



Comprehensive Rental Housing Market Study
for the Plymouth Housing and Redevelopment
Authority



Maxfield
Research & Consulting

7575 Golden Valley Road

Suite 385

Golden Valley, MN 55427

612.338.0012

www.maxfieldresearch.com



April 4, 2018

Jim Barnes
HRA Manager
City of Plymouth
3400 Plymouth Blvd
Plymouth, MN 55447

Dear Mr. Barnes:

Attached is the *Comprehensive Rental Housing Market Study for the Plymouth Housing and Redevelopment Authority* conducted by Maxfield Research and Consulting, LLC. The study projects rental housing demand from 2017 through 2030, and provided recommendations on the amount and type of rental housing that could be built in Plymouth to satisfy demand from current and future residents over the next decade.

The study identifies a potential demand for approximately 3,500 new housing units through 2030. Because the population in Plymouth of the baby boomers will be aging over the next few decades; about 56% of the total demand will be for age-restricted housing types. At the same time, strong demand exists for general-occupancy apartments with a need for over 1,500 units through 2030. Based on the survey of occupancies, Plymouth vacancies are extremely low posting an overall vacancy rate of only 1.7% for general-occupancy housing and 2.5% for senior housing.

Detailed information regarding recommended housing concepts can be found in the *Recommendations & Conclusions* section at the end of the report. If you have any questions or need additional information, please contact us. We have enjoyed conducting this study for you.

Sincerely,

MAXFIELD RESEARCH AND CONSULTING, LLC

A handwritten signature in black ink that reads "Matt Mullins".

Matt Mullins
Vice President
Attachment

A handwritten signature in black ink that reads "Max Perrault".

Max Perrault
Associate

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Purpose and Scope of Study

Maxfield Research and Consulting LLC (i.e. “Maxfield Research”) was engaged by the City of Plymouth HRA to conduct a *Comprehensive Rental Housing Market Study* for the City of Plymouth. The Housing Market Study provides recommendations on the amount and types of rental housing that should be developed in order to meet the needs of current and future households who choose to reside in Plymouth.

The scope of this study includes: an analysis of the demographic and economic characteristics of the City; a review of the characteristics of the existing housing stock, building permit trends, and residential land supply; an analysis of the market condition for a variety of rental and for-sale housing products; and an assessment of the need for housing by product type in the City. Recommendations on the number and types of housing products that should be considered in the City are also supplied.

Demographic Analysis

- As of the 2010 Census, the City of Plymouth had 70,576 people and 29,982 households. The City of Plymouth is forecast to grow by 8,424 people and 2,418 households between 2010 and 2020 and by another 5,000 people and 2,100 households between 2020 and 2030.
- From 2017 to 2022, growth is expected in all ages except in those ages 18 to 24 and in 45 to 54 year olds. The 65 to 74 age cohorts are projected to have the greatest numeric growth increasing by 1,809 people, while the 75 to 84 age cohort is projected to have the greatest percentage growth in Plymouth increasing by 32% between 2017 and 2022.
- The City of Plymouth had an estimated median household income of \$96,274 in 2017. Non-senior household median incomes peak in the 45 to 54 age group at \$124,490. The median income for seniors age 65 to 74 is \$84,386 and for 75+ is \$45,545.
- Between 2000 and 2015, homeownership rates decreased from 76.5% to 71.4% in the City of Plymouth. The decline was a result of lender-mediated properties during the Great Recession and the rental housing market that is currently booming in Plymouth.
- Married without children households accounted for the highest household type percentage in 2015 at 33.3%. However, living alone is the second largest household type accounting for about 26% of households in Plymouth.

Employment Analysis

- Plymouth and Hennepin County had an unemployment rate of 3.1% and 3.4% respectively in June 2017, which is lower than the State of Minnesota (4.1%).
- According to Employer-Household Dynamics data from the U.S. Census Bureau there are roughly 50,551 workers in Plymouth in 2014, 9.9% live in Plymouth. Most other workers are commuting from Minneapolis (7.4%), Maple Grove (5.9%) and Brooklyn Park (4.3%). Plymouth is considered a major importer of works as over 90% of the employees working in Plymouth are from other communities.

Housing Characteristics

- Per the City of Plymouth Building Department there were 7,225 units permitted from 2000 to May 2017. In 2009 (the peak of the recession), Plymouth observed the fewest building permits issued at 75, but has averaged building permits for 299 units per year since 2007.
- Nearly one-half of Plymouth's renter-occupied housing were constructed in the 1970s and 1980s (47%), while 22% of Plymouth's renter-occupied housing stock was built since 2000.
- Approximately 70% of Plymouth homeowners have a mortgage compared to 73% of Hennepin County and 73% of the metro area. About 17% of homeowners with mortgages also have a second mortgage or home equity loan.
- The median estimated home value in Plymouth was roughly \$331,263 in 2017. The income required to afford a home at this price would be about \$94,646 to \$110,421 based on the standard of 3.0 to 3.5 times the median income (and assuming these households do not have a high level of debt). About 64% of non-senior households in Plymouth have incomes of \$94,646 or more in 2017.
- The median contract rent in Plymouth was \$1,057 in 2015. Based on a 30% allocation of income to housing, a household would need an income of about \$42,280 to afford the median contract rent in Plymouth.

Rental Housing Market Analysis

- In total, Maxfield Research inventoried 6,972 general occupancy rental units in Plymouth spread across 44 multifamily developments. At the time of the survey, there were 115 vacant units resulting in an overall vacancy rate of 1.6%. Typically, a healthy rental market maintains a vacancy rate of roughly 5%, which promotes competitive rates, ensures adequate consumer choice, and allows for unit turnover.

EXECUTIVE SUMMARY

- Market rate projects make-up 6,372 units and a total of 115 unit vacancies were found, resulting in a market rate rental project vacancy rate of 1.8%.
- Affordable/subsidized projects make-up 600 units and posted no vacant units.

Senior Housing Market Analysis

- There are eight senior housing developments located in the Plymouth with a total of 914 units. There were 23 vacancies identified within the housing developments posting an overall vacancy rate of 2.5%. Generally, healthy senior housing vacancy rates range from 5% to 7% depending on service level.

Housing Demand Analysis

- Based on our calculations, demand exists in the City of Plymouth for the following general occupancy product types between 2017 and 2030:
 - Market rate rental 972 units
 - Affordable rental 408 units
 - Subsidized rental 188 units
- In addition, we find demand for multiple senior housing product types. By 2030, demand in the Plymouth Market Area for senior housing is forecast for the following:
 - Active adult ownership 308 units
 - Active adult rental 262 units
 - Active adult affordable 234 units
 - Active adult subsidized 227 units
 - Congregate 457 units
 - Assisted Living 234 units
 - Memory care 279 units

Recommendations and Conclusions

- Based on the finding of our analysis and demand calculations, the following chart provides a summary of the recommended development concepts by product type for the City of Plymouth through 2030. Detailed findings are described in the *Recommendations* section of the report.

EXECUTIVE SUMMARY

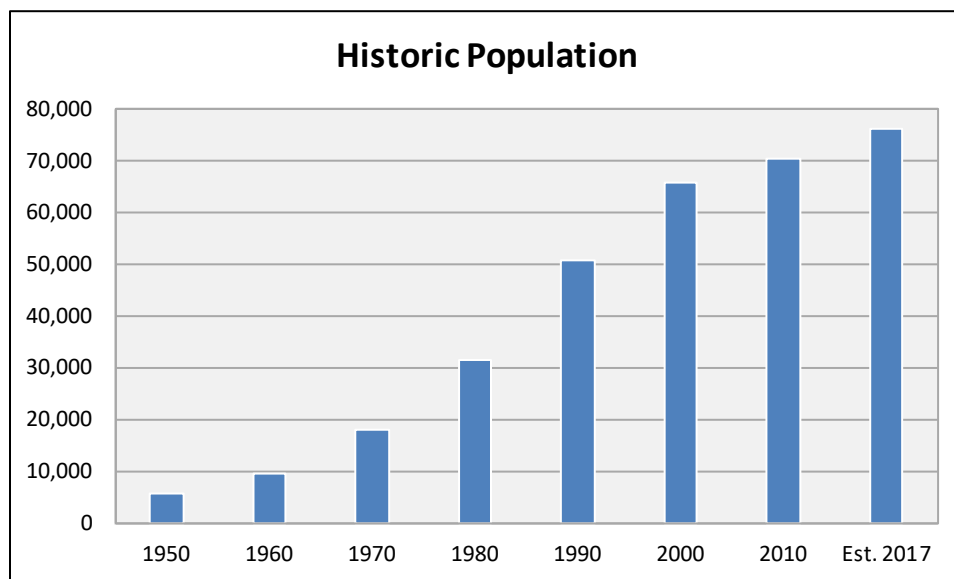
RECOMMENDED HOUSING DEVELOPMENT CITY OF PLYMOUTH 2017 to 2030					
	Purchase Price/ Monthly Rent Range ¹	No. of Units 2017 - 2020	No. of Units 2021 - 2025	No. of Units 2026 - 2030	Total
General Occupancy Rental Housing					
<i>Market Rate Rental Housing</i>					
Apartment-style	\$1,000/1BR - \$2,800/3BR	280 - 300	180 - 200	350 - 400	810 - 900
Townhomes	\$2,300/2BR - \$2,700/3BR	50 - 60	40 - 50	30 - 40	120 - 150
Total		330 - 360	220 - 250	380 - 440	930 - 1,050
<i>Affordable Rental Housing</i>					
Apartment-style	Moderate Income ³	130 - 140	100 - 120	130 - 140	360 - 400
Subsidized	30% of Income ⁴	50 - 60	50 - 60	50 - 60	150 - 180
Total		180 - 200	150 - 180	180 - 200	510 - 580
Total Renter-Occupied		510 - 560	370 - 430	560 - 640	1,440 - 1,630
Senior Housing (i.e. Age Restricted)					
Senior Coop./Ownership Active Adult	\$50,000 - \$200,000+	60 - 70	80 - 90	90 - 100	230 - 260
Active Adult Market Rate Rental ⁵	\$1,400/1BR - \$2,700/2BR	70 - 80	90 - 100	80 - 90	240 - 270
Active Adult Affordable Rental ⁵	Moderate Income ³	80 - 90	60 - 70	80 - 90	220 - 250
Active Adult Subsidized Rental ⁵	30% of Income ⁴	50 - 60	50 - 60	80 - 90	180 - 210
Independent Living/Congregate	\$2,050/1BR - \$4,000/2BR	120 - 130	140 - 150	150 - 160	410 - 440
Assisted Living	\$3,750/EFF - \$5,300/2BR	50 - 60	70 - 80	100 - 110	220 - 250
Memory Care	\$2,900/EFF - \$6,000/2BR	60 - 70	70 - 80	90 - 100	220 - 250
Total Senior Units		490 - 560	560 - 630	670 - 740	1,720 - 1,930
Total - All Units		1,000 - 1,120	930 - 1,060	1,230 - 1,380	3,160 - 3,560
¹ Pricing in 2017 dollars. Pricing can be adjusted to account for inflation. ² Replacement need, infill, and redevelopment. ³ Affordability subject to income guidelines per Minnesota Housing Finance Agency (MHFA). See Table HA-1 for Hennepin County Income limits. ⁴ Subsidized housing will be difficult to develop financially ⁵ Alternative development concept is to combine active adult affordable and market rate active adult into mixed-income senior community Note - Recommended development does not coincide with total demand. Plymouth may not be able to accommodate all recommended housing types based on land availability and development constraints.					
Source: Maxfield Research & Consulting, LLC					

Introduction

This section of the report examines factors related to the current and future demand for owner- and renter-occupied housing units in Plymouth, Minnesota. It includes an analysis of population and household growth trends and projections, projected age distribution, household income, net worth, household types, household tenure, diversity, and mobility trends. A review of these characteristics provides insight into the demand for various types of housing in the City of Plymouth.

Population and Household Growth Trends and Projections from 1990 to 2040

Table D-1 presents population and household growth trends and projections from 1990 to 2040. The 1990 to 2010 data is from the U.S. Census. Estimate and projection data is calculated from the Metropolitan Council; ESRI (a national demographics service provider); with adjustments calculated by Maxfield Research and Consulting LLC. The adjustments are intended to reflect growth that will likely be realized after considering the impact of the current housing market, employment, and review of building permit trends.

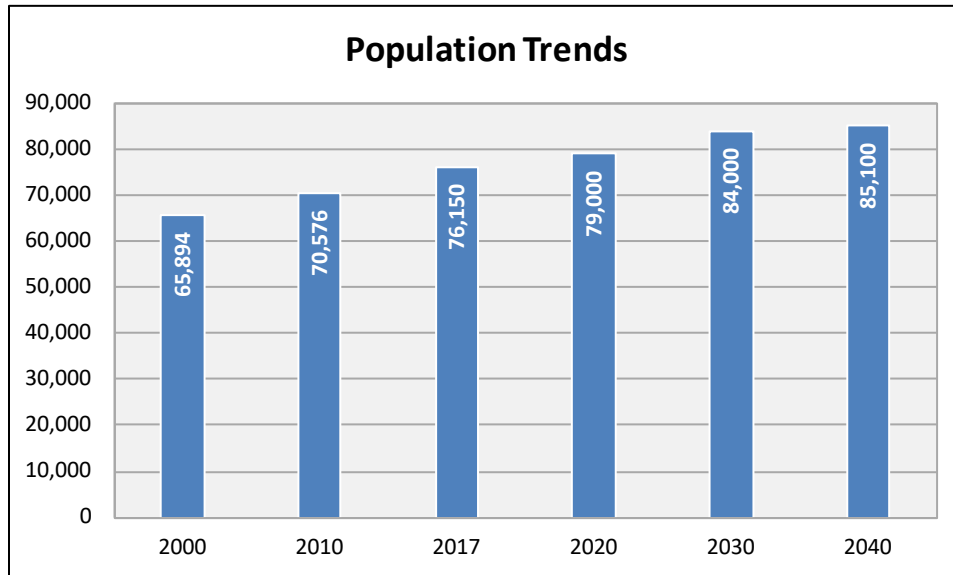


Population

- The City of Plymouth’s population grew by 4,682 people (+7.1%) between 2000 and 2010. During this same period Hennepin County grew by +3.2% and the 7-County Metro Area grew by 7.9%.
- In 2010, The City of Plymouth included roughly 6.1% of the total population in Hennepin County.

DEMOGRAPHIC ANALYSIS

- Maxfield Research projects that Plymouth will have an increase in its population by 8,424 people (+11.9%) between 2010 and 2020.
- We project that between 2020 and 2040, Plymouth will increase by approximately 6,100 people (+7.7%).



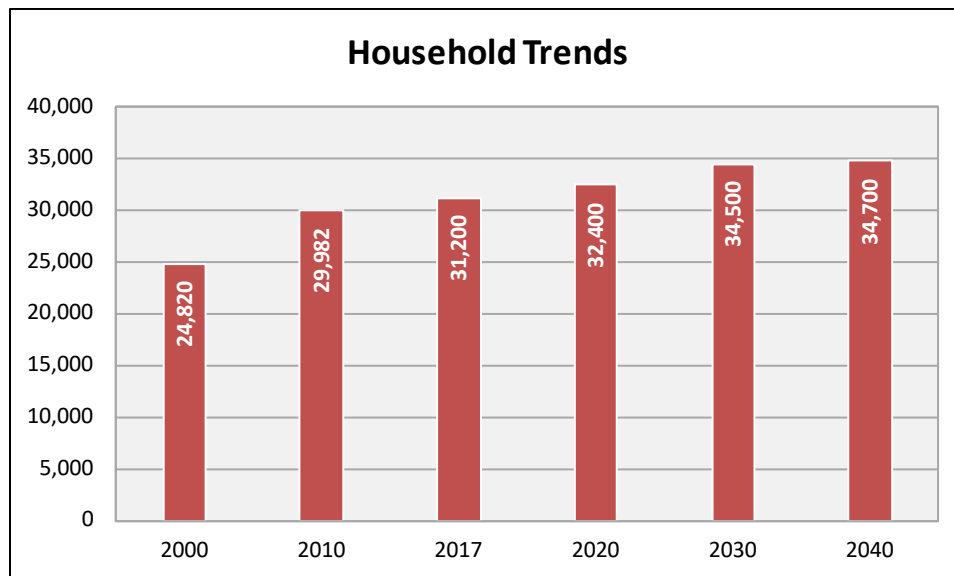
DEMOGRAPHIC ANALYSIS

**TABLE D-1
POPULATION AND HOUSEHOLD GROWTH TRENDS AND PROJECTIONS
PLYMOUTH ANALYSIS AREA
1990 to 2040**

									Change					
	U.S. Census			Estimate	Forecast				2000 to 2010		2010 to 2020		2020 to 2040	
	1990	2000	2010	2017	2020	2022	2030	2040	No.	Pct.	No.	Pct.	No.	Pct.
POPULATION														
Plymouth	50,889	65,894	70,576	76,150	79,000	80,600	84,000	85,100	4,682	7.1	8,424	11.9	6,100	7.7
Hennepin County	1,032,431	1,116,200	1,152,425	1,200,862	1,221,620	1,243,336	1,330,200	1,405,060	36,225	3.2	69,195	6.0	183,440	15.0
7-County Metro Area	2,288,729	2,642,056	2,849,567	2,979,370	3,035,000	3,084,885	3,284,427	3,652,060	207,511	7.9	185,433	6.5	617,060	20.3
HOUSEHOLDS														
Plymouth	19,616	24,820	29,982	31,200	32,400	33,175	34,500	34,700	5,162	20.8	2,418	8.1	2,300	7.1
Hennepin County	419,060	456,129	475,913	512,024	527,500	535,136	565,680	600,040	19,784	4.3	89,767	18.9	72,540	13.8
7-County Metro Area	1,032,431	1,021,454	1,117,749	1,214,931	1,256,580	1,280,958	1,378,470	1,491,780	96,295	9.4	138,831	12.4	235,200	18.7
<i>Note: Hennepin County and Metro Area totals sourced to Metropolitan Council (2020 to 2040).</i>														
Sources: U.S. Census Bureau; ESRI; Metropolitan Council; Maxfield Research & Consulting, LLC														

Households

- Household growth trends are typically a more accurate indicator of housing needs than population growth since a household is, by definition, an occupied housing unit. However, additional demand can come from changing demographics of the population base, which results in demand for different housing products.
- Plymouth gained 5,162 households during the 2000s (an increase of +20.8%), increasing its household base to 29,982 households as of 2010.
- Maxfield Research projects household growth in Plymouth to increase by 2,418 households (+8.1%) between 2010 and 2020. Overall, we project Plymouth to increase to 34,700 households by 2040.



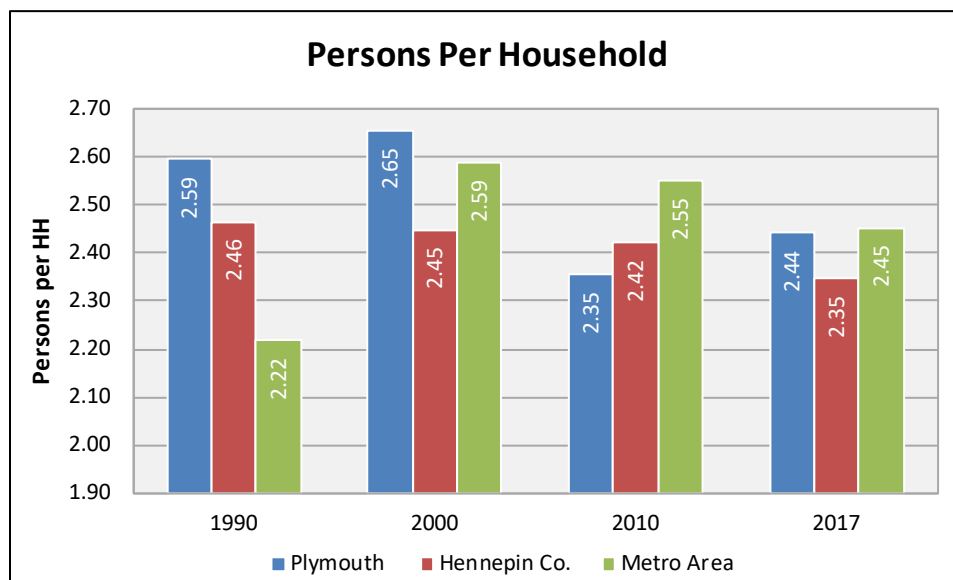
Persons Per Household (Household Size)

Household size is calculated by dividing the number of persons in households by the number of households (or householders). Nationally, the average number of people per household has been declining for over a century; however, there have been sharp declines starting in the 1960s and 1970s. Persons per household in the U.S. were about 4.5 in 1916 and declined to 3.2 in the 1960s. Over the past 50 years, it dropped to 2.57 as of the 2000 Census. However, due to the economic recession this trend has been temporarily halted as renters and laid-off employees “doubled-up,” which increased the average U.S. household size to 2.59 as of the 2010 Census.

DEMOGRAPHIC ANALYSIS

The declining household size has been caused by many factors, including: aging of the population, higher divorce rates, cohabitation, smaller family sizes, demographic trends in marriage, etc. Most of these changes have resulted from shifts in societal values, the economy, and improvements in health care that have influenced how people organize their lives.

- In 2000, the average household size range increased between 2.65 (City of Plymouth) and 2.45 (Hennepin County).
- By 2017, it is estimated that the average household sizes range decreased to 2.44 in Plymouth and 2.35 in Hennepin County. The average household size in the seven-county metro area nearly mimics that of the City of Plymouth at 2.45 persons per household.



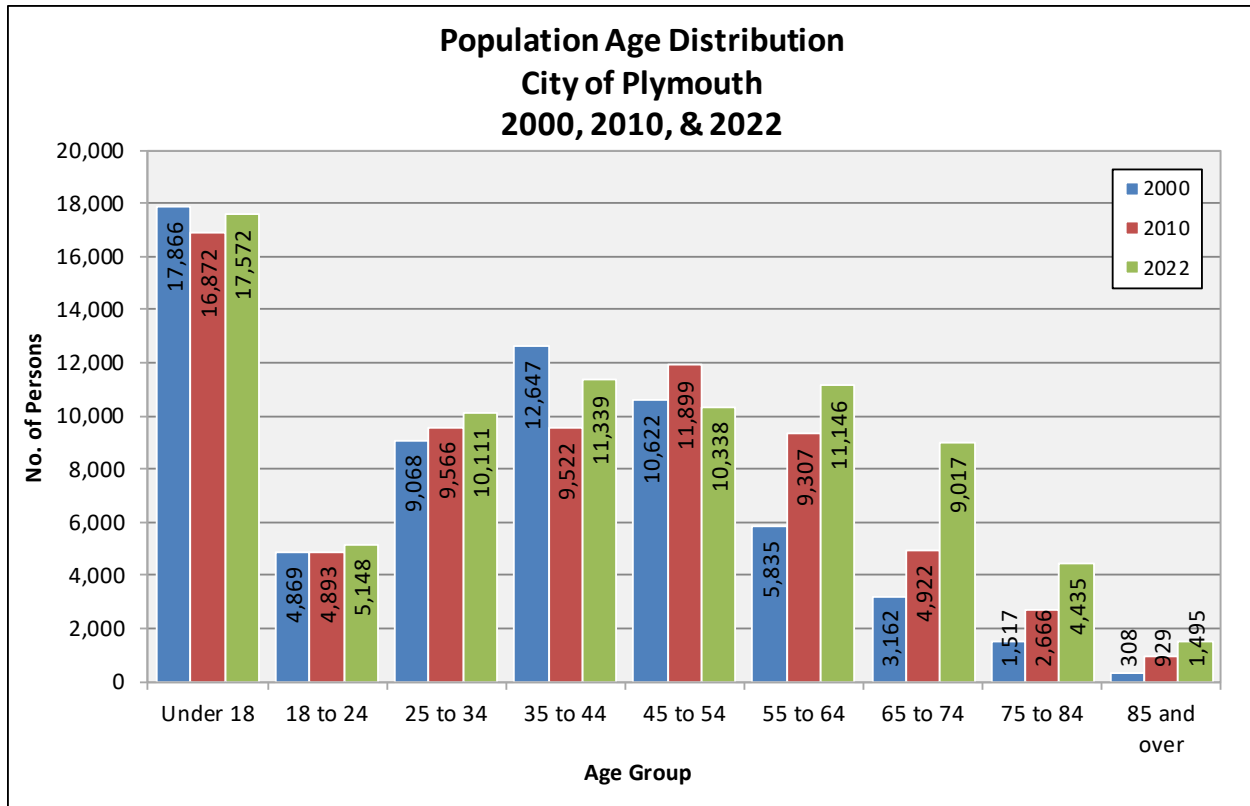
Age Distribution Trends

Age distribution affects demand for different types of housing since needs and desires change at different stages of the life cycle. Table D-2 shows the distribution of persons within nine age cohorts for Plymouth, Hennepin County, and the Metro Area in 2000 and 2010 with estimates for 2017 and projections for 2022. The 2000 and 2010 age distributions are from the U.S. Census Bureau and the 2017 and 2022 figures are estimates based on 2017 ESRI data. The following are key points from the table.

