analysis and findings are as thorough and current as possible based on information available on the as-of date from local and national sources. As such, findings or conclusions may be modified by subsequent developments. HUD expresses its appreciation to those industry sources and state and local government officials who provided data and information on local economic and housing market conditions.

D. Photo/Map Credits

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