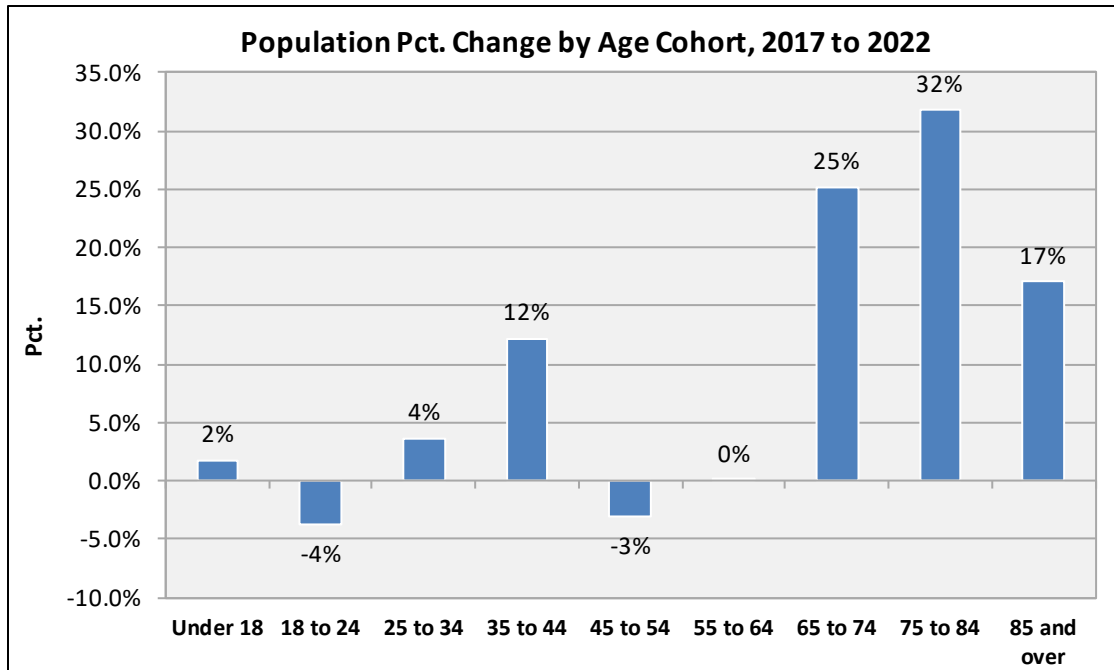
- In Plymouth between 2000 and 2010, growth occurred in all age cohorts except those under the age of 18 and the 35 to 44 age cohort. The majority of the growth occurred in those between the ages of 45 to 84.
- The City of Plymouth's population of 18 to 34 year olds, which consists primarily of renters and first-time homebuyers, decreased by (-1.5%) between 2000 and 2010, but is expected to increase by 445 people (+1.4%) between 2017 and 2022.

DEMOGRAPHIC ANALYSIS

TABLE D-2 POPULATION AGE DISTRIBUTION PLYMOUTH ANALYSIS AREA 2000 to 2022								
Age	Census		Estimate	Projection	Change			
	2000	2010	2017	2022	2000-2010		2017-2022	
	No.	No.	No.	No.	No.	Pct.	No.	Pct.
<i>Plymouth</i>								
Under 18	17,866	16,872	17,280	17,572	-994	-5.6	292	1.7
18 to 24	4,869	4,893	5,346	5,148	24	0.5	-198	-3.7
25 to 34	9,068	9,566	9,761	10,111	498	5.5	350	3.6
35 to 44	12,647	9,522	10,108	11,339	-3,125	-24.7	1,231	12.2
45 to 54	10,622	11,899	10,662	10,338	1,277	12.0	-324	-3.0
55 to 64	5,835	9,307	11,142	11,146	3,472	59.5	4	0.0
65 to 74	3,162	4,922	7,208	9,017	1,760	55.7	1,809	25.1
75 to 84	1,517	2,666	3,367	4,435	1,149	75.7	1,068	31.7
85 and over	308	929	1,277	1,495	621	201.6	217	17.0
Total	65,894	70,576	76,150	80,600	4,682	7.1	4,450	5.8
<i>Hennepin County</i>								
Under 18	267,502	261,345	271,024	273,071	-6,157	-2.3	2,047	0.8
18 to 24	108,767	113,551	107,328	106,308	4,784	4.4	-1,020	-1.0
25 to 34	183,860	187,523	184,257	188,290	3,663	2.0	4,033	2.2
35 to 44	191,872	154,304	158,247	168,823	-37,568	-19.6	10,576	6.7
45 to 54	156,068	171,130	155,489	148,085	15,062	9.7	-7,403	-4.8
55 to 64	85,773	133,758	154,813	154,929	47,985	55.9	117	0.1
65 to 74	59,737	66,516	97,436	118,501	6,779	11.3	21,066	21.6
75 to 84	44,942	42,476	46,489	58,608	-2,466	-5.5	12,119	26.1
85 and over	17,679	21,822	25,778	26,720	4,143	23.4	941	3.7
Total	1,116,200	1,152,425	1,200,862	1,243,336	36,225	3.2	42,474	3.5
<i>Metro Area</i>								
Under 18	697,534	700,960	715,248	722,852	3,426	0.5	7,604	1.1
18 to 24	244,226	263,462	248,229	239,719	19,236	7.9	-8,510	-3.4
25 to 34	411,155	420,311	430,515	441,179	9,156	2.2	10,663	2.5
35 to 44	469,324	391,324	394,459	427,843	-78,000	-16.6	33,385	8.5
45 to 54	363,592	440,753	401,611	375,721	77,161	21.2	-25,890	-6.4
55 to 64	200,980	326,007	386,615	391,102	125,027	62.2	4,487	1.2
65 to 74	130,615	163,425	239,535	291,236	32,810	25.1	51,701	21.6
75 to 84	90,292	97,442	108,833	138,681	7,150	7.9	29,848	27.4
85 and over	34,338	45,883	54,326	56,553	11,545	33.6	2,227	4.1
Total	2,642,056	2,849,567	2,979,370	3,084,885	207,511	7.9	105,515	3.5
Sources: U.S. Census Bureau; ESRI; Maxfield Research & Consulting, LLC								



- The senior age cohorts are projected to have the greatest percentage growth. The 75 to 84 age cohort is forecast to increasing by 1,068 people (+31.7%) in Plymouth between 2017 and 2022. The growth in the senior age cohorts can be primarily attributed to the baby boom generation aging into their senior years.
- The social changes that occurred with the aging of the baby boom generation, such as higher divorce rates, higher levels of education, and lower birth rates has led to a greater variety of lifestyles than existed in the past – not only among baby boomers, but also among their parents and children. The increased variety of lifestyles has also fueled demand for alternative housing products to single-family homes. Seniors, in particular, and middle-aged persons tend to do more traveling and participate in more activities than previous generations, and they increasingly prefer maintenance-free housing that enables them to spend more time on activities outside the home.



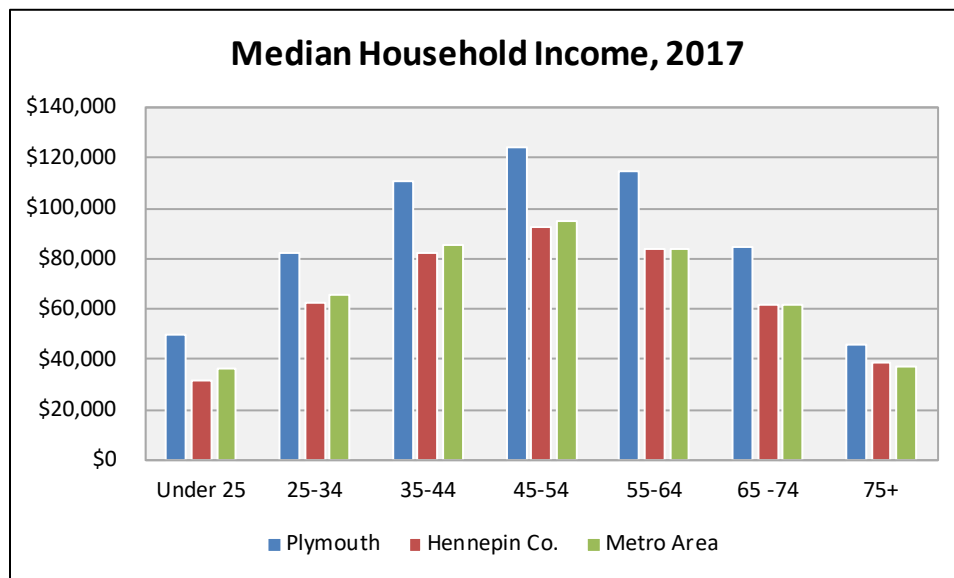
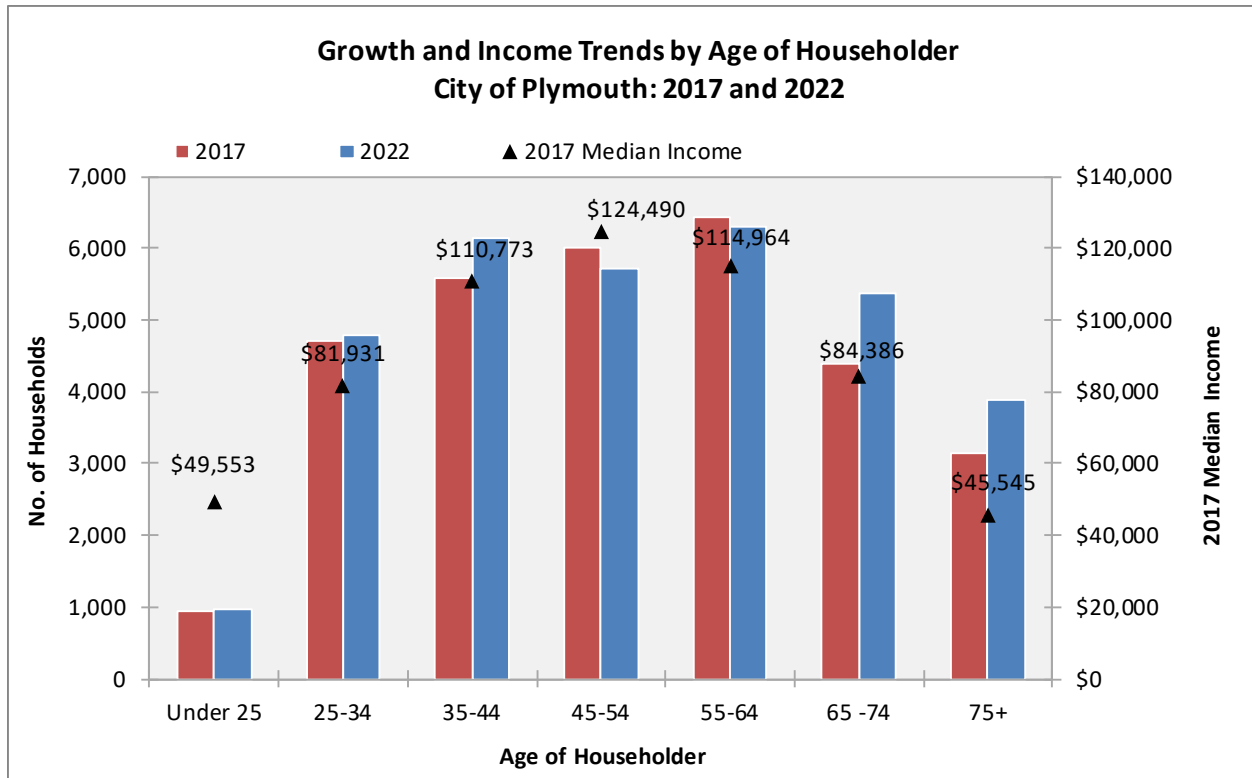
Household Income by Age of Householder

The estimated distribution of household incomes in Plymouth for 2017 and 2022 are shown in Table D-3. The data was estimated by Maxfield Research based on income trends provided by ESRI. The data helps ascertain the demand for different housing products based on the size of the market at specific cost levels.

The Department of Housing and Urban Development defines affordable housing costs as 30% of a household’s adjusted gross income. For example, a household in Plymouth with the median income of \$96,274 per year would be able to afford a monthly housing cost of about \$2,407. Maxfield Research uses a figure of 25% to 30% for younger households and 40% or more for seniors, since seniors generally have lower living expenses and can often sell their homes and use the proceeds toward rent payments.

A generally accepted standard for affordable owner-occupied housing is that a typical household can afford to pay 3.0 to 3.5 times their annual income on a single-family home. Thus, a \$96,274 income would translate to an affordable single-family home of \$288,822 to \$336,959. The higher end of this range assumes that the person has adequate funds for down payment and closing costs, but does not include savings or equity in an existing home which would allow them to purchase a higher priced home.

- Plymouth has an estimated median household income of \$96,274 in 2017 and is expected to increase over the next five years to \$104,687 in 2022 (+8.7%).



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TABLE D-3 HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER CITY OF PLYMOUTH (Number of Households) 2017 and 2022								
	Age of Householder							
	Total	Under 25	25-34	35-44	45-54	55-64	65 -74	75+
2017								
Less than \$15,000	1,244	85	166	116	124	244	191	316
\$15,000 to \$24,999	1,659	122	229	179	144	219	319	446
\$25,000 to \$34,999	1,674	109	308	236	188	240	234	358
\$35,000 to \$49,999	2,909	161	546	425	370	405	417	587
\$50,000 to \$74,999	4,536	200	824	692	681	727	740	671
\$75,000 to \$99,999	4,061	123	813	783	667	802	650	222
\$100,000 to \$149,999	6,206	81	967	1,206	1,384	1,445	849	273
\$150,000 to \$199,999	3,775	42	482	888	1,018	853	396	96
\$200,000+	5,135	24	377	1,060	1,420	1,493	588	174
Total	31,200	948	4,713	5,585	5,997	6,429	4,384	3,144
<i>Median Income</i>	<i>\$96,274</i>	<i>\$49,553</i>	<i>\$81,931</i>	<i>\$110,773</i>	<i>\$124,490</i>	<i>\$114,964</i>	<i>\$84,386</i>	<i>\$45,545</i>
2022								
Less than \$15,000	1,293	81	169	127	98	217	220	381
\$15,000 to \$24,999	1,626	120	205	152	113	176	337	522
\$25,000 to \$34,999	1,574	103	274	216	140	191	246	405
\$35,000 to \$49,999	2,718	157	474	373	291	328	433	662
\$50,000 to \$74,999	4,196	191	724	630	515	591	765	779
\$75,000 to \$99,999	4,177	144	818	812	597	742	777	287
\$100,000 to \$149,999	7,142	101	1,098	1,446	1,417	1,511	1,144	425
\$150,000 to \$199,999	4,408	51	571	1,081	1,054	925	570	158
\$200,000+	6,041	29	466	1,304	1,484	1,607	873	277
Total	33,175	977	4,799	6,141	5,710	6,286	5,364	3,896
<i>Median Income</i>	<i>\$104,687</i>	<i>\$52,440</i>	<i>\$90,152</i>	<i>\$120,824</i>	<i>\$134,719</i>	<i>\$124,353</i>	<i>\$96,123</i>	<i>\$49,326</i>
Change - 2017 to 2022								
Less than \$15,000	49	-4	3	11	-26	-28	28	65
\$15,000 to \$24,999	-33	-2	-24	-27	-31	-43	17	76
\$25,000 to \$34,999	-100	-6	-34	-21	-49	-49	12	47
\$35,000 to \$49,999	-192	-4	-72	-51	-78	-77	16	75
\$50,000 to \$74,999	-340	-9	-100	-62	-166	-136	25	108
\$75,000 to \$99,999	116	20	4	29	-70	-61	127	65
\$100,000 to \$149,999	936	20	130	240	33	65	295	152
\$150,000 to \$199,999	633	9	89	192	36	72	174	62
\$200,000+	906	5	90	245	64	114	285	103
Total	1,975	29	86	556	-286	-143	980	753
<i>Median Income</i>	<i>\$8,413</i>	<i>\$2,887</i>	<i>\$8,221</i>	<i>\$10,051</i>	<i>\$10,229</i>	<i>\$9,389</i>	<i>\$11,737</i>	<i>\$3,781</i>

Sources: ESRI; Maxfield Research and Consulting LLC

Non-Senior Households

- In 2017, 3.1% of non-senior (under age 65) households in Plymouth had incomes under \$15,000 (736 households). All of these households would be eligible for deep-subsidy rental housing. Another 3.8% of Plymouth's non-senior households had incomes between \$15,000 and \$24,999 (894 households). Many of these households would qualify for deep-subsidy housing, but many could also afford shallow-subsidy or older market rate rentals. If

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housing costs absorb 30% of income, households with incomes of \$15,000 to \$24,999 could afford to pay \$375 to \$625 per month.

- In most geographic areas, household median incomes peak in the 45 to 54 age group and that group is usually considered to be in their peak earning years. In 2017, the median household income in Plymouth was highest in the 45 to 54 age group at \$124,490. The 35 to 44 age group has a median income of \$110,773 in 2017. By 2022, the median income for the 35 to 44 and the 45 to 54 age groups are projected to increase to \$120,824 (9.1%) and \$134,719 (8.2%) respectively. The 55 to 64 age group is projected to increase from \$114,964 to 124,353 (+8.2%) by 2022.
- The median estimated home value in Plymouth was roughly \$331,263 2017. The income required to afford a home at this price would be about \$94,646 to \$110,421 based on the standard of 3.0 to 3.5 times the median income (and assuming these households do not have a high level of debt). About 64% of non-senior households in Plymouth have incomes of \$94,646 or more in 2017.
- Incomes are expected to increase by 8.7% between 2017 and 2022 in Plymouth. This equates to an increase of 1.7% annually.

Senior Households

- The oldest householders have lower incomes in 2017. In Plymouth, 4.4% of households ages 65 to 74 had incomes below \$15,000, compared to 10.1% of households ages 75 and over. Many of these low-income older senior households rely solely on social security benefits. Typically, younger seniors have higher incomes due to the fact they are still able to work or are married couples with two pensions or higher social security benefits. The 2017 median income for Plymouth householders age 65 to 74 and 75+ are \$84,386 and \$45,545, respectively.
- Generally, senior households with incomes greater than \$25,000 will be able to afford market rate senior housing in Plymouth. Based on a 40% allocation of income for housing, this translates to monthly rents of at least \$833. About 6,255 senior households in Plymouth (83% of senior households) have incomes above \$25,000 in 2017.
- The median income for seniors age 65+ in Plymouth is \$64,965 in 2017. It is projected to increase by \$7,760 (11.9%) to \$72,724 by 2022.

Net Worth

Table D-4 shows household net worth in the Plymouth in 2017. Simply stated, net worth is the difference between assets and liabilities, or the total value of assets after the debt is subtracted. The data was compiled and estimated by ESRI based on the Survey of Consumer Finances and Federal Reserve Board data.

According to data released by the National Association of Realtors, the average American homeowner has a net worth about 31 to 46 times greater than that of a renter and that in 2016 the average American homeowner net worth is estimated at 44 times greater than that of a renter. The Federal Reserve survey is conducted every three years and this research was based on the 2016 Federal Reserve survey that showed the median net worth of a homeowner was \$231,400, whereas the median net worth of a renter was \$5,200.

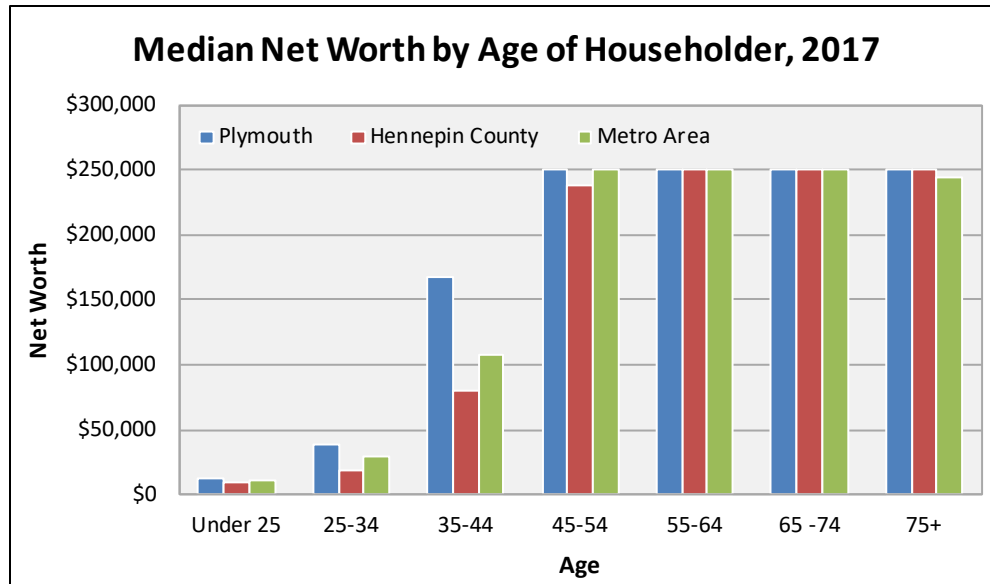
- Plymouth had a median net worth of \$300,121. Median net worth is generally a more accurate depiction of wealth than the average figure. A few households with very large net worth can significantly skew the average.
- Similar to household income, net worth increases as households age and decreases after they pass their peak earning years and move into retirement. Median and average net worth usually peak in the 65 to 74 age cohort. The median net worth in the Plymouth for age cohorts 45+ was \$250,001 in 2017. Senior households usually have higher net worth due to their saving investments, and other retirement funds.
- Households often delay purchasing homes and instead choose to rent until they acquire sufficient assets to cover the costs of a down payment and closing costs associated with home ownership. Lending has recently become slightly easier for obtaining mortgages making mortgages with little or no down payments easier to obtain in today's mortgage lending environment than it has been the past year.

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**TABLE D-4
NET WORTH BY AGE OF HOUSEHOLDER
PLYMOUTH ANALYSIS AREA
2017**

	Age of Householder							
	Total	Under 25	25-34	35-44	45-54	55-64	65-74	75+
Plymouth								
Less than \$15,000	4,467	569	1,639	845	522	457	187	248
\$15,000 to \$34,999	1,659	174	647	384	207	137	35	75
\$35,000 to \$49,999	921	65	274	256	126	111	54	35
\$50,000 to \$99,999	2,529	48	544	763	414	303	225	232
\$100,000 to \$149,999	1,887	21	312	430	333	285	296	210
\$150,000 to \$249,999	2,774	39	417	491	519	519	344	445
\$250,000 or more	16,917	29	875	2,408	3,866	4,608	3,238	1,893
Subtotal	31,154	945	4,708	5,577	5,987	6,420	4,379	3,138
<i>Median Net Worth</i>	<i>\$300,121</i>	<i>\$12,456</i>	<i>\$38,090</i>	<i>\$166,936</i>	<i>\$250,001</i>	<i>\$250,001</i>	<i>\$250,001</i>	<i>\$250,001</i>
<i>Average Net Worth</i>	<i>\$1,131,424</i>	<i>\$47,550</i>	<i>\$200,338</i>	<i>\$955,295</i>	<i>\$1,206,892</i>	<i>\$1,638,739</i>	<i>\$1,853,387</i>	<i>\$977,683</i>
Hennepin County								
Less than \$15,000	132,117	19,322	43,495	24,521	17,113	14,620	6,359	6,687
\$15,000 to \$34,999	34,398	2,952	11,846	7,426	5,022	3,770	1,460	1,922
\$35,000 to \$49,999	17,939	826	5,123	4,732	2,584	2,329	1,587	758
\$50,000 to \$99,999	47,217	984	10,944	12,291	7,946	6,303	4,382	4,367
\$100,000 to \$149,999	31,797	380	5,725	6,680	5,433	5,159	4,638	3,782
\$150,000 to \$249,999	47,720	506	6,567	8,915	8,923	9,301	6,165	7,343
\$250,000 or more	200,417	466	10,094	26,211	45,420	54,365	38,338	25,523
Subtotal	511,605	25,436	93,794	90,776	92,441	95,847	62,929	50,382
<i>Median Net Worth</i>	<i>\$135,412</i>	<i>\$9,873</i>	<i>\$18,709</i>	<i>\$80,165</i>	<i>\$237,865</i>	<i>\$250,001</i>	<i>\$250,001</i>	<i>\$250,001</i>
<i>Average Net Worth</i>	<i>\$762,132</i>	<i>\$32,697</i>	<i>\$123,008</i>	<i>\$574,227</i>	<i>\$863,354</i>	<i>\$1,221,915</i>	<i>\$1,415,366</i>	<i>\$782,457</i>
Metro Area								
Less than \$15,000	258,474	33,663	82,288	48,562	35,172	30,573	13,515	14,701
\$15,000 to \$34,999	73,876	6,326	24,863	16,292	10,749	8,282	3,000	4,364
\$35,000 to \$49,999	40,005	1,932	10,851	10,746	5,829	5,349	3,540	1,758
\$50,000 to \$99,999	114,601	2,829	27,811	29,767	19,004	14,762	10,392	10,036
\$100,000 to \$149,999	80,910	1,038	16,128	17,249	13,746	12,508	11,717	8,524
\$150,000 to \$249,999	124,765	1,269	18,267	25,466	24,231	23,335	15,213	16,984
\$250,000 or more	505,472	1,026	25,484	69,833	122,953	137,329	93,804	55,043
Total	1,198,103	48,083	205,692	217,915	231,684	232,138	151,181	111,410
<i>Median Net Worth</i>	<i>\$168,704</i>	<i>\$10,713</i>	<i>\$29,794</i>	<i>\$108,223</i>	<i>\$250,001</i>	<i>\$250,001</i>	<i>\$250,001</i>	<i>\$244,387</i>
<i>Average Net Worth</i>	<i>\$773,328</i>	<i>\$37,913</i>	<i>\$138,556</i>	<i>\$577,985</i>	<i>\$872,106</i>	<i>\$1,209,626</i>	<i>\$1,376,580</i>	<i>\$711,663</i>

Sources: ESRI; Maxfield Research & Consulting, LLC



Tenure by Household Income

Table D-5 shows household tenure by income for Plymouth in 2015. Data is an estimate from the American Community Survey. Household tenure information is important to assess the propensity for owner-occupied or renter-occupied housing options based on household affordability. As stated earlier, the Department of Housing and Urban Development determines affordable housing as not exceeding 30% of the household’s income. The higher the income, the lower percentage a household typically allocates to housing. Many lower income households, as well as many young and senior households spend more than 30% of their income, while middle-aged households in their prime earning years typically allocate 20% to 25% of their income.

**TABLE D-5
TENURE BY HOUSEHOLD INCOME
PLYMOUTH ANALYSIS AREA
2015**

	City of Plymouth				Hennepin County				Metro Area			
	Own		Rent		Own		Rent		Own		Rent	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Less than \$15,000	499	33.3	1,000	66.7	11,286	23.0	37,812	77.0	26,809	41.5	37,812	58.5
\$15,000 to \$24,999	1,054	55.4	847	44.6	14,948	36.4	26,089	63.6	35,265	57.5	26,089	42.5
\$25,000 to \$34,999	1,136	56.6	871	43.4	17,827	44.0	22,701	56.0	44,018	66.0	22,701	34.0
\$35,000 to \$49,999	1,761	55.9	1,388	44.1	30,782	52.4	27,952	47.6	78,573	73.8	27,952	26.2
\$50,000 to \$74,999	2,702	56.5	2,081	43.5	51,925	62.3	31,379	37.7	139,502	81.6	31,379	18.4
\$75,000 to \$99,999	2,780	71.4	1,116	28.6	46,933	73.6	16,859	26.4	128,280	88.4	16,859	11.6
\$100,000+	11,680	89.6	1,352	10.4	133,694	87.0	20,009	13.0	332,965	94.3	20,009	5.7
Total	21,612	71.4	8,655	28.6	307,395	62.7	182,801	37.3	785,412	81.1	182,801	18.9

Source: U.S. Census Bureau; American Community Survey; Maxfield Research & Consulting, LLC

- Typically, as income increases, so does the rate of homeownership. This can be seen in the Plymouth, where the homeownership rate increases from 33.3% of households with incomes below \$15,000 to 89.6% of households with incomes above \$100,000.

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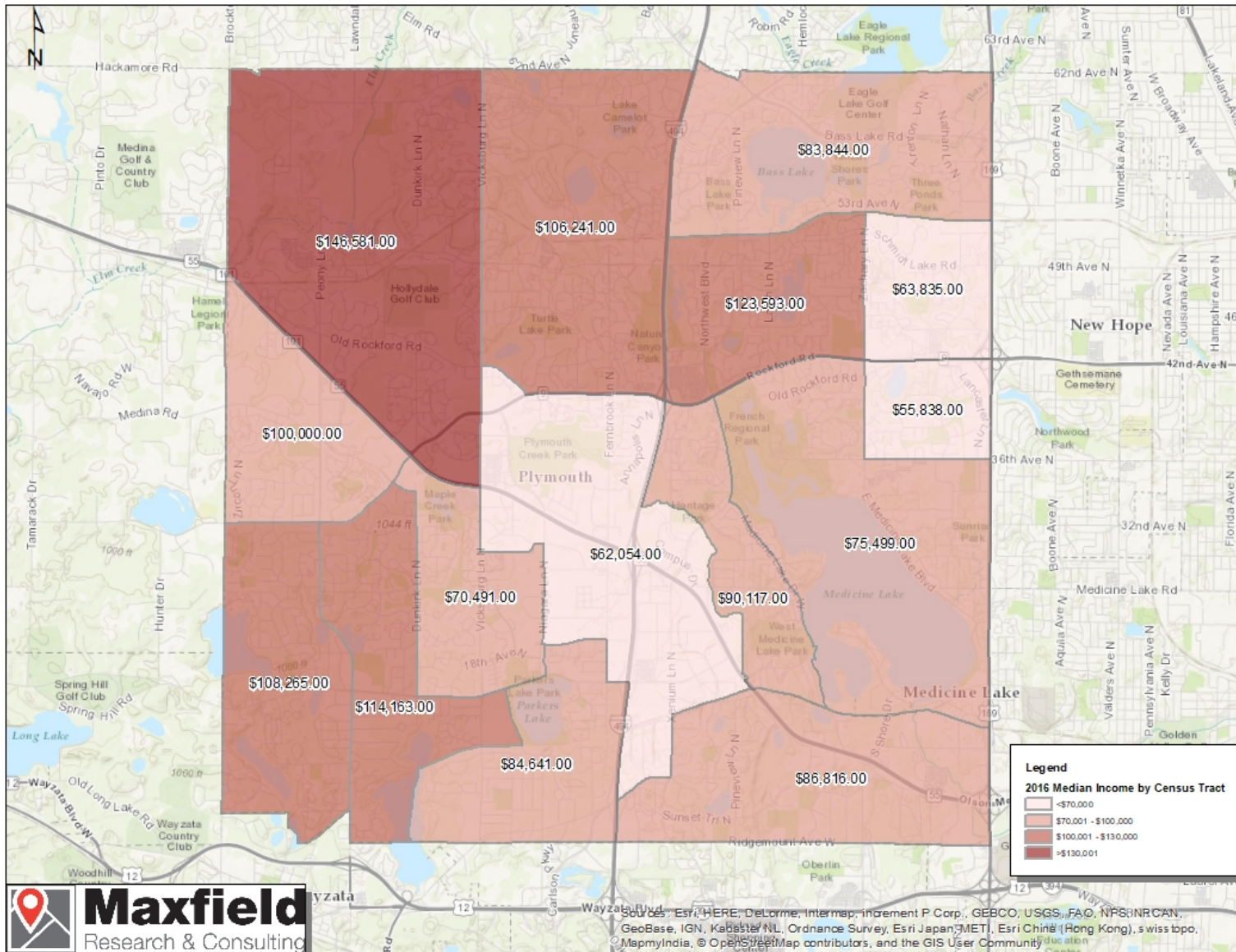
- A portion of renter households that are referred to as lifestyle renters, or those who are financially-able to own but choose to rent, have household incomes of \$50,000 or more (about 53% of the Plymouth's renters in 2015). Households with incomes below \$15,000 are typically a market for deep subsidy rental housing (about 11% of the Plymouth's renters in 2015).

Median Household Income by Census Tract

The map on the following page shows median household income by census tract in Plymouth in 2016. Geographic Information System (GIS) data was provided through ESRI, a national demographics and GIS service provider. Below are key points from the map.

- Census tracts with the highest median income tend to be located on the west and north sides of Plymouth. Median incomes in Plymouth ranged from \$146,581 on the high end to \$55,838 on the low end.
- Within the central section of the city and in two census tracts bordering US-Hwy 169, on the eastside of Plymouth, are the areas with the lowest median incomes. These three tracts all had median incomes below \$65,000 in 2016.

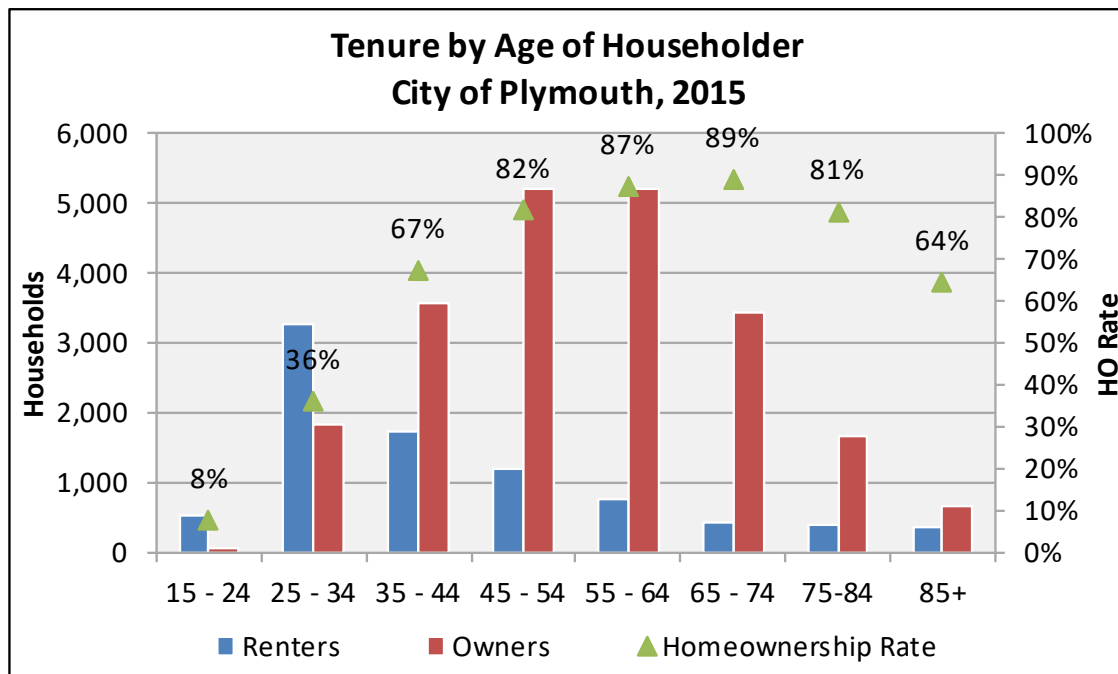
2016 Median Income by Census Tract



Tenure by Age of Householder

Table D-6 shows the number of owner and renter households in Plymouth by age group in 2000, 2010 and 2015. This data is useful in determining demand for certain types of housing since housing preferences change throughout an individual’s life cycle. The following are key findings from Table D-6.

- In 2000, 76.5% of all households in the Plymouth owned their housing. By 2010, that percentage declined to 72.4% and in 2015 it is estimated that 71.4% of all Plymouth households owned their housing.
- The housing market downturn contributed to the decrease in the homeownership rate during the late 2000s as it became more difficult for households to secure mortgage loans, households delayed purchasing homes due to the uncertainty of the housing market, and foreclosures forced households out of their homes. Currently it is estimated that there is a growing trend of lifestyle renters seeking rental properties in the Plymouth area and Metro Area as can be seen by the growing percentage of renters.



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TABLE D-6
TENURE BY AGE OF HOUSEHOLDER
PLYMOUTH ANALYSIS AREA
2000 - 2015

Age		City of Plymouth						Hennepin County						Metro Area					
		2000		2010		2015*		2000		2010		2015*		2000		2010		2015*	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
15-24	Own	148	13.7	95	10.1	44	7.6	3,380	11.8	2,790	10.9	1,458	6.8	9,790	17.3	7,947	16.0	4,963	11.6
	Rent	934	86.3	843	89.9	536	92.4	25,252	88.2	22,734	89.1	19,949	93.2	46,699	82.7	41,789	84.0	37,764	88.4
	Total	1,082	100.0	938	100.0	580	100.0	28,632	100.0	25,524	100.0	21,407	100.0	56,489	100.0	49,736	100.0	42,727	100.0
25-34	Own	2,269	52.0	2,003	42.5	1,839	35.9	44,563	46.9	39,850	42.3	38,814	39.0	114,071	55.5	102,236	50.6	98,991	46.7
	Rent	2,092	48.0	2,714	57.5	3,283	64.1	50,435	53.1	54,312	57.7	60,755	61.0	91,342	44.5	99,716	49.4	112,759	53.3
	Total	4,361	100.0	4,717	100.0	5,122	100.0	94,998	100.0	94,162	100.0	99,569	100.0	205,413	100.0	201,952	100.0	211,750	100.0
35-44	Own	5,538	81.6	3,769	71.6	3,562	67.2	79,041	72.5	57,684	66.6	54,874	62.6	203,729	77.7	154,678	72.3	143,886	68.1
	Rent	1,249	18.4	1,495	28.4	1,735	32.8	29,926	27.5	28,946	33.4	32,721	37.4	58,438	22.3	59,303	27.7	67,401	31.9
	Total	6,787	100.0	5,264	100.0	5,297	100.0	108,967	100.0	86,630	100.0	87,595	100.0	262,167	100.0	213,981	100.0	211,287	100.0
45-54	Own	5,267	87.8	5,557	82.4	5,220	81.6	74,037	79.7	75,651	75.4	70,987	73.9	177,090	83.1	202,404	79.8	192,198	78.4
	Rent	733	12.2	1,190	17.6	1,179	18.4	18,829	20.3	24,688	24.6	25,107	26.1	36,077	16.9	51,379	20.2	52,855	21.6
	Total	6,000	100.0	6,747	100.0	6,399	100.0	92,866	100.0	100,339	100.0	96,094	100.0	213,167	100.0	253,783	100.0	245,053	100.0
55-64	Own	3,136	90.5	4,742	86.6	5,205	87.3	42,671	81.9	65,466	79.5	69,927	77.6	102,583	84.9	162,595	82.6	174,794	80.9
	Rent	328	9.5	733	13.4	760	12.7	9,412	18.1	16,891	20.5	20,226	22.4	18,205	15.1	34,355	17.4	41,383	19.1
	Total	3,464	100.0	5,475	100.0	5,965	100.0	52,083	100.0	82,357	100.0	90,153	100.0	120,788	100.0	196,950	100.0	216,177	100.0
65-74	Own	1,693	87.0	2,706	89.0	3,428	89.0	30,672	81.2	34,028	80.0	40,246	79.5	68,030	82.4	85,347	82.6	100,740	82.5
	Rent	254	13.0	336	11.0	423	11.0	7,090	18.8	8,502	20.0	10,382	20.5	14,491	17.6	17,998	17.4	21,409	17.5
	Total	1,947	100.0	3,042	100.0	3,851	100.0	37,762	100.0	42,530	100.0	50,628	100.0	82,521	100.0	103,345	100.0	122,149	100.0
75-84	Own	812	81.8	1,465	80.5	1,666	81.4	22,083	72.8	21,975	75.6	21,813	75.2	43,576	71.8	50,083	75.6	50,917	75.7
	Rent	181	18.2	354	19.5	381	18.6	8,242	27.2	7,108	24.4	7,209	24.8	17,109	28.2	16,185	24.4	16,330	24.3
	Total	993	100.0	1,819	100.0	2,047	100.0	30,325	100.0	29,083	100.0	29,022	100.0	60,685	100.0	66,268	100.0	67,247	100.0
85+	Own	131	70.4	419	63.4	648	64.4	5,346	50.9	8,677	56.8	9,276	59.0	10,097	49.9	17,185	54.2	18,923	56.0
	Rent	55	29.6	242	36.6	358	35.6	5,150	49.1	6,611	43.2	6,452	41.0	10,127	50.1	14,549	45.8	14,841	44.0
	Total	186	100.0	661	100.0	1,006	100.0	10,496	100.0	15,288	100.0	15,728	100.0	20,224	100.0	31,734	100.0	33,764	100.0
TOTAL	Own	18,994	76.5	20,756	72.4	21,612	71.4	301,793	66.2	306,121	64.3	307,395	62.7	728,966	71.4	782,475	70.0	785,412	68.3
	Rent	5,826	23.5	7,907	27.6	8,655	28.6	154,336	33.8	169,792	35.7	182,801	37.3	292,488	28.6	335,274	30.0	364,742	31.7
	Total	24,820	100.0	28,663	100.0	30,267	100.0	456,129	100.0	475,913	100.0	490,196	100.0	1,021,454	100.0	1,117,749	100.0	1,150,154	100.0

* 2015 data is from the American Community Survey

Sources: U.S. Census Bureau; Maxfield Research & Consulting, LLC

DEMOGRAPHIC ANALYSIS

- As households progress through their life cycle, housing needs change. The proportion of renter households decreases significantly as households' age out of their young-adult years. However, by the time households reach their senior years, rental housing often becomes a more viable option than homeownership, reducing the responsibility of maintenance and a financial commitment.
- In 2015, ACS estimated that 92.4% of the Plymouth's households between the ages of 15 and 24 rented their housing, compared to 64.1% of households between the ages of 25 and 34. Householders between 35 and 84 were overwhelmingly homeowners, with no more than 32.8% of the householders in each 10-year age cohort renting their housing.
- The higher homeownership rates in Plymouth (71.4%) compared to Hennepin County (62.7%), and the Metro Area (68.3%) reflects the suburban character of the City and was originally developed as a single-family housing community.

Household Type

Table D-7 shows a breakdown of the type of households present in Plymouth in 2010 and 2015. The data is useful in assessing housing demand since the household composition often dictates the type of housing needed and preferred.

- Between 2010 and 2015, Plymouth experienced an increase in all household types besides Other Family households, which decreased by -2.8%. Married families without children grew the most numerically, adding +1,101 households (+12.3%). The increase in households married without children can be attributed to couples waiting longer to have children, and the baby boomers aging into empty nester years.
- The differences between Plymouth compared to Hennepin County and the Twin Cities Metro Area reflect the demographic changes that were seen in Table D-2 Population Age Distribution. The aging of baby boomers is increasing the Married without child category and decreasing the Married with Child category. The Other category (Single-parent families, unmarried couples with children) is also increasing at a higher rate in Plymouth, but is catching up to a similar distribution of Other households as compared to Hennepin County and the Twin Cities Metro Area. Roommates are accounting for smaller percentages in all areas which shows that economic conditions are changing in the area for households with more households seeking Living Alone options and more households are considered Family Households in Plymouth in 2015 than there was in 2010

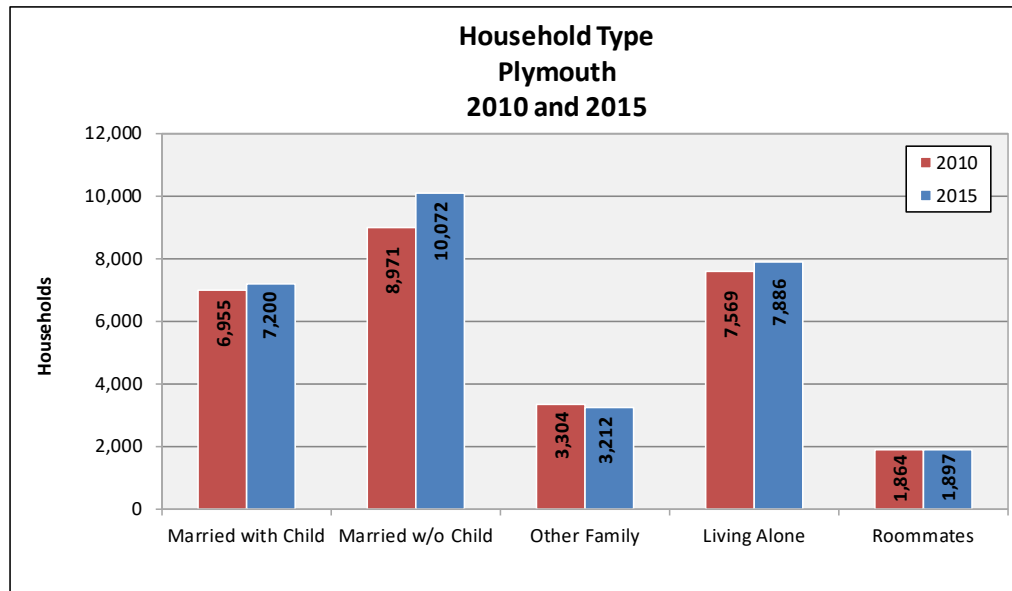
DEMOGRAPHIC ANALYSIS

**TABLE D-7
HOUSEHOLD TYPE
PLYMOUTH ANALYSIS AREA
2010 & 2015**

Number of Households	Total HH's		Family Households						Non-Family Households			
	2010	2015	Married w/o Child		Married w/ Child		Other *		Living Alone		Roommates	
			2010	2015	2010	2015	2010	2015	2010	2015	2010	2015
Plymouth	28,663	30,267	8,971	10,072	6,955	7,200	3,304	3,212	7,569	7,886	1,864	1,897
Hennepin County	475,913	490,196	116,099	123,135	89,084	92,038	67,702	68,773	155,807	160,687	47,221	45,563
Twin Cities Metro Area	1,117,749	1,150,154	298,723	316,180	244,687	247,506	164,086	167,069	319,030	331,010	91,223	88,389
Percent of Total												
Plymouth	100%	100%	31.3%	33.3%	24.3%	23.8%	11.5%	10.6%	26.4%	26.1%	6.5%	6.3%
Hennepin County Total	100%	100%	24.4%	25.1%	18.7%	18.8%	14.2%	14.0%	32.7%	32.8%	9.9%	9.3%
Twin Cities Metro Area Total	100%	100%	26.7%	27.5%	21.9%	21.5%	14.7%	14.5%	28.5%	28.8%	8.2%	7.7%

* Single-parent families, unmarried couples with children.

Sources: U.S. Census Bureau; Maxfield Research & Consulting, LLC



DEMOGRAPHIC ANALYSIS

Tenure by Household Size

Table D-8 shows the distribution of households by size and tenure in the Plymouth in 2015 and 2010. This data is useful in that it sheds insight into the number of units by unit type that may be most needed in Plymouth.

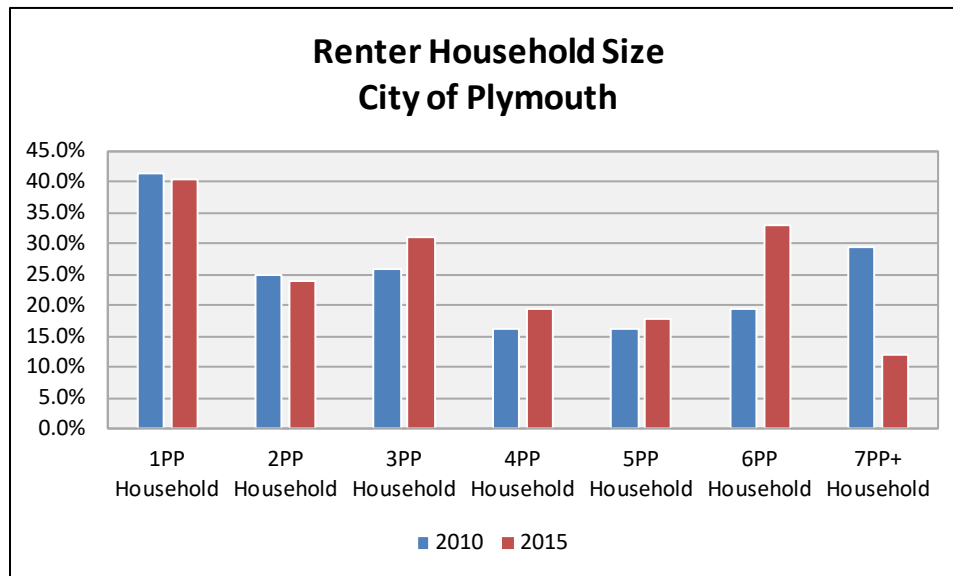
- Household size for renters tends to be smaller than for owners. This trend is a result of the typical market segments for rental housing, including households that are younger and are less likely to be married with children as well as older adults and seniors who choose to downsize from their single-family homes. In 2015, approximately 40% of the total renter-occupied households in the Plymouth were one-person households.
- Approximately 68% of renter households in Plymouth in 2015 have either one or two people. The one-person households would primarily seek one-bedroom units and two-person households that are couples would primarily seek one-bedroom units. Two-person households that consist of a parent and child or roommate would primarily seek two-bedroom units. Larger households would seek units with multiple bedrooms.

Age	2015											
	City of Plymouth				Hennepin County				Metro Area			
	Owners	Pct.	Renters	Pct.	Owners	Pct.	Renters	Pct.	Owners	Pct.	Renters	Pct.
1PP Household	4,705	59.7	3,181	40.3	78,491	48.8	82,196	51.2	175,681	53.1	155,329	46.9
2PP Household	8,649	75.9	2,746	24.1	114,302	69.7	49,741	30.3	287,943	74.5	98,732	25.5
3PP Household	3,382	68.8	1,531	31.2	46,133	67.5	22,257	32.5	124,856	72.6	47,146	27.4
4PP Household	3,404	80.6	818	19.4	42,974	73.8	15,250	26.2	122,186	78.7	33,141	21.3
5PP Household	1,122	82.0	247	18.0	16,681	70.4	7,022	29.6	49,255	74.3	17,005	25.7
6PP Household	239	67.1	117	32.9	5,398	60.7	3,495	39.3	15,930	68.3	7,398	31.7
7PP+ Household	111	88.1	15	11.9	3,416	54.6	2,840	45.4	9,561	61.5	5,991	38.5
Total	21,612	71.4	8,655	28.6	307,395	62.7	182,801	37.3	785,412	68.3	364,742	31.7
Average HH Size	2.37		2.02		2.52		2.18		2.63		2.19	
Age	2010											
	City of Plymouth				Hennepin County				Metro Area			
	Owners	Pct.	Renters	Pct.	Owners	Pct.	Renters	Pct.	Owners	Pct.	Renters	Pct.
1PP Household	4,445	58.7	3,124	41.3	77,198	49.5	78,609	50.5	171,241	53.7	147,789	46.3
2PP Household	7,888	75.2	2,597	24.8	112,157	71.5	44,706	28.5	280,552	76.3	87,139	23.7
3PP Household	3,266	74.1	1,143	25.9	47,338	70.3	20,044	29.7	128,197	75.1	42,563	24.9
4PP Household	3,474	83.7	677	16.3	42,878	76.3	13,330	23.7	123,219	80.6	29,587	19.4
5PP Household	1,234	83.9	237	16.1	16,863	71.7	6,653	28.3	50,854	77.4	14,883	22.6
6PP Household	334	80.5	81	19.5	5,442	62.6	3,255	37.4	16,887	71.0	6,908	29.0
7PP+ Household	115	70.6	48	29.4	4,245	57.1	3,195	42.9	11,525	64.3	6,405	35.7
Total	20,756	72.4	7,907	27.6	306,121	64.3	169,792	35.7	782,475	70.0	335,274	30.0
Average HH Size	2.37		1.86		2.51		2.12		2.64		2.18	

Sources: U.S. Census; Maxfield Research & Consulting, LLC

DEMOGRAPHIC ANALYSIS

- One-person households in the Plymouth have the highest percentage of renters among all household types. Seven-person plus households have the lowest renter percentage among all household types (11.9%).



Diversity

The population distribution by race, Table D-9 presents the diversity of the population in Plymouth and Hennepin County for 2010 and 2015. The data was obtained from the U.S. Census.

- In 2015, “White Alone” comprised the largest proportion of the population in Plymouth (83.2%), Hennepin County (74.3%), and the Metro Area (78.2%). The percentage has decreased since 2010 where “White Alone” was 84.2% in Plymouth, 74.4% in Hennepin County, and 78.8% in the Metro Area.
- U.S. Census respondents that list themselves ethnically as Hispanic or Latino, racially list themselves in various race categories. As of 2015, 3.8% of Plymouth’s population was Hispanic/Latino. The Hispanic/Latino population was 3.0% of Plymouth’s population in 2010.
- The race “Asian Alone” experienced the largest percentage growth between 2010 and 2015 in Plymouth, increasing by +1.4% from 4,888 to 6,112 people.

DEMOGRAPHIC ANALYSIS

TABLE D-9
POPULATION DISTRIBUTION BY RACE
PLYMOUTH ANALYSIS AREA
2010 and 2015

NUMBER	White Alone		Black or African American Alone		American Indian and Alaska Native Alone (AIAN)		Native Hawaiian and Pacific Islander Alone (NHPI)		Asian Alone		Some Other Race		Two or More Races Alone		Hispanic or Latino ¹ <i>Ethnicity not Race</i>	
	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015
Plymouth	59,460	61,450	3,704	3,756	188	315	22	0	4,888	6,112	717	362	1,597	1,901	2,117	2,772
Hennepin County	856,834	889,634	136,262	145,718	10,591	8,273	506	475	71,905	81,406	38,878	30,305	37,449	41,965	77,676	81,719
Metro Area	2,246,356	2,309,380	238,723	257,069	20,219	17,200	1,262	1,164	183,421	207,088	74,516	61,390	84,383	98,823	167,558	179,371
PERCENTAGE																
Plymouth	84.2%	83.2%	5.2%	5.1%	0.3%	0.4%	0.03%	0.00%	6.9%	8.3%	1.0%	0.5%	2.3%	2.6%	3.0%	3.8%
Hennepin County	74.4%	74.3%	11.8%	12.2%	0.9%	0.7%	0.0%	0.0%	6.2%	6.8%	3.4%	2.5%	3.2%	3.5%	6.7%	6.8%
Metro Area	78.8%	78.2%	8.4%	8.7%	0.7%	0.6%	0.0%	0.0%	6.4%	7.0%	2.6%	2.1%	3.0%	3.3%	5.9%	6.1%

¹ US Census respondents list themselves ethnically Hispanic or Latino and racially in one of the other listed categories.

Sources: U.S. Census Bureau ACS; Maxfield Research and Consulting LLC

DEMOGRAPHIC ANALYSIS

Mobility in the Past Year

Table D-10 shows the mobility patterns of Plymouth residents within a one-year time frame (2015 is the last year available).

- The majority of residents in the Plymouth (84.7%) did not move within the last year.
- Of the remaining 15.3% of residents that moved within the last year, approximately 3.7% moved from outside of Hennepin County but within Minnesota and 8.4% were intra-county moves (i.e. one location in Hennepin County to another Hennepin County location).
- A greater proportion of younger age cohorts (a large student population) tended to move compared to older age cohorts. Approximately 30.7% of those age 18 to 24 moved within the last year compared to 9.6% of those age 75+.

City of Plymouth	Not Moved		Moved							
	Same House		Within Same County		Different County Same State		Different State		Abroad	
Age	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Under 18	13,171	84.3%	1,518	9.7%	378	2.4%	331	2.1%	222	1.4%
18 to 24	3,110	69.3%	736	16.4%	465	10.4%	162	3.6%	15	0.3%
25 to 34	7,418	67.6%	1,798	16.4%	1,008	9.2%	528	4.8%	216	2.0%
35 to 44	7,982	82.8%	960	10.0%	367	3.8%	191	2.0%	141	1.5%
45 to 54	10,110	91.4%	519	4.7%	188	1.7%	235	2.1%	5	0.0%
55 to 64	9,897	95.4%	226	2.2%	97	0.9%	138	1.3%	15	0.1%
65 to 74	5,956	95.4%	180	2.9%	44	0.7%	23	0.4%	42	0.7%
75+	4,088	90.4%	191	4.2%	174	3.8%	23	0.5%	46	1.0%
Total	61,732	84.7%	6,128	8.4%	2,721	3.7%	1,631	2.2%	702	1.0%

Sources: 2010-2015 American Community Survey; Maxfield Research and Consulting LLC

Demographic Comparison

Table D-11, on the following page, provides a demographic summary that compares the City of Plymouth to neighboring cities in the Metro Area.

DEMOGRAPHIC ANALYSIS

TABLE D-11
DEMOGRAPHIC COMPARISON
PLYMOUTH ANALYSIS AREA

Demographic Summary	Plymouth		Eden Prairie		Edina		Golden Valley		Maple Grove		Medina		Minnetonka		St. Louis Park	
	Num	Pct.	Num	Pct.	Num	Pct.	Num	Pct.	Num	Pct.	Num	Pct.	Num	Pct.	Num	Pct.
Total Population and Households																
Population (2017)	76,150		64,545		51,476		21,536		69,340		6,259		52,664		48,973	
Households (2017)	31,200		25,205		22,121		9,260		25,516		2,164		23,054		23,440	
Age Distribution (2017)																
Under 25	22,626	29.7%	20,637	32.0%	14,677	28.5%	5,420	25.2%	22,300	32.2%	2,015	32.2%	13,416	25.5%	12,855	26.2%
25 to 34	9,761	12.8%	8,045	12.5%	4,322	8.4%	2,126	9.9%	8,729	12.6%	494	7.9%	6,027	11.4%	10,152	20.7%
35 to 44	10,108	13.3%	8,843	13.7%	5,242	10.2%	2,568	11.9%	10,181	14.7%	608	9.7%	5,911	11.2%	6,889	14.1%
45 to 54	10,662	14.0%	9,649	14.9%	7,024	13.6%	2,983	13.9%	10,612	15.3%	1,094	17.5%	7,103	13.5%	5,910	12.1%
55 to 64	11,142	14.6%	9,608	14.9%	7,771	15.1%	3,406	15.8%	9,873	14.2%	1,074	17.2%	8,988	17.1%	5,738	11.7%
65 to 74	7,208	9.5%	5,048	7.8%	5,867	11.4%	2,429	11.3%	5,377	7.8%	625	10.0%	6,304	12.0%	3,784	7.7%
75+	4,644	6.1%	2,715	4.2%	6,573	12.8%	2,611	12.1%	2,270	3.3%	351	5.6%	4,915	9.3%	3,645	7.4%
Household Income (2017)																
Average Household Income	\$129,033		\$136,890		\$144,691		\$117,872		\$130,196		\$162,377		\$124,916		\$92,219	
Median Household Income	\$96,274		\$103,684		\$92,620		\$89,183		\$102,799		\$107,270		\$88,511		\$69,125	
Net Worth (2017)																
Average Net Worth	\$1,131,424		\$1,046,325		\$1,782,745		\$1,323,912		\$1,123,496		\$1,472,410		\$1,275,545		\$546,693	
Median Net Worth	\$300,121		\$333,183		\$363,665		\$325,546		\$393,432		\$500,001		\$306,465		\$110,945	
Household Tenure (2015)																
Owner	21,612	71.4%	17,776	72.8%	15,327	73.4%	6,851	76.9%	21,019	84.4%	1,735	93.6%	15,995	70.5%	12,705	56.8%
Renter	8,655	28.6%	6,643	27.2%	5,554	26.6%	2,054	23.1%	3,885	15.6%	119	6.4%	6,681	29.5%	9,662	43.2%
Household Type (2010)																
Married With Children	6,955	24.3%	6,834	28.6%	4,955	20.7%	1,648	18.7%	7,123	31.1%	626	36.8%	4,306	19.7%	3,084	14.2%
Married Without Children	8,971	31.3%	7,091	29.6%	6,153	25.7%	2,784	31.6%	7,508	32.8%	640	37.6%	7,104	32.4%	4,647	21.4%
Other	3,304	11.5%	2,592	10.8%	1,810	7.6%	985	11.2%	2,591	11.3%	120	7.1%	2,209	10.1%	2,728	12.5%
Living Alone	7,569	26.4%	6,004	25.1%	6,851	28.6%	2,682	30.4%	4,415	19.3%	266	15.6%	6,821	31.1%	8,716	40.1%
Roommates	1,864	6.5%	1,409	5.9%	903	3.8%	717	8.1%	1,230	5.4%	50	2.9%	1,461	6.7%	2,568	11.8%

Source: U.S. Census Bureau; ESRI; Maxfield Research, Inc.

Summary of Demographic Trends

The following points summarize key demographic trends that will impact demand for housing throughout the Plymouth.

- The City of Plymouth experienced a population increase between 2000 and 2017, by gaining an estimated 10,256 people (+15.6%), and 6,380 households (+25.7%).
- Between 2010 and 2040, Plymouth's population is expected to increase by +20.6% (+14,524 people) while the number of households is expected to increase by +15.7% (+4,718 households). The City of Plymouth can expect to see continued population growth since it is located near employment opportunities and urban services that would support residential development. More people will choose to locate near their place of work as increasing transportation costs increase the desirability of living close to employment. As the amount of buildable land starts to dwindle within Plymouth, the City will need to consider options to support housing growth such as changes to building or zoning restrictions.
- In the City of Plymouth, growth is projected to occur in all age cohorts except the 18 to 24 year olds (-3.7%), 45 to 54 year olds (-3.0%), and 55 to 64 year olds (0.0%) between 2017 and 2022. The greatest percentage growth is projected to occur among seniors 75 to 84 year olds (+31.7%).
- Plymouth has an estimated median household income of \$96,274 in 2017 and is projected to increase over the next five years to \$104,687. There are 736 non-senior households (3.1% of households with incomes less than \$15,000) eligible for deep-subsidy rental housing. Median incomes for households in Plymouth peak at \$124,490 for the 45 to 54 age group in 2017. Incomes are expected to increase by 8.2% (1.6% annually) between 2017 and 2022 in the Plymouth.
- Plymouth had an average net worth of \$1,131,424 in 2017 and a median net worth of \$300,121. Median net worth is generally a more accurate depiction of wealth than the average figure. A few households with very large net worth can significantly skew the average.
- Typically, as income increases, so does the rate of homeownership. Homeownership in the Plymouth increases from 33.3% of households with incomes below \$15,000 to 89.6% of households with incomes above \$100,000.
- Between 2010 and 2015, Plymouth experienced an increase in all household types besides Other Family households, which decreased by -2.8%. Married families without children grew the most numerically, adding +1,101 households (+12.3%). The increase in households married without children can be attributed to couples waiting longer to have children, and the baby boomers aging into empty nester years.

DEMOGRAPHIC ANALYSIS

- An estimated 68.5% of renter households in Plymouth in 2015 had either one or two people.
- In 2015, “White Alone” (83.2%) comprised the largest proportion of the population in Plymouth. The race “Asian Alone” experienced the largest percentage growth between 2010 and 2015 in Plymouth, increasing by +1.4% from 4,888 to 6,112 people.
- Of Plymouth residents that moved in the past year, approximately 3.7% moved from outside of Hennepin County but within Minnesota and 8.4% were intra-county moves.

Employment Trends

Since employment growth generally fuels household growth, employment trends are a reliable indicator of housing demand. Typically, households prefer to live near work for convenience. However, housing is often less expensive in smaller towns, making commuting from outlying communities to work in larger employment centers attractive for households concerned about housing affordability.

Employment Growth and Projections

Table E-1 shows projected employment growth in Plymouth, Hennepin County, and the Twin Cities Metro Area. Table E-1 shows employment growth trends and projections from 2000 to 2040 based on the most recent Minnesota Department of Employment and Economic Development (DEED) and Metropolitan Council employment outlook projections.

	Employment						Change					
	Actual			Forecast			2000-2010		2010-2020		2020-2030	
	2000*	2010*	2015*	2020	2030	2040	No.	Pct.	No.	Pct.	No.	Pct.
Plymouth	53,206	45,881	49,414	53,900	57,700	61,500	-7,325	-13.8%	8,019	17.5%	3,800	7.1%
Hennepin County	874,882	803,733	883,488	924,710	981,800	1,038,140	-71,149	-8.1%	120,977	15.1%	57,090	6.2%
Twin Cities Metro Area	1,600,741	1,537,041	1,675,271	1,791,080	1,913,050	2,032,660	-63,700	-4.0%	254,039	16.5%	121,970	6.8%

*Values from 2000, 2010, 2015 Data is from MNDEED Quarterly Census of Employment and Wages
 Note: Twin Cities Metro represents the 7-County planning region
 Sources: MN Dept of Employment and Economic Development; Metropolitan Council; Maxfield Research & Consulting, LLC.

- There was an estimated total of 49,414 jobs in Plymouth in 2015, which was 5.6% of the Hennepin County total (883,488 jobs).
- The number of jobs in Plymouth is projected to grow by 8,019 jobs from 2010 through 2020 (17.5%). This projection is higher than what is expected for Hennepin County (15.1%) and the Twin Cities Metro Area (16.5%). Between 2010 and 2015 it is estimated that Plymouth added 3,533 jobs. Job creation in Plymouth continues to grow, making Plymouth more appealing for housing.
- Plymouth’s employment is anticipated to increase by 7.1% between 2020 and 2030 and is forecast to increase another 7.1% between 2030 and 2040.

Resident Labor Force

Recent employment growth trends are shown in Tables E-2 and E-3. Table E-2 presents resident employment data for the City of Plymouth from 2000 through June 2017. These numbers were derived from the proportion of jobs in Plymouth as compared to Hennepin County, the State of Minnesota, and the United States. Resident employment data is calculated as an annual average and reveals the work force and number of employed persons living in the City. It is important to note that not all of these individuals necessarily work in the City or County. Table E-3 presents covered employment numbers as available for the City of Plymouth from 2000 through 2016. Covered employment data is calculated as an annual average and reveals the number of jobs in the designated area, which are covered by unemployment insurance. Many temporary workforce positions, agricultural, self-employed persons, and some other types of jobs are not covered by unemployment insurance and are not included in the table. Some agricultural businesses and employees are listed in Table E-3, but not all positions are included. The data in both tables is sourced from the Minnesota Department of Employment and Economic Development. The following are key trends derived from the employment data:

Resident Employment

- Resident employment (number of employed persons) in Plymouth increased by approximately 2,334 people between 2000 and June 2017 (+5.9%) and the unemployment rate increased from 2.3% (2000) to 3.1% in June 2017. By comparison, Hennepin County’s unemployment rate was at 3.4% and the State of Minnesota was at 4.1% as of June 2017.
- Plymouth’s unemployment rate has stayed lower than Minnesota’s unemployment rate since 2000. The greatest yearly difference was 1.4% lower than the State in 2009.
- The unemployment rate in Hennepin County increased to a high of 7.3% (2009) which was the peak of the recession. However, as of June 2017, the unemployment rate has fallen to 3.4%, which is considered to be below equilibrium (5.0%).

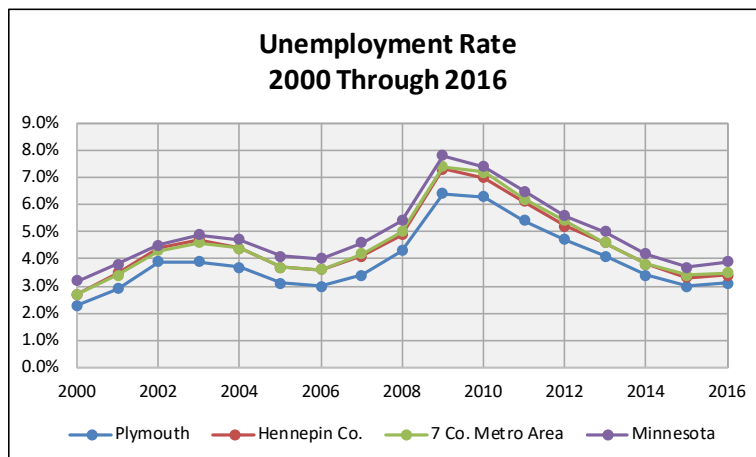


TABLE E-2 ANNUAL AVERAGE RESIDENT EMPLOYMENT PLYMOUTH MN 2000 to 2017 ¹				
<u>Year</u>	<u>Labor Force</u>	<u>Employed</u>	<u>Unemployed</u>	<u>Rate</u>
PLYMOUTH				
2000	40,187	39,258	929	2.3%
2005	41,365	40,081	1,284	3.1%
2010	40,078	37,558	2,520	6.3%
2015	42,095	40,828	1,267	3.0%
2016	42,570	41,264	1,306	3.1%
2017 ¹	42,922	41,592	1,330	3.1%
Change 2000-2017 ¹				
Number	2,735	2,334	401	--
Percent	6.8%	5.9%	43.2%	--
HENNEPIN COUNTY				
2000	666,621	648,571	18,050	2.7%
2005	652,568	628,595	23,973	3.7%
2010	650,891	605,294	45,597	7.0%
2015	671,702	649,491	22,211	3.3%
2016	679,285	656,426	22,859	3.4%
2017 ¹	685,177	661,652	23,525	3.4%
MINNESOTA				
2010	2,938,795	2,721,194	217,601	7.4%
2015	2,975,533	2,864,583	110,950	3.7%
2016	3,006,324	2,888,922	117,402	3.9%
2017 ¹	3,019,856	2,895,136	124,720	4.1%
U.S. ²				
2010	153,889	139,878	14,011	9.6%
2015	157,130	148,833	8,297	5.3%
2016	159,396	151,769	7,627	4.8%
2017 ¹	159,867	152,584	7,283	4.6%
¹ Through June 2017				
² Estimated in Thousands				
Note: Data not seasonally adjusted				
Sources: U.S. Department of Labor, MN Workforce Center, Maxfield Research and Consulting LLC				

EMPLOYMENT

Covered Employment by Industry

- Between 2000 and 2016, the number of jobs decreased in Plymouth by -1,718, a -3.2% decrease in the City. Education and Health Services gained the greatest number of jobs (+1,995, jobs) between 2000 and 2016. Manufacturing declined the most (-5,228 jobs) between 2000 and 2016.

Industry	Average Number of Employees					Change 2000 - 2016		% of Total				
	2000	2005	2010	2015	2016	No.	Pct.	2000	2005	2010	2015	2016
Natural Resources & Mining	213	195	180	167	183	-30	-14.1%	0.4%	0.4%	0.4%	0.3%	0.4%
Construction	2,213	2,115	1,593	2,220	2,154	-59	-2.7%	4.2%	4.2%	3.6%	4.5%	4.2%
Manufacturing	15,034	12,449	9,379	10,041	9,806	-5,228	-34.8%	28.3%	24.7%	20.9%	20.3%	19.0%
Trade, Transportation, and Utilities	11,219	10,636	9,113	10,965	11,428	209	1.9%	21.1%	21.1%	20.3%	22.2%	22.2%
Information	1,499	1,105	1,281	727	722	-777	-51.8%	2.8%	2.2%	2.9%	1.5%	1.4%
Financial Services	4,676	4,496	4,433	3,774	5,179	503	10.8%	8.8%	8.9%	9.9%	7.6%	10.1%
Professional and Business Services	10,076	9,185	9,506	9,627	10,096	20	0.2%	18.9%	18.2%	21.2%	19.5%	19.6%
Education and Health Services	3,957	4,964	4,793	5,884	5,952	1,995	50.4%	7.4%	9.8%	10.7%	11.9%	11.6%
Leisure and Hospitality	2,314	2,931	3,061	3,009	2,949	635	27.4%	4.3%	5.8%	6.8%	6.1%	5.7%
Other Services	1,011	1,067	-	1,464	1,403	392	38.8%	1.9%	2.1%	-	3.0%	2.7%
Public Administration	989	1,273	1,504	1,553	1,611	622	62.9%	1.9%	2.5%	3.4%	3.1%	3.1%
Totals	53,201	50,416	44,843	49,431	51,483	-1,718	-3.2%					

Source: Minnesota Workforce Center; Maxfield Research & Consulting, LLC

Employment, Earnings, and Employment by Educational Attainment

Table E-4 displays information on the employment by earnings, Table E-5 identifies employment by educational attainment, and Table E-6 is the business summary in. The employment by earnings and the employment by educational attainment are both sourced by the US Census for 2014 while the business summary for Plymouth is sourced from ESRI for 2017.

It should be noted that certain industries in Table E-6 may not display any information which means that there is either no reported economic activity for that industry or the data has been suppressed to protect the confidentiality of cooperating employers. This generally occurs when there are too few employers or one employer comprises too much of the employment in that geography.

- As of 2014, approximately 21,910 (57.8%) employees make more than \$3,333 per month in Plymouth. This is a higher percentage than Hennepin County (49.8%) and the Metro Area (49.5%) of those who make more than \$3,333 per month.

EMPLOYMENT

- As of 2014, approximately 11,872 (31.3%) employees have a bachelor's degree or advanced degree. This is a higher percentage than Hennepin County and the Metro Area where 27.5% and 27.0% respectively have a bachelor's or advanced degree.

TABLE E-4 EMPLOYMENT BY EARNINGS PLYMOUTH ANALYSIS AREA 2014						
Type	Plymouth		Hennepin County		Metro Area	
	No.	Pct.	No.	Pct.	No.	Pct.
\$1,250/month or less	8,011	21.1%	138,086	22.9%	353,773	23.3%
\$1,251 to \$3,333/month	8,007	21.1%	164,242	27.3%	413,324	27.2%
More than \$3,333/month	21,910	57.8%	300,130	49.8%	750,898	49.5%
Total	37,928	100%	602,458	100%	1,517,995	100%

Sources: US Census Bureau; Maxfield Research & Consulting, LLC

TABLE E-5 EMPLOYMENT BY EDUCATIONAL ATTAINMENT PLYMOUTH ANALYSIS AREA 2014						
Type	Plymouth		Hennepin County		Metro Area	
	No.	Pct.	No.	Pct.	No.	Pct.
Less Than High School	1,865	4.9%	36,078	6.0%	87,877	5.8%
High School or Equivalent, No College	6,705	17.7%	109,293	18.1%	281,815	18.6%
Some College or Associate Degree	9,518	25.1%	147,741	24.5%	379,952	25.0%
Bachelor's Degree or Advanced Degree	11,872	31.3%	165,460	27.5%	410,475	27.0%
Educational Attainment Not Available	7,968	21.0%	143,886	23.9%	357,876	23.6%
Total	37,928	100%	602,458	100%	1,517,995	100%

Sources: US Census Bureau; Maxfield Research & Consulting, LLC

EMPLOYMENT

**TABLE E-6
BUSINESS SUMMARY - BY NAICS CODE
PLYMOUTH MN
2017**

Business/Industry	Businesses		Employees
	Number	Pct	Pct
NAICS CODES			
Agriculture & Mining	7	0.2%	0.1%
Mining	3	0.1%	0.0%
Utilities	2	0.1%	0.0%
Construction	225	7.2%	7.2%
Manufacturing	211	6.7%	16.6%
Wholesale Trade	216	6.9%	9.9%
Retail Trade	330	10.5%	10.2%
Transportation & Warehousing	37	1.2%	0.8%
Information	86	2.7%	4.0%
Finance & Insurance	228	7.3%	11.3%
Real Estate, Rental & Leasing	205	6.5%	2.6%
Professional, Scientific & Tech Services	384	12.2%	9.8%
Management of Companies & Enterprises	6	0.2%	0.3%
Admin & Support & Waste Management & Remediation Services	148	4.7%	2.5%
Educational Services	75	2.4%	5.1%
Health Care & Social Assistance	297	9.5%	7.7%
Arts, Entertainment & Recreation	55	1.8%	1.9%
Accommodation & Food Services	139	4.4%	5.1%
Other Services (except Public Administration)	249	7.9%	3.3%
Public Administration	20	0.6%	1.1%
Unclassified Establishments	213	6.8%	0.4%
Total	3,136	100.0%	100.0%

Sources: ESRI, Maxfield Research & Consulting, LLC

- As of 2017, there were approximately 3,136 businesses in the City of Plymouth.
- Professional, Scientific and Technical Services have the highest proportion of establishments (12.2%), while the Manufacturing sector had the highest proportion of employees (16.6%) in Plymouth.
- The Retail Trade sector is one of the largest industry types in Plymouth with 10.5% businesses and 10.2% employees.
- The Finance & Insurance sector account for the second largest share of employees (11.3%) and ranked fifth in proportion of businesses (7.3%).

Commuting Patterns

Proximity to employment is often a primary consideration when choosing where to live, since transportation costs often account for a large proportion of households' budgets. Table E-7 highlights the commuting patterns of workers in Plymouth in 2014 (the most recent data available), based on Employer-Household Dynamics data from the U.S. Census Bureau.

- As shown in Table E-7, 13.1% of Plymouth residents were employed in Plymouth. Most employees that live in Plymouth commuted to jobs in Minneapolis (20.8%).
- Of the workers who work in Plymouth, 9.9% also live in Plymouth. The remaining workers are commuting from mostly Minneapolis (7.4%), Maple Grove (5.9%), and Brooklyn Park (4.3%).

TABLE E-7 PLYMOUTH COMMUTING PATTERNS 2014			
Place of Residence	Place of Employment	Count	Percent
Place of Residence for Workers Commuting to Plymouth			
Plymouth city, MN	Plymouth	4,980	9.9%
Minneapolis city, MN	Plymouth	3,746	7.4%
Maple Grove city, MN	Plymouth	2,966	5.9%
Brooklyn Park city, MN	Plymouth	2,158	4.3%
St. Paul city, MN	Plymouth	1,451	2.9%
Minnetonka city, MN	Plymouth	1,317	2.6%
Coon Rapids city, MN	Plymouth	1,083	2.1%
St. Louis Park city, MN	Plymouth	1,079	2.1%
Eden Prairie city, MN	Plymouth	1,022	2.0%
Crystal city, MN	Plymouth	949	1.9%
All Other Locations	Plymouth	29,800	59.0%
Metro Area	Plymouth	40,362	79.8%
Outstate MN	Plymouth	9,398	18.6%
Other State	Plymouth	791	1.6%
		<u>50,551</u>	<u>100.0%</u>
Place of Employment for Plymouth Residents			
Plymouth	Minneapolis city, MN	7,879	20.8%
Plymouth	Plymouth city, MN	4,980	13.1%
Plymouth	Minnetonka city, MN	2,370	6.2%
Plymouth	Golden Valley city, MN	2,131	5.6%
Plymouth	Bloomington city, MN	1,598	4.2%
Plymouth	Maple Grove city, MN	1,479	3.9%
Plymouth	St. Paul city, MN	1,424	3.8%
Plymouth	St. Louis Park city, MN	1,389	3.7%
Plymouth	Eden Prairie city, MN	1,196	3.2%
Plymouth	Edina city, MN	1,145	3.0%
Plymouth	All Other Locations	12,337	32.5%
Plymouth	Metro Area	35,776	94.4%
Plymouth	Outstate MN	1,645	4.3%
Plymouth	Other State	507	1.3%
		<u>37,928</u>	<u>100.0%</u>
Sources: Longitudinal Employer-Household Dynamics; Maxfield Research & Consulting, LLC			

Inflow/Outflow

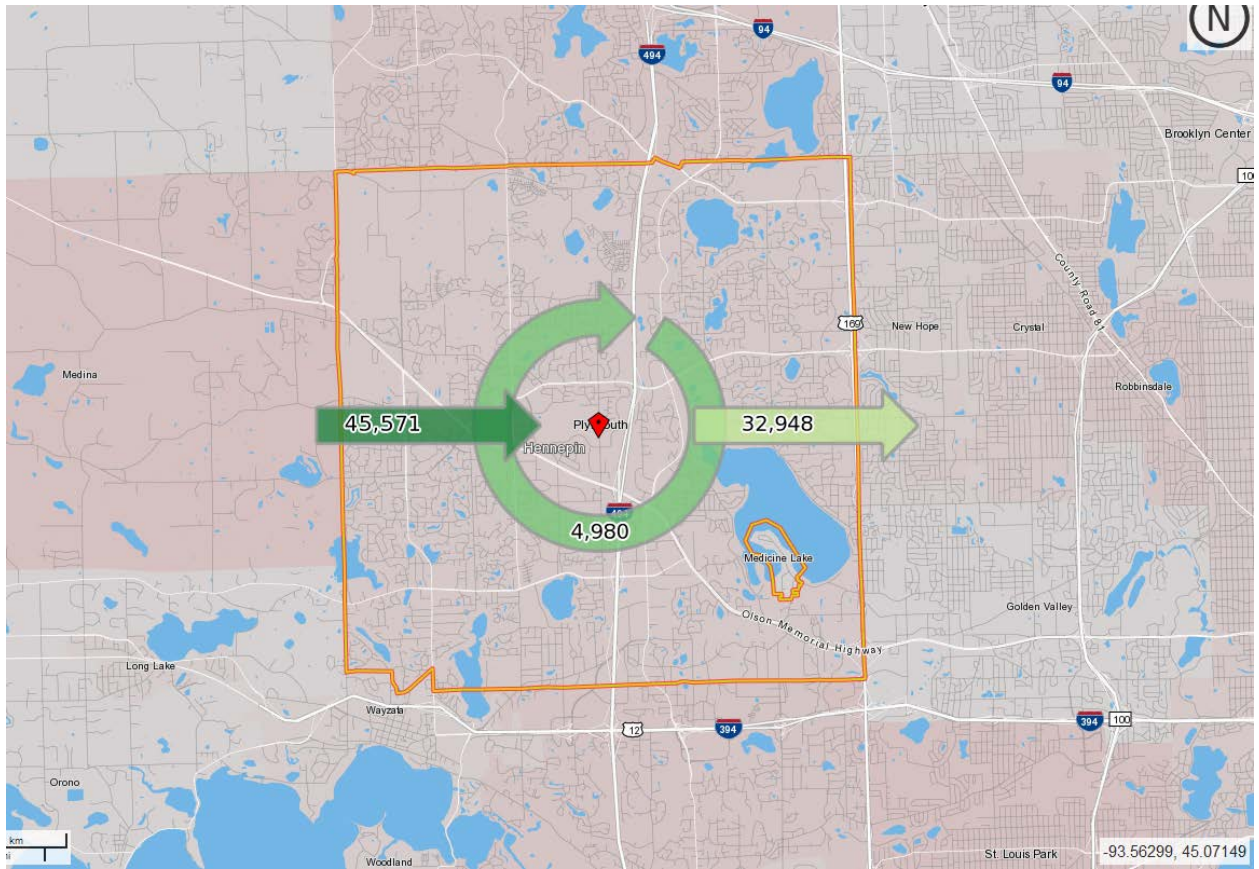
Table E-8 provides a summary of the inflow and outflow of workers in the City of Plymouth. Outflow reflects the number of workers living in the City of Plymouth but employed outside of the city while inflow measures the number of workers that are employed in the City of Plymouth but live outside. Interior flow reflects the number of workers that both live and work in the City of Plymouth.

- The City of Plymouth can be considered a major importer of workers, as the number of residents coming into the City (inflow) for employment was more than the number of residents leaving the City for work (outflow). Approximately 45,571 workers came into the City of Plymouth for work while 32,948 workers left, for a net difference of 12,623.

TABLE E-8 COMMUTING INFLOW/OUTFLOW PLYMOUTH MN 2014		
	Plymouth	
	Num.	Pct.
Employed in the Selection Area	50,551	100%
Employed in the Selection Area but Living Outside	45,571	90.1%
Employed and Living in the Selection Area	4,980	9.9%
Living in the Selection Area	37,928	100%
Living in the Selection Area but Employed Outside	32,948	86.9%
Living and Employed in the Selection Area	4,980	13.1%
Commuting Distance - Work to Home	Num.	Pct.
Less than 10 miles	20,833	41.2%
10 to 24 miles	21,202	41.9%
25 to 50 miles	4,886	9.7%
Greater than 50 miles	3,630	7.2%
Commuting Distance - Home to Work	Num.	Pct.
Less than 10 miles	20,141	53.1%
10 to 24 miles	15,676	41.3%
25 to 50 miles	623	1.6%
Greater than 50 miles	1,488	3.9%

Sources: Longitudinal Employer-Household Dynamics; Maxfield Research and Consulting LLC

EMPLOYMENT



Sources: Longitudinal Employer-Household Dynamics

Major Employers

Table E-9 shows the major employers in Plymouth based on data provided by the City of Plymouth. Please note that the table is not a comprehensive list of all employers and presents a selected list of employers and their employees as identified by the City of Plymouth. The following are key points from the major employers table.

- Independent School District No. 284 is the largest identified employer with approximately 1,505 employees. Quadion Holdings LLC employs over 1,000 employees. Another major employer in Plymouth is Abbott, previously St. Jude Medical, with approximately 800 employees.

TABLE E-9 MAJOR EMPLOYERS CITY OF PLYMOUTH 2017	
Name	Approximate Employee Size
Independent School Dist No.284 (Wayzata)	1,505
Quadion Holdings LLC	1,100
Abbott (Previously St Jude Medical)	800
Uniprise Inc	600
Smiths Medical Asd, Inc.	576
Honeywell International Inc.	500
Sterilmed, Inc.	500
Realogy Holdings Corp.	485
Daikin Applied Americas Inc.	450
Covidien LP	430
Medivators Inc.	413
Fluke Electronics Corporation	413
Flynn America LP	400
Onebeacon Insurance Group LLC	400

Source: City of Plymouth; Maxfield Research and Consulting LLC

- The list of major employers represents several industry sectors, but the highest concentrations of large employers are in the Educational Services, Healthcare & Social Assistance, and Manufacturing sectors.
- The top four employers account for approximately 47% of the employee base out of the major employers in the City of Plymouth.

Employment Interview

Maxfield Research and Consulting LLC interviewed a small sample size of economic development specialists and local officials regarding major employment changes and other issues that may impact long-term employment projections in Plymouth. Community economic development information provides useful job growth data and assists in identifying housing demand in an area. Though our sample size was small, we encourage diving deeper into interviewing local employers. The following summarizes key points derived from the information provided.

- Some employers noted that they had employees having longer commutes, traveling from cities like St. Paul, Blaine, and Monticello.
- Rental housing is often desired among newer and younger employees. Other employees would prefer to rent before they establish their roots in the community and purchase a home.
- Many middle- to upper positioned employees come from already established backgrounds and primarily consist of home-owners as opposed to renters.

Introduction

The variety and condition of the housing stock in a community provides the basis for an attractive living environment. Housing functions as a building block for neighborhoods and goods and services. We initially examined the characteristics of the housing supply in Plymouth by reviewing data on the age of the existing housing stock; examining residential building trends since 2000; and reviewing housing data from the American Community Survey that relates to the City of Plymouth.

Residential Construction Trends 2000 to Present

Maxfield Research obtained data from the Metropolitan Council on the number of building permits issued for new housing units in Plymouth from 2000 through 2016 and compared this with the number of units permitted as identified by the City of Plymouth. Table HC-1 displays units permitted issued for different housing types as reported by Metropolitan Council and verified with the City of Plymouth. Table HC-2 displays total units permitted and demolition permits for single-family detached units as recorded by the City of Plymouth. The following are key points about housing development since 2000.

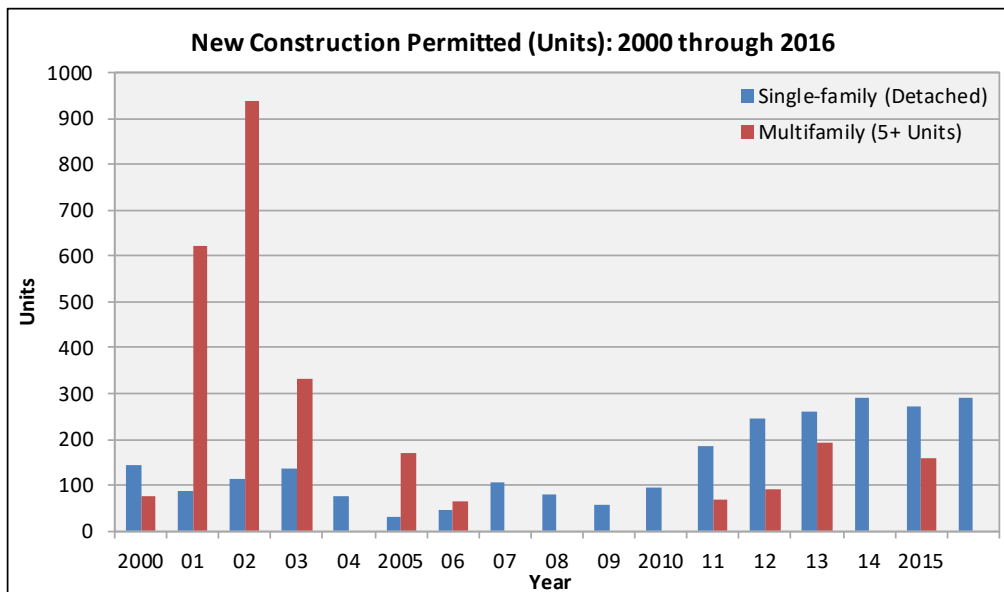
- Per the Metropolitan Council, the City of Plymouth issued 7,225 permits between 2000 and 2016. That equates to about 401 residential units permitted annually since 2000.
- Since 2007, there have been a decreasing number of single-family attached homes permits. The City of Plymouth saw a high of 186 single-family attached units permitted in 2004, but has only averaged 25 units permitted since 2008.
- The City of Plymouth averages roughly 160 multifamily units permitted each year since 2000. Plymouth issued a high of 938 multifamily units in 2002. There were a total of seven years between 2000 and 2016 where no multifamily permits were issued.
- The City of Plymouth has issued roughly 15 demolition permits for single-family detached units per year between 2000 and 2017 for a total of 278 single-family detached demolition permits.

HOUSING CHARACTERISTICS

HC-1 RESIDENTIAL CONSTRUCTION BUILDING PERMITTED UNITS ISSUED CITY OF PLYMOUTH <i>per Metropolitan Council & City of Plymouth</i> 2000 to 2016					
Year	Units Permitted				Total Units
	Single-Family (Detached)	Townhomes (Single-Family Attached)	Duplex, Triplex, Quadplex	Multifamily (5+ Units)*	
2000	142	142	0	77	361
2001	86	94	0	621	801
2002	115	165	0	938	1,218
2003	136	179	0	332	647
2004	75	186	28	0	289
2005	31	164	2	170	367
2006	47	124	14	66	251
2007	105	114	4	0	223
2008	79	66	0	0	145
2009	59	16	0	0	75
2010	94	39	0	0	133
2011	184	35	2	67	288
2012	247	16	0	90	353
2013	261	8	0	194	463
2014	291	12	0	0	303
2015	272	20	0	157	449
2016	290	11	0	0	301
Total	2,514	1,391	50	2,712	6,667

* 2000-2003 may contain units from structures of 3+ units

Sources: Metropolitan Council; City of Plymouth; Maxfield Research & Consulting LLC



HC-2 RESIDENTIAL CONSTRUCTION BUILDING & DEMO PERMITS CITY OF PLYMOUTH 2000 to 2017		
Year	Total Building Permits Issued	Total SF Demo Permits Issued
2000	361	7
2001	801	18
2002	1,218	10
2003	647	10
2004	289	12
2005	367	12
2006	251	16
2007	223	16
2008	145	7
2009	75	9
2010	133	14
2011	288	9
2012	353	8
2013	463	15
2014	303	40
2015	449	31
2016	301	30
2017	558	14
Total	7,225	278

Sources: City of Plymouth; Maxfield Research and Consulting LLC

American Community Survey

The American Community Survey (“ACS”) is an ongoing statistical survey administered by the U.S. Census Bureau that is sent to approximately 3 million addresses annually. The survey gathers data previously contained only in the long form of the Decennial Census. As a result, the survey is ongoing and provides a more “up-to-date” portrait of demographic, economic, social, and household characteristics every year, not just every ten years. The most recent ACS highlights data collected between 2011 and 2015. Tables HC-3 to HC-7 show key data for Plymouth.

Age of Housing Stock

The following graph shows the age distribution of the housing stock in 2015 based on data from the U.S. Census Bureau American Community Survey (5-Year). Table HC-3 includes the number of housing units built in Plymouth, prior to 1940 and during each decade since.

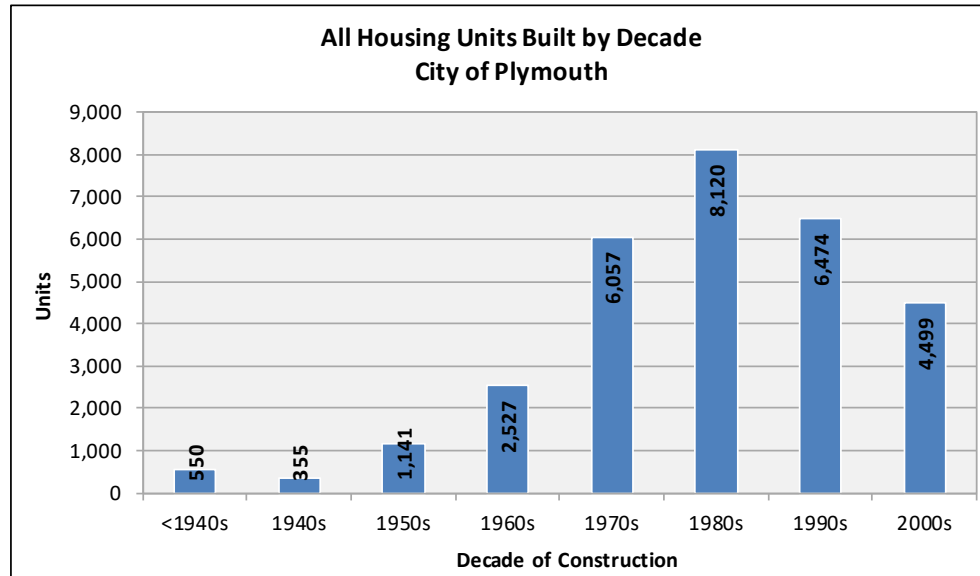
- As of 2015, the City of Plymouth was estimated to have 30,267 housing units, of which roughly 71.4% were owner-occupied and 28.6% were renter-occupied. In Hennepin County, approximately 37.3% were renter-occupied while in Minnesota 26.2% of the housing stock was renter-occupied.
- Homes in Plymouth are newer than homes in Hennepin County. Most housing (68.2%) was built in the 1970’s, 1980’s and 1990’s. The greatest number of homes in Plymouth were constructed in the 1980’s (roughly 27%). By comparison, the highest number of homes in Hennepin County was built prior to 1940 (19.2%).
- Compared to Hennepin County and the Twin Cities Metro Area, 16.7% of Plymouth’s housing stock has been built since 2000 compared to 10.5% of Hennepin County, 8.6% of Twin Cities Metro Area.
- Per the City of Plymouth, 508 multifamily units have been permitted since 2010.

HOUSING CHARACTERISTICS

**TABLE HC-3
AGE OF HOUSING STOCK
PLYMOUTH ANALYSIS AREA
2015**

	Total Units	Med. Yr. Built	Year Unit Built															
			<1940		1940s		1950s		1960s		1970s		1980s		1990s		2000s	
			No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.		
CITY OF PLYMOUTH																		
Owner-Occupied	21,612	1963	366	1.7	270	1.2	1,016	4.7	1,766	8.2	3,993	18.5	6,081	28.1	4,979	23.0	2,689	12.4
Renter-Occupied	8,655	1977	184	2.1	85	1.0	125	1.4	761	8.8	2,064	23.8	2,039	23.6	1,495	17.3	1,810	20.9
Total	30,267	1965	550	1.8	355	1.2	1,141	3.8	2,527	8.3	6,057	20.0	8,120	26.8	6,474	21.4	4,499	14.9
HENNEPIN COUNTY																		
Owner-Occupied	307,395	1967	59,724	19.4	20,362	6.6	51,676	16.8	31,070	10.1	38,821	12.6	43,979	14.3	30,348	9.9	28,552	9.3
Renter-Occupied	182,801	1972	34,320	18.8	8,125	4.4	15,373	8.4	25,179	13.8	37,714	20.6	26,723	14.6	15,328	8.4	17,116	9.4
Total	490,196	1970	94,044	19.2	28,487	5.8	67,049	13.7	56,249	11.5	76,535	15.6	70,702	14.4	45,676	9.3	45,668	9.3
METRO AREA																		
Owner-Occupied	1,026,407	1974	364,742	35.5	110,528	10.8	34,704	3.4	96,299	9.4	76,288	7.4	105,139	10.2	119,915	11.7	109,222	10.6
Renter-Occupied	364,742	1977	59,160	16.2	13,428	3.7	28,556	7.8	46,570	12.8	72,799	20.0	56,336	15.4	39,311	10.8	42,555	11.7
Total	1,391,149	1975	423,902	30.5	123,956	8.9	63,260	4.5	142,869	10.3	149,087	10.7	161,475	11.6	159,226	11.4	151,777	7.5

Sources: U.S. Census Bureau - American Community Survey; Maxfield Research & Consulting, LLC



Housing Units by Structure and Occupancy or (Housing Stock by Structure Type)

Table HC-4 shows the housing stock in the City of Plymouth by type of structure and tenure as of 2015.

- The dominant housing type in Plymouth is the single-family detached home, representing an estimated 73.1% of all owner-occupied housing units and 7.5% of renter-occupied housing units as of 2015.

Units in Structure	PLYMOUTH				HENNEPIN COUNTY				METRO AREA			
	Owner-Occupied		Renter-Occupied		Owner-Occupied		Renter-Occupied		Owner-Occupied		Renter-Occupied	
	Units	Pct.	Units	Pct.	Units	Pct.	Units	Pct.	Units	Pct.	Units	Pct.
1, detached	15,792	73.1%	651	7.5%	247,800	80.6%	23,400	13%	632,367	80.5%	50,228	13.8%
1, attached	4,427	20.5%	1,189	13.7%	30,109	9.8%	12,592	7%	93,048	11.8%	37,318	10.2%
2	56	0.3%	75	0.9%	4,012	1.3%	12,829	7%	6,727	0.9%	23,053	6.3%
3 to 4	237	1.1%	195	2.3%	2,669	0.9%	8,885	5%	5,410	0.7%	18,481	5.1%
5 to 9	220	1.0%	350	4.0%	2,588	0.8%	10,911	6%	5,610	0.7%	22,420	6.1%
10 to 19	45	0.2%	338	3.9%	2,076	0.7%	22,573	12%	3,355	0.4%	43,460	11.9%
20 to 49	236	1.1%	1,565	18.1%	4,620	1.5%	32,276	18%	7,767	1.0%	63,623	17.4%
50 or more	569	2.6%	4,273	49.4%	12,573	4.1%	58,794	32%	18,628	2.4%	104,067	28.5%
Mobile home	30	0.1%	19	0.2%	910	0.3%	446	0%	12,395	1.6%	1,844	0.5%
Boat, RV, van, etc.	0	0.0%	0	0.0%	38	0.0%	95	0%	105	0.0%	248	0.1%
Total	21,612	100%	8,655	100%	307,395	100%	182,801	100%	785,412	100%	364,742	100%

Sources: U.S. Census Bureau - American Community Survey; Maxfield Research & Consulting, LLC

- About one-half of the renter-occupied housing units are within structures that have 50 or more units in Plymouth.
- Most of the housing units with two or more units are renter-occupied.

Owner-Occupied Housing Units by Mortgage Status

Table HC-5 shows mortgage status and average values from the American Community Survey for 2015 (5-Year). Mortgage status provides information on the cost of homeownership when analyzed in conjunction with mortgage payment data. A mortgage refers to all forms of debt where the property is pledged as security for repayment of debt. A first mortgage has priority claim over any other mortgage or if it is the only mortgage. A second (and sometimes third) mortgage is called a “junior mortgage,” a home equity line of credit (HELOC) would also fall into this category. Finally, a housing unit without a mortgage is owned free and clear and is debt free.

HOUSING CHARACTERISTICS

- Approximately 70% of Plymouth homeowners have a mortgage. About 17% of homeowners with mortgages in Plymouth also have a second mortgage and/or home equity loan. These numbers are slightly lower compared to Hennepin County and the Metro Area where approximately 73% of homeowners in Hennepin County and in the Metro Area have a mortgage.
- The median value for homes with a mortgage for the City of Plymouth homeowners is approximately \$301,600, while the median value for homes without a mortgage are \$15,700 lower at \$285,900.

Mortgage Status	PLYMOUTH		HENNEPIN CO.		METRO AREA	
	No.	Pct.	No.	Pct.	Pct.	Pct.
Housing units without a mortgage	6,450	29.8	83,550	27.2	182,334	26.6
Housing units with a mortgage/debt	15,162	70.2	223,845	72.8	503,556	73.4
<i>Second mortgage only</i>	701	3.2	12,747	4.1	30,582	4.5
<i>Home equity loan only</i>	3,005	13.9	38,113	12.4	85,592	12.5
<i>Both second mortgage and equity loan</i>	61	0.3	1,731	0.6	4,192	0.6
<i>No second mortgage or equity loan</i>	11,395	52.7	171,254	55.7	383,190	55.9
Total	21,612	100.0	307,395	100.0	685,890	100.0
Average Value by Mortgage Status						
Housing units with a mortgage	\$301,600		\$232,200		\$224,570	
Housing units without a mortgage	\$285,900		\$220,400		\$209,350	

Sources: U.S. Census Bureau - American Community Survey; Maxfield Research & Consulting, LLC

Housing Units by Occupancy Status & Tenure

Tenure is a key variable that analyzes the propensity for householders to rent or own their housing unit. Tenure is an integral statistic used by numerous governmental agencies and private sector industries to assess neighborhood stability. The Follow are key points from Table HC-6:

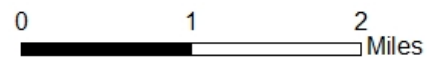
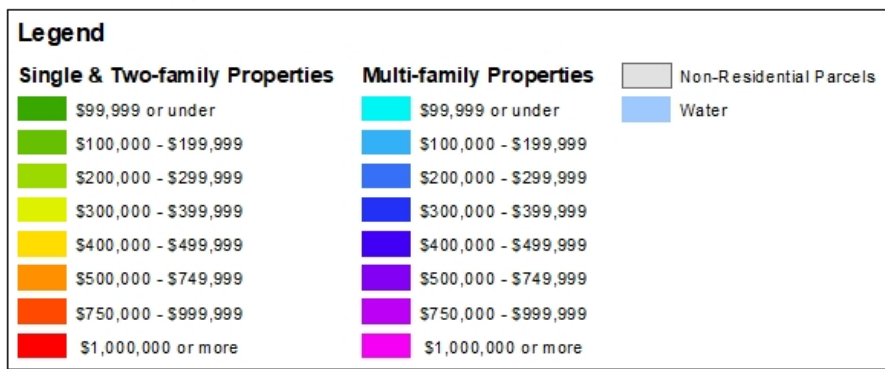
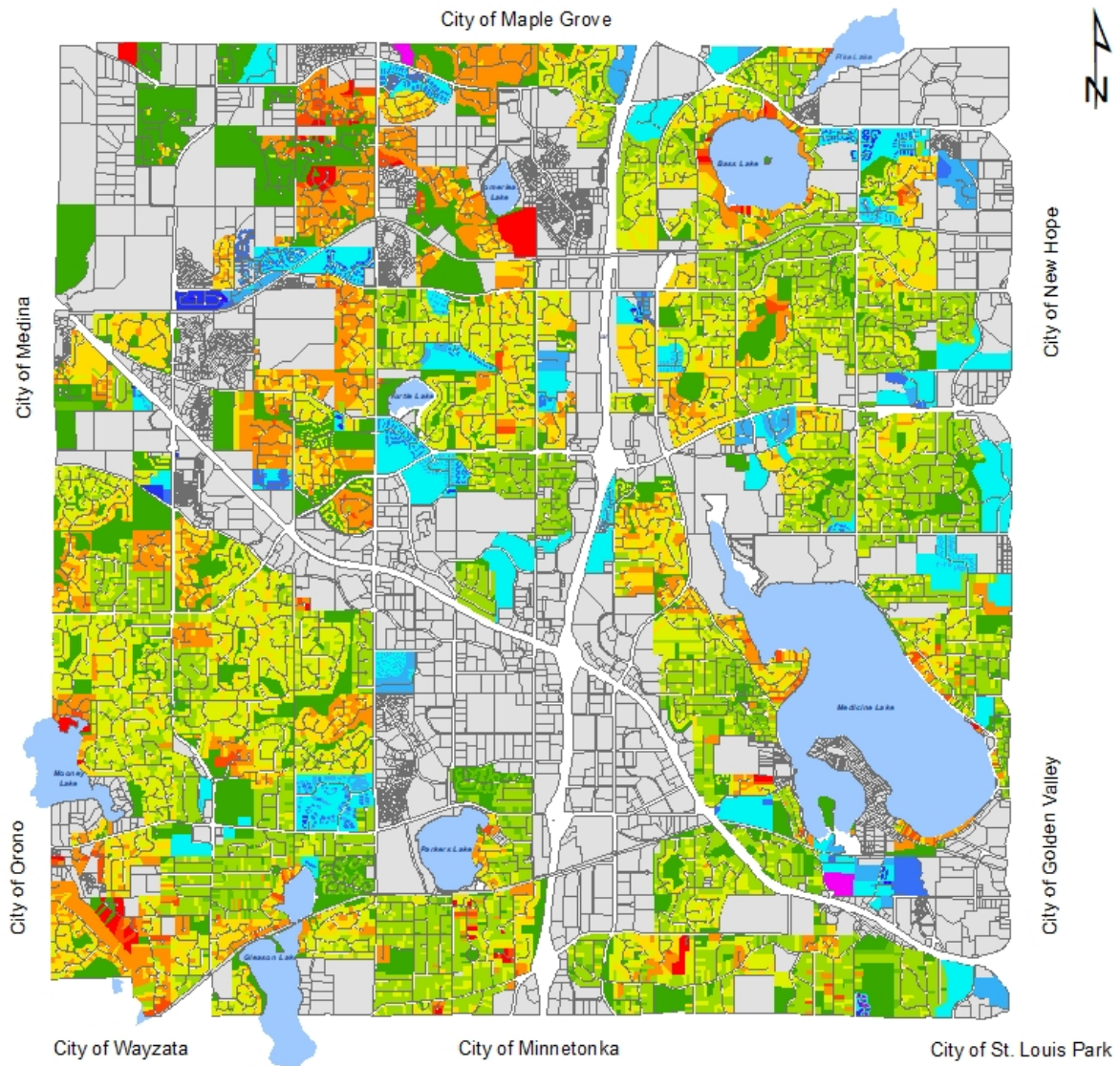
- The City of Plymouth had a larger portion (68%) of the City's housing stock devoted to owner occupied units in 2015 than Hennepin County (59%) and the Metro Area (65%).
- Approximately 27% of housing units in the City of Plymouth were renter occupied in the 2015, compared to a moderately higher percentage in Hennepin County (35%) and the Metro Area (30%).

HOUSING CHARACTERISTICS

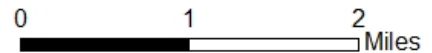
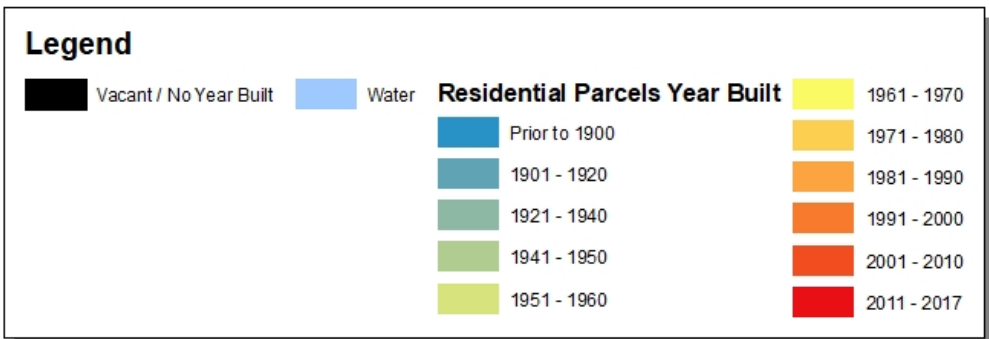
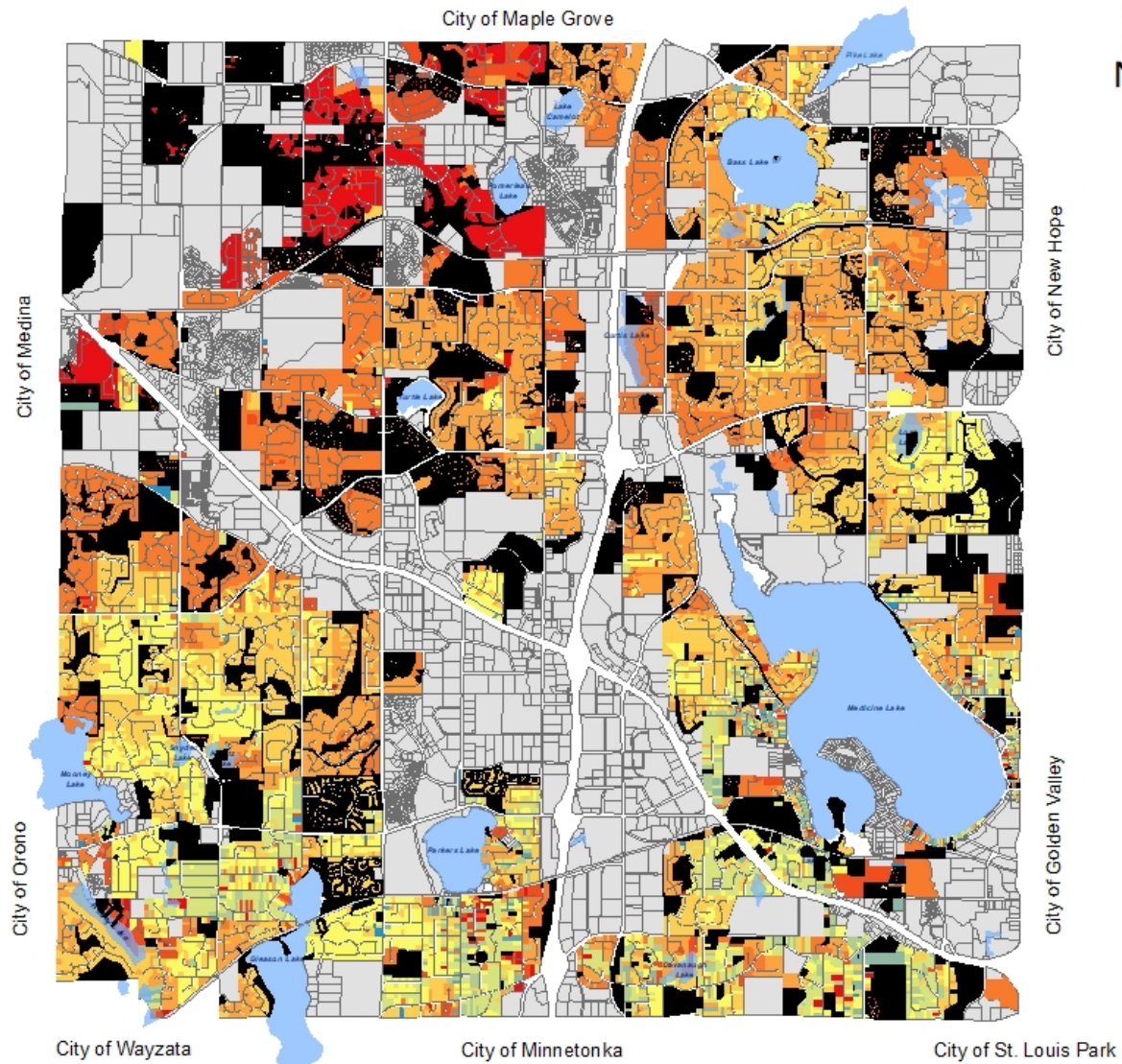
- About 4.4% of Plymouth’s housing stock was vacant in 2010 and decreased to 4.1% in 2015. It is important to note, however, that the Census’s definition of vacant housing units includes: units that have been rented or sold, but not yet occupied, seasonal housing (vacation or second homes), housing for migrant workers, and even boarded-up housing. Thus, the U.S. Census vacancy figures are not always a true indicator of adequate housing available for new households wishing to move into the area.

TABLE HC-6 HOUSING UNITS BY OCCUPANCY STATUS & TENURE PLYMOUTH ANALYSIS AREA 2010 & 2015						
Year/Occupancy	PLYMOUTH		HENNEPIN CO.		METRO AREA	
	No.	Pct.	No.	Pct.	Pct.	Pct.
2010						
Owner Occupied	20,756	69.2	306,121	60.1	782,475	65.9
Renter Occupied	7,907	26.4	169,792	33.3	335,274	28.2
Vacant	1,319	4.4	33,556	6.6	69,237	5.8
Total	29,982	100.0	509,469	100.0	1,186,986	100.0
2015						
Owner Occupied	21,612	68.4	307,395	59.3	785,412	65.1
Renter Occupied	8,655	27.4	182,801	35.3	364,742	30.2
Vacant	1,308	4.1	28,136	5.4	56,584	4.7
Total	31,575	100.0	518,332	100.0	1,206,738	100.0
Sources: U.S. Census Bureau; Maxfield Research & Consulting, LLC						

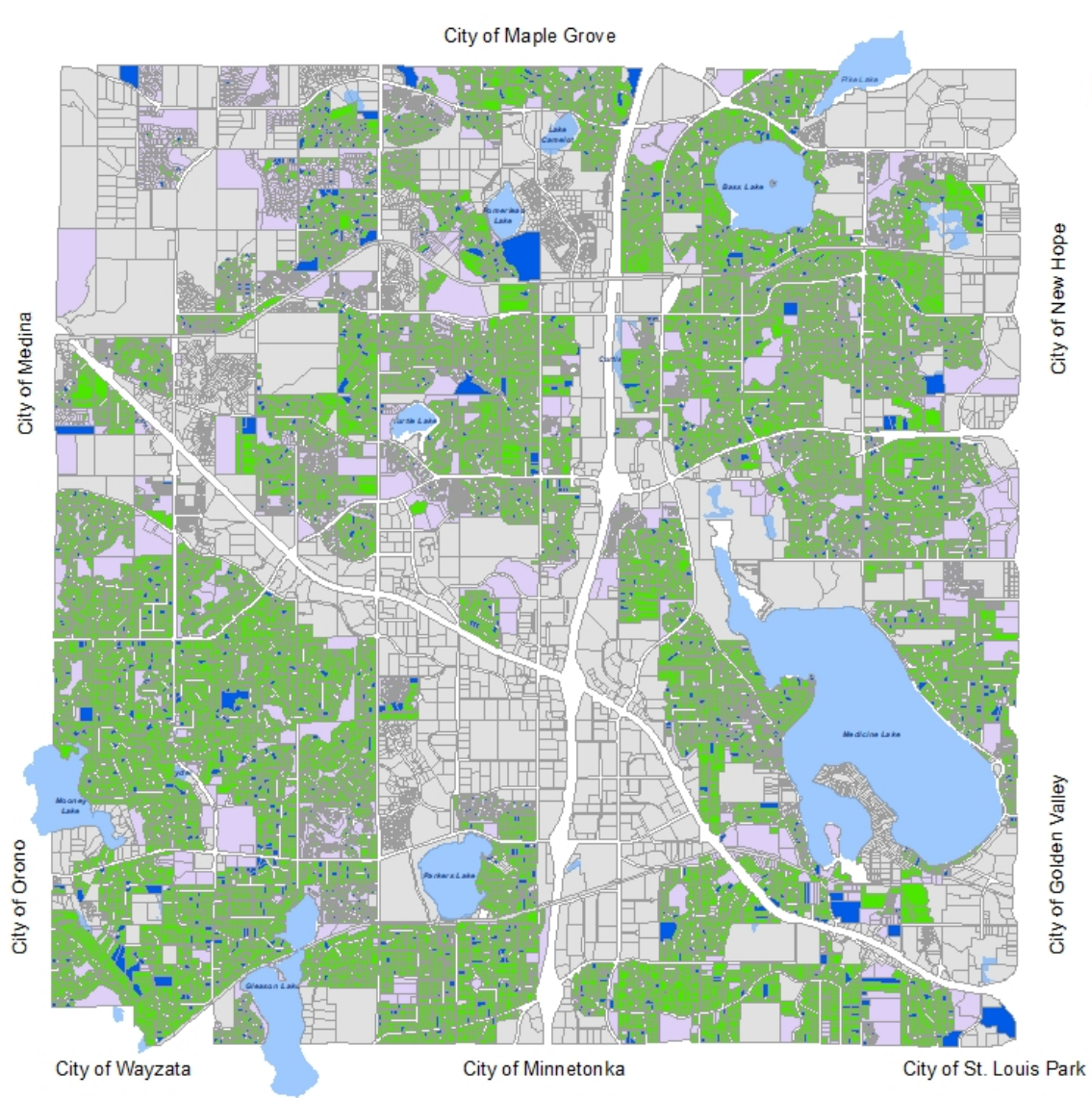
City of Plymouth Residential Parcels by Total Assessed Parcel Value



City of Plymouth Residential Parcels by Year Built



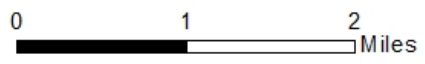
City of Plymouth Residential Parcels Homesteaded



Legend

Status of Residential Parcels Homestead vs. Non-Homestead

- Data Not Available
- Homestead
- Non-Homestead
- Water
- Non-Residential Parcels



Renter-Occupied Units by Contract Rent

Table HC-7 presents information on the monthly housing costs for renters called contract rent (also known as asking rent). Contract rent is the monthly rent agreed to regardless of any utilities, furnishings, fees, or services that may be included.

- The median contract rent in Plymouth was \$1,057 and \$874 in Hennepin County. Based on a 30% allocation of income to housing, a household in Plymouth would need an income of about \$42,280 to afford an average monthly rent of \$1,057.
- Approximately 56% of Plymouth renters have monthly rents over \$1,000, 37% of renters paying between \$500 and \$999, 4.8% of renters pay less than \$500.
- Within Hennepin County, nearly half of renters (49.7%) paid a contract rent between \$500 and \$999, while just over a third of renters (35.9%) paid a contract rent above \$1,000. The remaining renters who paid cash rent in Hennepin County consist of renters who paid a contract rent less than \$500 (12.2%).

TABLE HC-7 RENTER-OCCUPIED UNITS BY CONTRACT RENT PLYMOUTH ANALYSIS AREA 2015						
Contract Rent	PLYMOUTH		HENNEPIN CO.		METRO AREA	
	No.	Pct.	No.	Pct.	Pct.	Pct.
No Cash Rent	193	2.2	3,979	2.2	9,618	2.6
Cash Rent	8,462	97.8	178,822	97.8	355,124	97.4
\$0 to \$249	143	1.7	11,121	6.1	20,313	5.6
\$250-\$499	275	3.2	11,119	6.1	23,675	6.5
\$500-\$749	707	8.2	38,975	21.3	79,666	21.8
\$750-\$999	2,505	28.9	51,905	28.4	107,773	29.5
\$1,000-\$1,500	3,910	45.2	47,983	26.2	93,061	25.5
\$1,500+	922	10.7	17,719	9.7	30,636	8.4
Total	8,655	100.0	182,801	100.0	364,742	100.0
Median Contract Rent	\$1,057		\$874		\$864	

Sources: U.S. Census Bureau - American Community Survey; Maxfield Research & Consulting, LLC.

Housing Characteristics Comparison

Table HC-8, on the following page, provides a comparison on various housing characteristics in Plymouth compared to neighboring peer cities in the Metro Area.

TABLE HC-8 HOUSING CHARACTERISTICS COMPARISON PLYMOUTH ANALYSIS AREA								
Housing Characteristics Summary	Plymouth	Eden Prairie	Edina	Golden Valley	Maple Grove	Medina	Minnetonka	St Louis Park
Owner Units (2015)	21,612	17,776	15,327	6,851	21,019	1,735	15,995	12,642
Renter Units (2015)	8,655	6,643	5,554	2,054	3,885	119	6,681	9,872
Median Contract Rent (2015)	\$1,057	\$1,104	\$1,126	\$1,036	\$1,188	\$1,207	\$1,082	\$966
Vacancy Rate (6/2017)*	3.2%	2.2%	3.3%	1.6%	3.6%	N/A	2.3%	2.2%
Average Rent (6/2017)*	\$1,176	\$1,212	\$1,378	\$1,288	\$1,312	N/A	\$1,263	\$1,229
Resales (2016)	1,511	1,175	1,004	457	1,462	129	1,018	1,011
Median Resale Price (2016)	\$325,000	\$308,500	\$435,010	\$290,275	\$256,700	\$541,250	\$307,350	\$245,000
Average Resale Price (2016)	\$372,849	\$357,670	\$529,736	\$343,493	\$292,793	\$622,633	\$355,936	\$272,848
Mortgage Status - Housing Units with a Mortgage (2015)	15,162	13,534	10,173	4,627	16,674	1,318	11,015	9,287
Median Home Value (2015)	\$297,400	\$303,600	\$403,000	\$265,300	\$248,000	\$607,200	\$289,300	\$236,900
Residential Building Permits								
2007 - 2011	878	331	533	39	1,416	79	329	504
2012 - 2016	1,926	508	1,523	705	2,173	573	1,087	1,410
2007 - 2016 Total	2,804	839	2,056	744	3,589	652	1,416	1,914

*Vacancy Rate & Average Rent for Maple Grove incorporates vacancy rates and rents from Osseo & Rogers
 Source: U.S. Census Bureau; ESRI; Marquette Advisors; Met Council; Northstar MLS; Maxfield Research, Inc.

Introduction

Affordable housing is a term that has various definitions according to different people and is a product of supply and demand. According to the U.S. Department of Housing and Urban Development (HUD), the definition of affordability is for a household to pay no more than 30% of its annual income on housing (including utilities). Families who pay more than 30% of their income for housing (either rent or mortgage) are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care.

Generally, housing that is income-restricted to households earning at or below 80% of Area Median Income (AMI) is considered affordable. However, many individual properties have income restrictions set anywhere from 30% to 80% of AMI. Rent is not based on income but instead is a contract amount that is affordable to households within the specific income restriction segment. Moderate-income housing, often referred to as “workforce housing,” refers to both rental and ownership housing. Hence the definition is broadly defined as housing that is income-restricted to households earning between 50% and 120% AMI. Figure 1 below summarizes income ranges by definition.

FIGURE 1
AREA MEDIAN INCOME (AMI) DEFINITIONS

Definition	AMI Range
Extremely Low Income	0% - 30%
Very Low Income	31% - 50%
Low Income	51% - 80%
Moderate Income	80% - 120%

Note: Hennepin County 4-person AMI = \$90,400 (2017)

Rent and Income Limits

Table HA-1 shows the maximum allowable incomes by household size to qualify for affordable housing and maximum gross rents that can be charged by bedroom size in Hennepin County. These incomes are published and revised annually by the Department of Housing and Urban Development (HUD) and also published separately by the Minnesota Housing Finance Agency based on the date the project was placed into service. Fair market rent is the amount needed to pay gross monthly rent at modest rental housing in a given area. This table is used as a basis for determining the payment standard amount used to calculate the maximum monthly subsidy for families at financially assisted housing.

HOUSING AFFORDABILITY

TABLE HA-1 MHFA/HUD INCOME AND RENT LIMITS HENNEPIN COUNTY- 2017								
Income Limits by Household Size								
	1 pph	2 pph	3 pph	4 pph	5 pph	6 pph	7 pph	8 pph
30% of median	\$18,990	\$21,720	\$24,420	\$27,120	\$29,310	\$31,470	\$33,630	\$35,820
50% of median	\$31,650	\$36,200	\$40,700	\$45,200	\$48,850	\$52,450	\$56,050	\$59,700
60% of median	\$37,980	\$43,440	\$48,840	\$54,240	\$58,620	\$62,940	\$67,260	\$71,640
80% of median	\$50,640	\$57,920	\$65,120	\$72,320	\$78,160	\$83,920	\$89,680	\$95,520
100% of median	\$63,300	\$72,400	\$81,400	\$90,400	\$97,700	\$104,900	\$112,100	\$119,400
120% of median	\$75,960	\$86,880	\$97,680	\$108,480	\$117,240	\$125,880	\$134,520	\$143,280
Maximum Gross Rent								
	EFF	1BR	2BR	3BR	4BR			
30% of median	\$474	\$543	\$610	\$678	\$732			
50% of median	\$791	\$905	\$1,017	\$1,130	\$1,221			
60% of median	\$949	\$1,086	\$1,221	\$1,356	\$1,465			
80% of median	\$1,266	\$1,448	\$1,628	\$1,808	\$1,954			
100% of median	\$1,582	\$1,810	\$2,035	\$2,260	\$2,442			
120% of median	\$1,899	\$2,172	\$2,442	\$2,712	\$2,931			
Fair Market Rent								
	EFF	1BR	2BR	3BR	4BR			
Fair Market Rent	\$699	\$862	\$1,086	\$1,538	\$1,799			

Sources: MHFA, HUD, Novogradac, Maxfield Research and Consulting LLC

Table HA-2 shows the maximum rents by household size and AMI based on income limits illustrated in Table HA-1. The rents on Table HA-2 are based on HUD’s allocation that monthly rents should not exceed 30% of income. In addition, the table reflects maximum household size based on HUD guidelines of number of persons per unit. For each additional bedroom, the maximum household size increases by two persons.

HOUSING AFFORDABILITY

**TABLE HA-2
MAXIMUM RENT BASED ON HOUSEHOLD SIZE AND AREA MEDIAN INCOME
HENNEPIN COUNTY - 2017**

Unit Type ¹	HHD Size		Maximum Rent Based on Household Size (@30% of Income)											
	Min	Max	30%		50%		60%		80%		100%		120%	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Studio	1	1	\$475	-\$475	\$791	-\$791	\$950	-\$950	\$1,266	-\$1,266	\$1,583	-\$1,583	\$1,899	-\$1,899
1BR	1	2	\$475	-\$543	\$791	-\$905	\$950	-\$1,086	\$1,266	-\$1,448	\$1,583	-\$1,810	\$1,899	-\$2,172
2BR	2	4	\$543	-\$678	\$905	-\$1,130	\$1,086	-\$1,356	\$1,448	-\$1,808	\$1,810	-\$2,260	\$2,172	-\$2,712
3BR	3	6	\$611	-\$787	\$1,018	-\$1,311	\$1,221	-\$1,574	\$1,628	-\$2,098	\$2,035	-\$2,623	\$2,442	-\$3,147
4BR	4	8	\$678	-\$896	\$1,130	-\$1,493	\$1,356	-\$1,791	\$1,808	-\$2,388	\$2,260	-\$2,985	\$2,712	-\$3,582

¹ One-bedroom plus den and two-bedroom plus den units are classified as 1BR and 2BR units, respectively. To be classified as a bedroom, a den must have a window and closet.

Note: 4-person Hennepin County AMI is \$90,400 (2017)

Sources: HUD, Novogradac, Maxfield Research and Consulting, LLC

Housing Cost Burden

Table HA-3 shows the number and percentage of owner and renter households in Minnesota, Hennepin County, the Twin Cities Metro Area, and Plymouth that pay 30% or more of their gross income for housing. This information was compiled from the American Community Survey 2015 estimates. This information is different than the 2000 Census which separated households that paid 35% or more in housing costs. As such, the information presented in the tables may be overstated in terms of households that may be “cost burdened.” The Federal standard for affordability is 30% of income for housing costs. Without a separate break out for households that pay 35% or more, there are likely a number of households that elect to pay slightly more than 30% of their gross income to select the housing that they choose. Moderately cost-burdened is defined as households paying between 30% and 50% of their income to housing; while severely cost-burdened is defined as households paying more than 50% of their income for housing.

Higher-income households that are cost-burdened may have the option of moving to lower priced housing, but lower-income households often do not. The figures focus on owner households with incomes below \$50,000 and renter households with incomes below \$35,000.

Key findings from Table HA-3 follow.

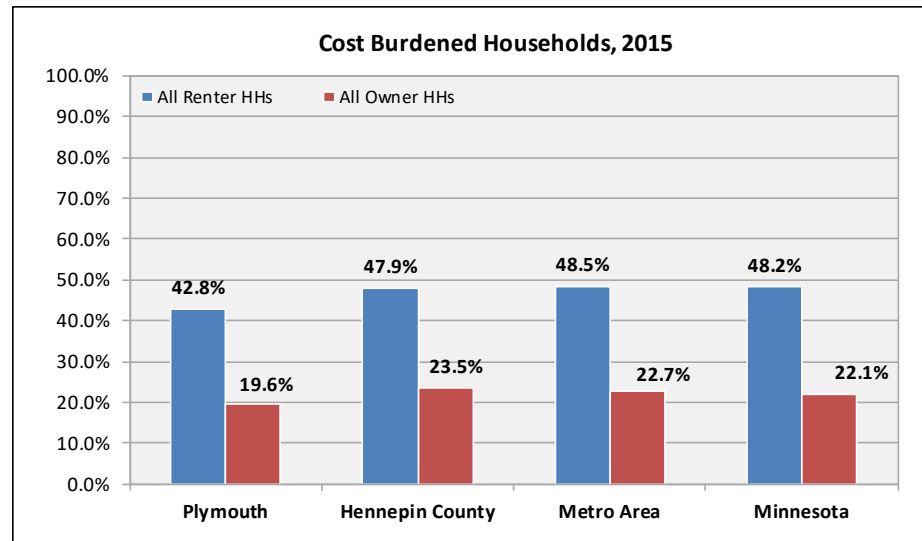
- In Plymouth, 19.6% of owner households and 42.8% of renter households are considered cost burdened. Plymouth is slightly less cost burdened for owner households than the Twin Cities Metro Area (22.7%), Hennepin County (23.5%), and the State of Minnesota (22.1%). Plymouth is also slightly less cost burdened for renter households than the Twin Cities Metro Area (48.5%), Hennepin County (47.9%), and the State of Minnesota (48.2%).
- Among owner households earning less than \$50,000, 57.8% were cost burdened in Plymouth. This is higher than both the Twin Cities Metro Area (57.7%) and the State of Minnesota (50.4%), but lower than Hennepin County (60.4%).
- Approximately 93.8% of Plymouth renter households earning less than \$35,000 were cost burdened which is significantly higher than the Twin Cities Metro Area (82.3%), Hennepin County (82.3%) and the State of Minnesota (77.7%).
- The median contract rent in Plymouth was \$1,057 in 2015 and was significantly higher than the Twin Cities Metro Area (\$855), Hennepin County (\$874), and the State of Minnesota (\$759). Plymouth’s median contract rent was roughly 21% higher than that of Hennepin County.

HOUSING AFFORDABILITY

**TABLE HA-3
HOUSING COST BURDEN
PLYMOUTH, METRO AREA, HENNEPIN COUNTY, MINNESOTA
2015**

Community	Plymouth		Metro Area		Hennepin County		Minnesota	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Owner Households								
All Owner Households	21,612		896,777		307,395		1,522,618	
Cost Burden 30% or greater	4,230	19.6%	202,714	22.7%	71,961	23.5%	334,738	22.1%
Owner Households w/ incomes <\$50,000	4,450		214,911		74,843		450,483	
Cost Burden 30% or greater	2,528	57.8%	121,783	57.7%	44,329	60.4%	223,625	50.4%
Renter Households								
All Renter Households	8,655		389,982		182,801		602,127	
Cost Burden 30% or greater	3,594	42.8%	181,389	48.5%	84,579	47.9%	272,894	48.2%
Renter Households w/ incomes <\$35,000	2,718		186,890		86,602		316,969	
Cost Burden 30% or greater	2,395	93.8%	145,084	82.3%	67,661	82.3%	228,441	77.7%
Median Contract Rent ¹	\$1,057		\$855		\$874		\$759	

¹Median Contract Rent 2015
 Note: Calculations exclude households not computed.
 Sources: American Community Survey 2015 estimates; Maxfield Research and Consulting LLC



Housing Vouchers

In addition to subsidized apartments, “tenant-based” subsidies like *Housing Choice Vouchers*, can help lower income households afford market-rate rental housing. The tenant-based subsidy is funded by the Department of Housing and Urban Development (HUD), and is managed by the City of Plymouth HRA. Under the Housing Choice Voucher program (also referred to as Section 8) qualified households are issued a voucher that the household can take to an apartment that has rent levels with Payment Standards. The household then pays approximately 30% of their Adjusted Gross Income (AGI) for rent and utilities, and the Federal government pays the remainder of the rent to the landlord. The maximum income limit to be eligible for a Housing Choice Voucher is 50% Area Median Income (AMI) based on household size, as shown in Table HA-1. The following are key points about the Housing Choice Voucher Program in Plymouth.

- The Plymouth HRA manages roughly 375 Housing Choice rental assistance vouchers throughout the city.
- The voucher program uses a payment standard which matches the cost of housing and utilities and households may use the housing voucher for units with rent that is below or above the payment standard.
- Housing Choice Vouchers can be used for several types of residences to include apartment rentals, single family housing rentals, duplexes, townhouses, and homeownership.

Table HA-4 on the following page provides a breakdown of properties that offer subsidized units and includes the expiration date of the properties funding source as well as the percentage of subsidized units at the select property.

HOUSING AFFORDABILITY

Name	Subsidized Units	Total Units	Pct. Subsidized	Exp. Date	Funding
At the Lake	61	204	30%	7/29/2019	Housing Revenue Bonds
The Axis	16	161	10%	12/31/2038	TIF/MN DEED/Met Council
Basset Creek Commons (senior housing)	46	46	100%	2039	TIF/HUD
Currents (Harbor Lane)	64	326	20%	2/15/2026	Housing Revenue Bonds
Kimberly Meadows	39	39	100%	10/8/2018	Project Based Section 8/HUD/MHFA
Lakeview Commons	62	62	100%	7/1/2025	LIHTC
Lancaster Village	32	160	20%	9/15/2031	Bonds
Mission Oaks	28	28	100%	12/31/2018	Project Based Section 8/HUD
Parkside Apartments	21	211	10%	4/15/2033	Revenue Bonds
Shenandoah Woods Apartments	46	64	72%	10/26/2024	HRA/Hennepin Co/FHF/MHFA
Stone Creek Village	34	132	26%	4/1/2038	TIF/Met Council/FHF/LIHTC/Hennepin County
Vicksburg Commons	50	50	100%	9/30/2041	TIF/Section 8/Met Council
West View Estates	67	67	100%	6/20/2041	TIF/Section 8/Met Council
Willow Woods	39	40	98%	12/1/2035	HRA Loan/Project Based section 8
HRA OWNED					
Plymouth Towne Square	99	99	100%	N/A	GO Bonds
Vicksburg Crossing	96	96	100%	N/A	GO Bonds

Sources: City of Plymouth; Maxfield Research & Consulting, LLC

Housing Costs as Percentage of Household Income

Housing costs are generally considered affordable at 30% of a household's adjusted gross income. Table HA-5 on the following page illustrates key housing metrics based on housing costs and household incomes in Plymouth. The table estimates the percentage of Plymouth households that can afford rental housing based on a 30% allocation of income to housing. Housing costs are based on the Plymouth average.

The housing affordability calculations assume the following:

Rental Housing

- Background check on tenant to ensure credit history
 - 30% allocation of income
 - Renter household income per 2015 ACS
-
- The median income of all Plymouth households in 2017 was about \$96,274. However, the median income varies by tenure. According to the 2015 American Community Survey, the median income of a homeowner is \$107,396 compared to \$52,043 for renters.
 - About 83% of existing renter households can afford to rent a one-bedroom unit in Plymouth (\$950/month). The percentage of renter income-qualified households decreases to 62% that can afford an existing three-bedroom unit (\$1,850/month). After adjusting for new construction rental housing, the percentage of renters that are income-qualified decreases. About 75% of renters can afford a new market rate one-bedroom unit while 44% can afford a new three-bedroom unit.

HOUSING AFFORDABILITY

**TABLE HA-5
PLYMOUTH HOUSING AFFORDABILITY - BASED ON HOUSEHOLD INCOME
CITY OF PLYMOUTH**

Rental (Market Rate)	Existing Rental			New Rental		
	1BR	2BR	3BR	1BR	2BR	3BR
Monthly Rent	\$950	\$1,300	\$1,850	\$1,300	\$2,000	\$2,800
Annual Rent	\$11,400	\$15,600	\$22,200	\$15,600	\$24,000	\$33,600
Housing Costs as % of Income	30%	30%	30%	30%	30%	30%
Minimum Income Required	\$38,000	\$52,000	\$74,000	\$52,000	\$80,000	\$112,000
Pct. of ALL Plymouth HHDS who can afford¹	83.5%	74.8%	62.4%	74.8%	58.9%	43.7%
No. of Plymouth HHDS who can afford¹	25,262	22,652	18,898	22,652	17,817	13,221
Pct. of Plymouth renter HHDS who can afford²	65.4%	65.4%	56.8%	46.8%	25.9%	13.2%
No. of Plymouth renter HHDS who can afford²	5,659	5,659	4,920	4,050	2,245	1,142
No. of Plymouth renter HHDS who cannot afford²	2,996	2,996	3,735	4,605	6,410	7,513

¹ Based on 2017 household income for ALL households

² Based on 2015 ACS household income by tenure (i.e. owner and renter incomes. Owner incomes = \$107,396 vs. renter incomes = \$52,043)

Source: Maxfield Research & Consulting, LLC

Introduction

Maxfield Research and Consulting LLC identified and surveyed larger rental properties of 25 or more units in Plymouth. In addition, interviews were conducted with rental housing management firms, and others in the community familiar with Plymouth's rental housing stock.

For purposes of our analysis, rental properties are classified rental projects into two groups, general occupancy and senior (age-restricted). All senior properties are included in the *Senior Housing Market Analysis* section of this report. The general occupancy rental properties are divided into three groups: market rate (those without income restrictions); affordable or shallow-subsidy housing (those receiving tax credits or another type of shallow-subsidy and where there is a quoted rent for the unit and a maximum income that cannot be exceeded by the tenant); and subsidized or deep-subsidy properties (those with income restrictions at 30% or less of AMI where rental rates are based on 30% of their gross adjusted income).

Overview of Rental Market Conditions

Maxfield Research utilized data from the American Community Survey (ACS) and Marquette Advisors *Apartment Trends* report for Minnesota, the Twin Cities Metro Area, Hennepin County and Plymouth to summarize rental market conditions in the Plymouth Analysis Area. The data from Marquette Advisors is shown for the 4th Quarter of 2007 through 4th Quarter of 2016, while the ACS data is 2011 – 2015. ACS includes all rental units, regardless of structure size.

The following are key points concerning Plymouth's rental conditions.

- The equilibrium vacancy rate for rental housing is considered to be 5.0%. This allows for normal turnover and an adequate supply of alternatives for prospective renters. During the fourth quarter of 2016, the vacancy rate was 3% in Plymouth overall, with the highest vacancies in two-bedroom (3.3%) and one-bedroom (3%) units.
- Vacancy rates were lowest for studio (1.6%), two-bedroom with den (1.6%), and one-bedroom with den (1.8%) units in Plymouth.
- Between the fourth quarter 2007 and 2016, the average rents for a studio unit increased 20.7%, 10.7% for a one-bedroom, and 14.5% for a two-bedroom.

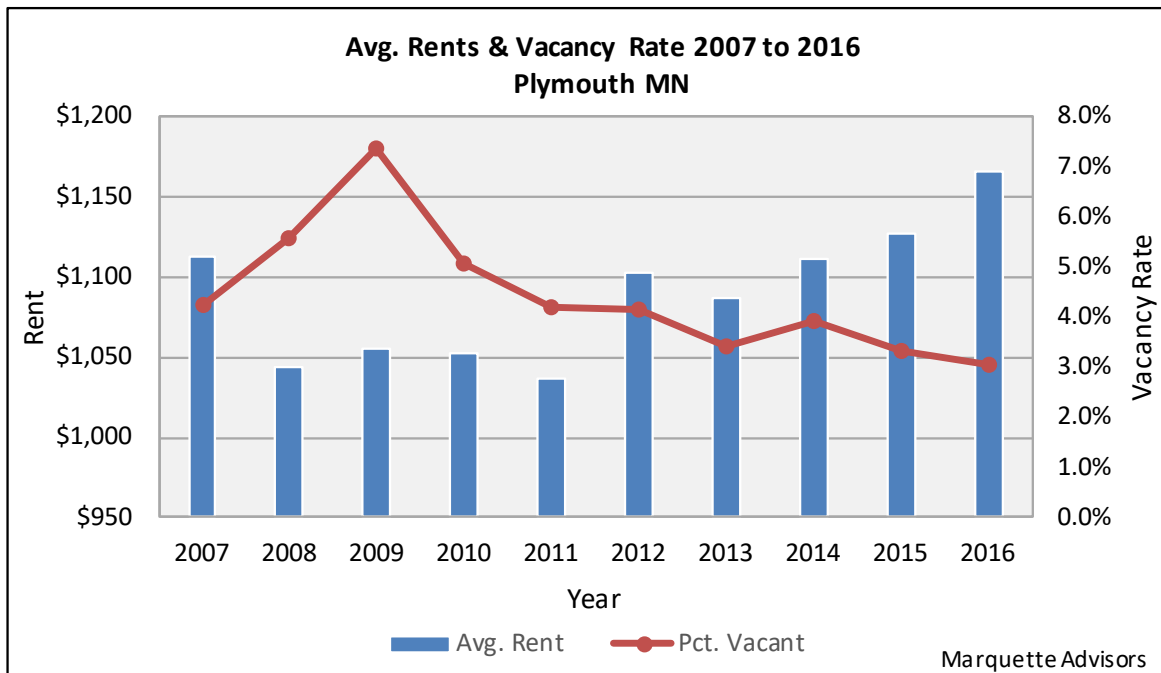
RENTAL MARKET ANALYSIS

TABLE R-1 AVERAGE RENTS/VACANCIES TRENDS CITY OF PLYMOUTH 4th Quarter 2007-2016								
	Total	Studio	1 BR	1 BR w/ Den	2 BR	2 BR w/ Den	3 BR	
2016	Units	5,598	128	1,918	218	2,868	128	338
	No. Vacant	170	2	58	4	96	2	8
	Avg. Rent	\$1,166	\$857	\$1,000	\$1,136	\$1,234	\$1,475	\$1,541
	Vacancy	3.0%	1.6%	3.0%	1.8%	3.3%	1.6%	2.4%
2015	Units	5,661	116	1,852	218	3,016	121	338
	No. Vacant	189	4	53	4	121	5	2
	Avg. Rent	\$1,127	\$831	\$960	\$1,124	\$1,184	\$1,426	\$1,523
	Vacancy	3.3%	3.4%	2.9%	1.8%	4.0%	4.1%	0.6%
2014	Units	5,789	128	1,960	218	3,018	127	338
	No. Vacant	226	2	49	4	143	8	20
	Avg. Rent	\$1,111	\$807	\$942	\$1,122	\$1,178	\$1,398	\$1,498
	Vacancy	3.9%	1.6%	2.5%	1.8%	4.7%	6.3%	5.9%
2013	Units	5,658	128	1,979	218	2,884	111	338
	No. Vacant	193	1	63	6	109	7	7
	Avg. Rent	\$1,087	\$783	\$927	\$1,113	\$1,150	\$1,336	\$1,498
	Vacancy	3.4%	0.8%	3.2%	2.8%	3.8%	6.3%	2.1%
2012	Units	5,423	127	1,834	218	2,747	111	386
	No. Vacant	225	3	55	4	138	10	15
	Avg. Rent	\$1,102	\$748	\$950	\$1,114	\$1,161	\$1,386	\$1,434
	Vacancy	4.1%	2.4%	3.0%	1.8%	5.0%	9.0%	3.9%
2011	Units	4,497	128	1,608	206	2,169	111	275
	No. Vacant	189	3	73	6	93	8	6
	Avg. Rent	\$1,036	\$728	\$897	\$1,061	\$1,091	\$1,359	\$1,408
	Vacancy	4.2%	2.3%	4.5%	2.9%	4.3%	7.2%	2.2%
2010	Units	5,248	98	1,811	206	2,671	111	351
	No. Vacant	267	5	68	15	147	14	18
	Avg. Rent	\$1,053	\$717	\$908	\$1,048	\$1,109	\$1,403	\$1,356
	Vacancy	5.1%	5.1%	3.8%	7.3%	5.5%	12.6%	5.1%
2009	Units	5,269	125	1,851	218	2,648	92	335
	No. Vacant	389	13	139	16	200	11	10
	Avg. Rent	\$1,055	\$742	\$915	\$1,096	\$1,110	\$1,440	\$1,374
	Vacancy	7.4%	10.4%	7.5%	7.3%	7.6%	12.0%	3.0%
2008	Units	6,277	121	2,094	218	3,292	104	448
	No. Vacant	351	2	85	14	212	14	24
	Avg. Rent	\$1,044	\$708	\$904	\$1,070	\$1,088	\$1,407	\$1,372
	Vacancy	5.6%	1.7%	4.1%	6.4%	6.4%	13.5%	5.4%
2007	Units	5,856	120	2,017	218	2,997	104	400
	No. Vacant	248	16	44	6	168	6	8
	Avg. Rent	\$1,112	\$710	\$903	\$1,091	\$1,078	\$1,481	\$1,411
	Vacancy	4.2%	13.2%	2.2%	2.8%	5.6%	5.6%	2.1%
Change	Units	-258	8	-99	0	-129	24	-62
	No. Vacant	-78	-14	14	-2	-72	-4	0
	Avg. Rent	\$54	\$147	\$97	\$45	\$156	-\$6	\$130
	Vacancy	-1.2%	-11.6%	0.8%	-1.0%	-2.3%	-4.0%	0.3%

Sources: Marquette Advisors; Maxfield Research & Consulting, LLC

RENTAL MARKET ANALYSIS

- The following chart illustrates how the Plymouth general occupancy apartment market recovered rapidly after struggling with higher vacancy rates between fourth quarter of 2008 and 2010.

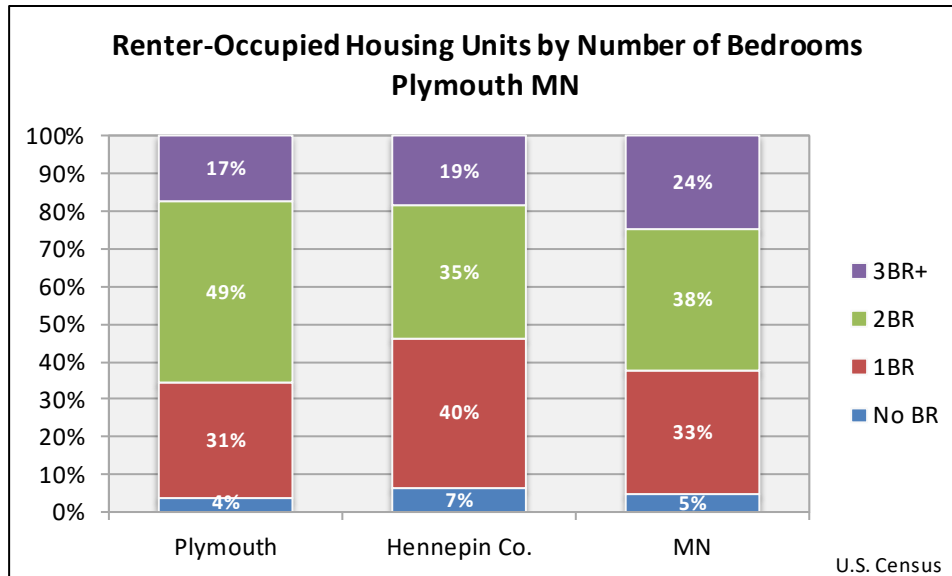


- Plymouth has much higher rents compared to Hennepin County and the State of Minnesota. The median gross rent in Plymouth (estimated as of 2015 ACS) was \$1,143 per month, which was 20% higher than the median monthly rent of \$951 in Hennepin County and 35% higher than the median monthly rent of \$848 in Minnesota.
- Monthly gross rents in Plymouth ranged from less than \$300 to more than \$1,500 with approximately 16% renting for \$1,500 or more per month. Over 49% had gross monthly rents between \$1,000 and \$1,499, 23% had rents between \$750 and \$999, while just over 5% had rents between \$500 and \$749. Only 3% of renters had rents of less than \$500.
- By comparison, an estimated 14% in the Hennepin County had gross monthly rents that were \$1,500 or more. Also, 30% had gross monthly rents from \$1,000 to \$1,500, 27% had rents between \$750 and \$999 and 16% had rents between \$500 and \$749. In addition, an estimated 10% had rents of less than \$500.

RENTAL MARKET ANALYSIS

R-2 BEDROOMS BY GROSS RENT, RENTER-OCCUPIED HOUSING UNITS PLYMOUTH ANALYSIS AREA 2015					
	Plymouth		Hennepin Co.		MN
	#	% of Total	#	% of Total	% of Total
Total:	8,655	100%	182,801	100%	100%
Median Gross Rent	\$1,143		\$951		\$848
No Bedroom	333	4%	12,192	7%	5%
Less than \$300	0	0%	1,393	1%	1%
\$300 to \$499	0	0%	1,342	1%	1%
\$500 to \$749	126	1%	5,517	3%	2%
\$750 to \$999	129	1%	2,377	1%	1%
\$1,000 to \$1,499	78	1%	1,066	1%	0%
\$1,500 or more	0	0%	342	0%	0%
No cash rent	0	0%	155	0%	0%
1 Bedroom	2,641	31%	72,588	40%	33%
Less than \$300	43	0%	7,162	4%	4%
\$300 to \$499	94	1%	3,623	2%	4%
\$500 to \$749	96	1%	18,031	10%	10%
\$750 to \$999	1,050	12%	26,223	14%	9%
\$1,000 to \$1,499	1,209	14%	13,251	7%	4%
\$1,500 or more	140	2%	3,758	2%	1%
No cash rent	9	0%	540	0%	0%
2 Bedrooms	4,207	49%	64,026	35%	38%
Less than \$300	68	1%	2,173	1%	1%
\$300 to \$499	15	0%	1,655	1%	2%
\$500 to \$749	202	2%	3,691	2%	7%
\$750 to \$999	792	9%	18,235	10%	12%
\$1,000 to \$1,499	2,577	30%	28,507	16%	11%
\$1,500 or more	478	6%	8,430	5%	3%
No cash rent	75	1%	1,335	1%	1%
3 or More Bedrooms	1,474	17%	33,995	19%	24%
Less than \$300	15	0%	752	0%	1%
\$300 to \$499	34	0%	1,099	1%	1%
\$500 to \$749	77	1%	2,297	1%	3%
\$750 to \$999	43	0%	2,725	1%	4%
\$1,000 to \$1,499	427	5%	11,771	6%	8%
\$1,500 or more	769	9%	13,402	7%	6%
No cash rent	109	1%	1,949	1%	3%

Sources: 2011-2015 American Community Survey;
 Maxfield Research and Consulting, LLC



General-Occupancy Rental Properties

Our research of Plymouth’s general occupancy rental market included a survey of 44 market rate, affordable, and subsidized apartment properties (25 units and larger) in July & August 2017. These properties represent a combined total of 6,972 units, including 6,372 market rate units, 366 affordable units, and 234 subsidized units.

Although we were able to contact and obtain up-to-date information on the majority of rental properties, there were a few projects that chose not to participate in this survey or were unable to reach and had to rely on information from third party sources.

At the time of our survey, 115 market rate units were vacant, resulting in an overall vacancy rate of 1.6% for all units. The combined overall vacancy rate is well below the industry standard of 5% vacancy for a stabilized rental market rate which promotes competitive rates, ensures adequate choice, and allows for sufficient unit turnover.

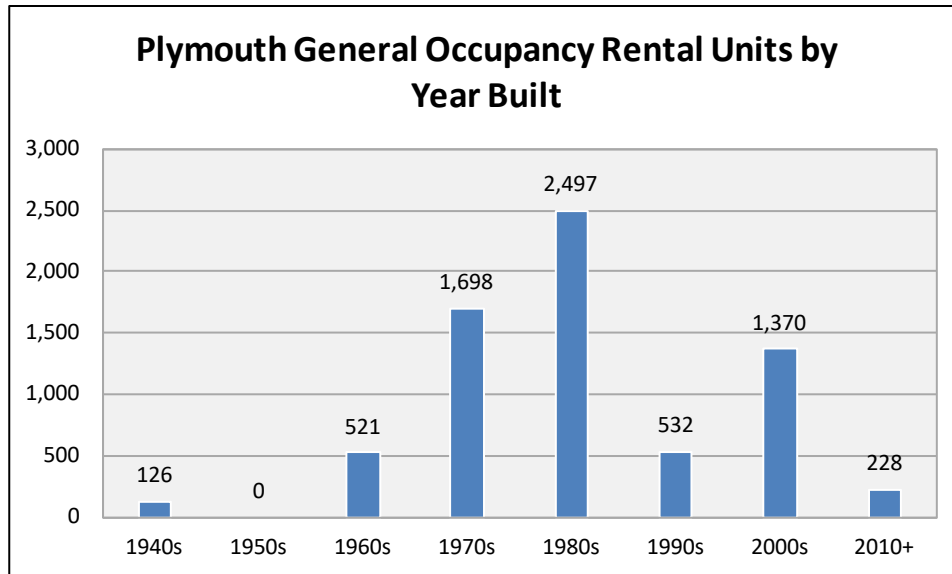
Table R-3 summarizes year built of Plymouth general occupancy projects. Table R-4 summarizes information on market rate, affordable, and subsidized general occupancy projects. Table R-5 summarizes available unit types and rents among all general-occupancy housing developments.

RENTAL MARKET ANALYSIS

**TABLE R-3
GENERAL OCCUPANCY RENTAL DEVELOPMENT YEAR BUILT
CITY OF PLYMOUTH
August 2017**

Property Name/Location	Built	Type	Units
The Axis	2016	MR/AFF	161
West View Estates	2012	AFF	67
Vicksburg Commons	2007	AFF	50
Stone Creek at Medicine Lake	2007	MR/AFF/SUB	132
Stoneleigh at the Reserve	2003	MR	361
The Quinn	2002	MR	301
Shadow Hills	2002	MR	322
Creekside Estates	2000	MR	204
Shenandoah Woods	1998	MR/AFF/SUB	64
Lakeview Commons	1995	AFF	62
Fernbrook Townhomes	1993	MR	72
Lancaster Park	1991	MR	50
Bass Lake Hills	1990	MR	284
Vicksburg Village	1989	MR	370
Coachman Trails	1988	MR	156
Hummingbird Cove	1988	MR	74
Stonehill	1988	MR	224
Parkers Lake Apartments	1988	MR	248
Plymouth Square at 37th	1987	MR	160
Plymouth Ponds	1987	MR	200
Parkside at Medicine Lake	1986	MR/AFF/SUB	211
Summer Creek	1985	MR	72
Fox Forest Townhomes	1985	MR	160
Park Place Apartments	1985	MR	500
Medicine Lake Woods	1984	MR	17
Mission Oaks	1983	SUB	26
Kimberly Meadows	1980	SUB	39
Willow Wood Estates	1980	AFF	40
Oakwood	1978	MR	107
Willow Creek Apartments	1977	MR	245
Medicine Lake Apartments	1977	MR	81
Lancaster Village	1974	MR/SUB	160
Wellington Apartments	1973	MR	39
Plymouth Commons	1972	MR	212
At the Lake	1971	MR/AFF/SUB	204
Currents	1971	MR/SUB	326
Granite Woods	1971	MR	192
Manor Royal	1971	MR	132
Plymouth Pointe	1969	MR	96
South Shore	1969	MR	17
Countryside Estates	1968	MR	72
Four Season Estates	1968	MR	96
Four Seasons Villas	1967	MR	240
Plymouth Colony	1945	MR	126

Source: City of Plymouth; Maxfield Research & Consulting, LLC



- Many of Plymouth’s larger general occupancy rental housing were built post 1980. Approximately 66% of all multifamily rental developments were built in 1980 or after.

Market Rate

- The newest market rate general occupancy rental housing project in Plymouth is the Axis Apartments, which came online in 2016 and has a total of 161 units, 145 being market rate while the remaining 16 being affordable units. Market rate rents average \$1,644 a month or approximately \$1.86 per square foot.
- A total of 115 vacancies were found in market rate rental projects, resulting in a vacancy rate of 1.8% as of August 2017. Market rate rental vacancy stabilized equilibrium is considered to be 5% to allow for unit turnover and property choice for renters.
- Sizes for market rate units ranged from 418 square feet for a studio apartment at the Currents Apartments to 1,780 square feet for a three-bedroom apartment at Bass Lake Hills Apartments. The average size of all market rate apartments in Plymouth is 962 square feet.
- Average rent per square foot for market rate rentals is \$1.29 with studios being the highest at \$1.61 and two-bedroom and two-bedroom units being the lowest at \$1.24 rent per square foot.

Affordable

- There are nine general occupancy affordable properties in Plymouth with 366 total units. There were no vacant units as of August 2017.
- Typically, tax credit rental properties should be able to maintain vacancy rates of 3% or less in most housing markets. The lack of vacancies for tax credit housing units indicates a need for additional housing of this type.
- Since 2007, three tax credit rental properties have come online, totaling 133. These three properties account for roughly 36% of Plymouth's affordable housing units.

Subsidized

- There are eight income-restricted properties deep subsidized projects in Plymouth with 234 total units. There were no vacant unit as of August 2017.
- Typically, deep-subsidy rental properties should be able to maintain vacancy rates of 3% or less in most housing markets. Because there are no vacancies, there is pent-up demand for additional subsidized product type.

RENTAL MARKET ANALYSIS

TABLE R-4 SELECT GENERAL OCCUPANCY RENTAL DEVELOPMENT SURVEY PLYMOUTH August 2017								
Property Name/Location	Year Built	Units/ Vacant	Unit Mix	Unit Size	Monthly Rent	Rent per Square Foot	Accept Vouchers	Amenities/Comments
Subsidized								
Stone Creek Apartments 1020 West Medicine Lake Dr <i>Dominium</i>	2004	26 0 0.0%	10 - 1BR 10 - 2BR 6 - 3BR	794 - 827 1,074 - 1,536 1,355 - 1,644	30% of AGI 30% of AGI 30% of AGI	n.m. n.m. n.m.	No	Underground parking included, fitness center, car wash bay, gas grill, playground, patio/terrace, dishwasher, kitchen pantry, in unit washer & dryer, outdoor hot-tub with heated deck
Shenandoah Woods 2205 Shenandoah Ln N	1998	6 0 0.0%	1 - 1BR 4 - 2BR 1 - 3BR	598 851 - 880 1,049 - 1,171	30% of AGI 30% of AGI 30% of AGI	n.m. n.m. n.m.	No	On-site property manager, dishwasher, walk-in closets, heated underground parking, BBQ area, subsidized, affordable, & market rate units offered
Parkside at Medicine Lake 12102 41st Ave N <i>StuartCo</i>	1986	21 0 0.0%	8 - 1BR 13 - 2BR	770 - 808 1,008 - 1,233	30% of AGI 30% of AGI	n.m. n.m.	No	Outdoor pool, sauna, lounge, underground parking, laundry facilities, two fitness centers, additional storage space, picnic area with grill, near walking/biking trail, dishwasher
Mission Oaks 11841 Old Rockford Rd <i>Tapestry Management</i>	1983	26 0 0.0%	18 - 2BR 8 - 3BR	920 - 994 1,242	30% of AGI 30% of AGI	n.m. n.m.	No	Designed for families with children, common area laundry, playground, nearby walking trails
Kimberly Meadows 17363 County Road 6 <i>Thies & Talle Management</i>	1980	39 0 0.0%	19 - 2BR 18 - 3BR 2 - 4BR	920 - 994 1,242 1,450	30% of AGI 30% of AGI 30% of AGI	n.m. n.m. n.m.	No	Balcony, playground, high speed internet access, storage units, on-site property manager, flexible lease lengths
Lancaster Village 3610 Lancaster Ln N <i>CSM Corporation</i>	1974	32 0 0.0%	15 - 1BR 17 - 2BR	700 - 750 900 - 950	30% of AGI 30% of AGI	n.m. n.m.	No	Clubhouse, fitness center, outdoor heated pool with sundeck, picnic area with grills, playground, surface & garage parking
Currents 3205 Harbor Ln N <i>Miramar Inc</i>	1971	64 0 0.0%	48 - 1BR 16 - 2BR	518 - 818 1,150	30% of AGI 30% of AGI	n.m. n.m.	No	Outdoor & indoor pool, dry sauna, fitness center, outdoor courtyard, picnic area with BBQ stations, multi-sport court, dog park, playground, tanning suite, coffee café, business center, DVD rentals, dry cleaning service
At the Lake 2500 Nathan Ln N <i>MN Apartment People</i>	1971	20 0 0.0%	10 - 1BR 10 - 2BR	750 - 750 950 - 1,050	30% of AGI 30% of AGI	n.m. n.m.	No	Grill & picnic area, laundry facility, tanning salon, dishwasher, balcony, fitness center, playground, pool, sauna, basketball & volleyball court
Subsidized Total		234	0	0.0%				

RENTAL MARKET ANALYSIS

<i>Continued</i> TABLE R-4 SELECT GENERAL OCCUPANCY RENTAL DEVELOPMENT SURVEY PLYMOUTH August 2017								
Property Name/Location	Year Built	Units/ Vacant	Unit Mix	Unit Size	Monthly Rent	Rent per Square Foot	Accept Vouchers	Amenities/Comments
Affordable Tax-Credit (Section 42)								
The Axis 350 Nathan Ln N <i>Steven Scott Management</i>	2016	16 0 0.0%	8 - 1BR 8 - 2BR	576 - 728 1,130 - 1,292	N/A N/A	N/A N/A	Yes	Bike storage & fix-it station, pet wash, tv room, sundeck, gas grills, surface parking & underground parking garage, fitness center, pool, in-unit washer & dryer, ping pong table & bocce ball court, tax credit & market rate units offered
West View Estates 6125 Vicksburg Ln N <i>Sand Companies</i>	2012	67 0 0.0%	4 - 1BR 38 - 2BR 25 - 3BR	956 1,122 1,444	\$764 \$915 \$1,054	\$0.80 \$0.82 \$0.73	Yes	Dishwasher, assigned parking, coffee bar, playground, walk-in closets, balcony, laundry facilities
Vicksburg Commons 6040 Shenandoah Ln N <i>Commonbond Properties</i>	2007	50 0 0%	4 - 1BR 20 - 2BR 26 - 3BR	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	Yes	One & two car attached garages, central air, in-unit washer and dryer, community room, computer lab, playground, waitlist closed, no longer accepting applications at time of survey
Stone Creek Apartments 1020 West Medicine Lake Dr <i>Dominium</i>	2004	8 0 0.0%	4 - 1BR 4 - 2BR	794 - 827 1,074 - 1,536	N/A N/A	N/A N/A	No	Underground parking included, fitness center, car wash bay, gas grill, playground, patio/terrace, dishwasher, kitchen pantry, in unit washer & dryer, outdoor hot-tub with heated deck
Shenandoah Woods 2205 Shenandoah Ln N <i>Hornig Companies</i>	1998	40 0 0%	21 - 1BR 8 - 2BR 11 - 3BR	598 851 - 880 1,049 - 1,171	N/A N/A N/A	N/A N/A N/A	Yes	On-site property manager, dishwasher, walk-in closets, heated underground parking, BBQ area, subsidized, affordable, & market rate units offered
Lakeview Commons 15235 18th Ave N <i>Heartland Management</i>	1995	62 0 0.0%	14 - 2B 48 - 3B	1,040 1,320	\$1,075 \$1,238	\$1.03 \$0.94	Yes	Dishwasher, garage parking, walk-in closets, playground, on-site manager, washer & dryer connections, nearby walking & biking trails
Parkside at Medicine Lake 12102 41st Ave N <i>StuartCo</i>	1986	42 0 0.0%	6 - Studio 9 - 1BR 25 - 2BR 2 - 3BR	560 770 - 808 1,008 - 1,233 1,233 - 1,344	N/A N/A N/A N/A	N/A N/A N/A N/A	No	Outdoor pool, sauna, lounge, underground parking, laundry facilities, two fitness centers, additional storage space, picnic area with grill, near walking/biking trail, dishwasher
Willow Wood Estates 10850 South Shore Dr <i>Dominium Management</i>	1980	40 0 0.0%	36 - 3BR 4 - 4BR	1,108 1,283	30% of AGI 30% of AGI	n.m n.m	No	On-site laundry facilities, patio/balcony, playground, clubhouse, storage units, waiting list is closed and not accepting applications at time of survey
At the Lake 2500 Nathan Ln N <i>MN Apartment People</i>	1971	41 0 0.0%	4 - Studio 22 - 1BR 11 - 2BR 4 - 3BR	490 - 500 750 - 750 950 - 1,050 1,200 - 1,200	N/A N/A N/A N/A	N/A N/A N/A N/A	Yes	Grill & picnic area, laundry facility, tanning salon, dishwasher, balcony, fitness center, playground, pool, sauna, basketball & volleyball court
Affordable Total		366	0	0.0%				

RENTAL MARKET ANALYSIS

Continued
TABLE R-4
SELECT GENERAL OCCUPANCY RENTAL DEVELOPMENT SURVEY
PLYMOUTH
August 2017

Property Name/Location	Year Built	Units/ Vacant	Unit Mix	Unit Size	Monthly Rent	Rent per Square Foot	Accept Vouchers	Amenities/Comments
Market Rate								
The Axis 350 Nathan Ln N <i>Steven Scott Management</i>	2016	145 9 6.2%	87 - 1BR 54 - 2BR 4 - 2BR/D	576 - 728 1,130 - 1,292 1,540	\$1,275 - \$1,495 \$1,920 - \$2,100 \$2,350	\$2.05 - \$2.21 \$1.63 - \$1.70 \$1.53	No	Bike storage & fix-it station, pet wash, tv room, sundeck, gas grills, surface parking & underground parking garage, fitness center, pool, in-unit washer & dryer, ping pong table & bocce ball court, tax credit & market rate units offered
Stone Creek Apartments 1020 West Medicine Lake Dr <i>Dominium</i>	2004	98 2 2.0%	16 - Studio 12 - 1BR 16 - 1BR/D 34 - 2BR 20 - 3BR	517 794 - 827 1,095 - 1,107 1,074 - 1,536 1,355 - 1,644	\$1,100 - \$1,200 \$1,340 - \$1,490 \$1,515 - \$1,695 \$1,405 - \$2,350 \$1,900 - \$2,540	\$2.13 - \$2.32 \$1.69 - \$1.88 \$1.38 - \$1.55 \$1.31 - \$1.53 \$1.40 - \$1.87	No	Underground parking included, fitness center, car wash bay, gas grill, playground, patio/terrace, dishwasher, kitchen pantry, in unit washer & dryer, outdoor hot-tub with heated deck
Stoneleigh at the Reserve 5200 Annapolis Ln N <i>Weidner Apartment Homes</i>	2003	361 4 1.1%	21 - Studio 211 - 1BR 42 - 1BR/D 63 - 2BR 24 - 2BR/D	530 720 - 1,016 1,033 1,092 - 1,158 1,376	\$1,120 \$1,200 - \$1,280 \$1,300 \$1,535 - \$1,565 \$1,720	\$2.11 \$1.26 - \$1.67 \$1.26 \$1.35 - \$1.41 \$1.25	No	9 foot ceilings, business center, fitness center, pool, basketball & racquetball courts, balcony, walk-in closets, car wash bay, DVD rental, heated parking garage, gas fireplces
Shadow Hills 4540 Nathan Ln N <i>Bigos Management</i>	2002	322 0 0.0%	119 - 1BR 18 - 1BR/D 130 - 2BR 52 - 2BR/D 3 - 3BR	739 - 957 957 1,069 - 1,223 1,248 - 1,477 1,525	\$1,156 - \$1,326 \$1,280 - \$1,305 \$1,370 - \$1,525 \$1,500 - \$1,629 \$1,695 - \$1,725	\$1.39 - \$1.56 \$1.34 - \$1.36 \$1.25 - \$1.28 \$1.10 - \$1.20 \$1.11 - \$1.13	No	Outdoor pool, picnic area with grills, playground, hot tub, party room, DVD rentals, bussiness center, fitness center, theater room, underground parking, in-unit washer & dryer, balcony, dishwasher, walk-in closet, central air
The Quinn 6110 Quinwood Ln N <i>GreyStar</i>	2002	301 6 2.0%	125 - 1 BR 136 - 2 BR 40 - 3 BR	677 - 800 990 - 1,187 1,417	\$1,084 - \$2,805 \$1,243 - \$3,000 \$1,920 - \$4,208	\$1.60 - \$3.51 \$1.26 - \$2.53 \$1.35 - \$2.97	No	Dog park, fitness center, game room, playground, outdoor pool & hot tub, clubhouse, central air, gas fireplaces, in-unit washer & dryers, walk-in closets, patio/balconies, underground & surface parking
Creekside Estates 200 Nathan Ln N <i>Steven Scott Management</i>	2000	204 14 6.9%	45 - 1BR 42 - 1BR/D 117 - 2BR	719 - 840 856 - 1,072 1,064 - 1,122	\$1,130 \$1,460 \$1,335 - \$1,520	\$1.57 - \$1.35 \$1.71 - \$1.36 \$1.25 - \$1.35	No	Picnic & BBQ area, additional storage units, walk-in closets, in-unit washer & dryer, car washing station, fitness center, business center, central air
Shenandoah Woods 2205 Shenandoah Ln N <i>Hornig Companies</i>	1998	18 0 0.0%	6 - 1BR 8 - 2BR 4 - 3BR	598 851 - 880 1,049 - 1,171	\$620 - \$695 \$745 - \$905 \$970 - \$1,130	\$1.04 - \$1.16 \$0.88 - \$1.06 \$0.92 - \$1.08	Yes	On-site property manager, dishwasher, walk-in closets, heated underground parking, BBQ area, subsidized, affordable, & market rate units offered
Fernbrook Townhomes 3900 Plymouth Boulevard <i>Equity Residential</i>	1993	72 0 0.0%	1 - 2BR 71 - 3BR	950 1,200	\$1,295 \$1,295	\$1.36 \$1.08	No	Pool, playground, gameroom, dishwasher, two car garage, balcony, near walking/bike trails, additional storage units
Lancaster Park 4015 Lancaster Ln N <i>Marathon Resources Inc</i>	1991	50 0 0.0%	6 - 1BR 44 - 2BR	825 995 - 1,260	\$1,110 - \$1,310 \$1,310 - \$1,610	\$1.35 - \$1.59 \$1.28 - \$1.32	No	Dishwasher, in-unit washer & dryer, garage parking, oversized closets, grills available, picnic area, near walking/bike trails
Bass Lake Hills 5875 Teakwood Ln N <i>CSM Corporation</i>	1990	284 4 1.4%	246 - 2BR 38 - 3BR	1,007 - 1,212 1,487 - 1,780	1,495 - 1,565 1,800 - 1,930	\$1.29 - \$1.48 \$1.08 - \$1.21	No	Playground, fitness center, lounge/community room, outdoor heated pool with sundeck, sport court, picnic area, attached garages, dishwasher, in-unit washer & dryer, patios

RENTAL MARKET ANALYSIS

Continued
TABLE R-4
SELECT GENERAL OCCUPANCY RENTAL DEVELOPMENT SURVEY
PLYMOUTH
August 2017

Property Name/Location	Year Built	Units/ Vacant	Unit Mix	Unit Size	Monthly Rent	Rent per Square Foot	Accept Vouchers	Amenities/Comments
Market Rate								
Vicksburg Village 15730 Rockford Road NA	1989	370 13 3.5%	104 - 1BR 198 - 2BR 36 - 2BR/D 32 - 3BR	785 - 822 1,042 1,248 - 1,528 1,367 - 1,521	\$1,214 - \$1,454 \$1,367 - \$1,742 \$2,229 - \$2,294 \$1,766 - \$1,958	\$1.55 - \$1.77 \$1.31 - \$1.51 \$1.50 - \$1.79 \$1.29 - \$1.29	No	In-unit washer & dryer, car wash area, clubhouse, conference room, patio/balcony, fitness center, heated underground garage, outdoor kitchen & firepit, sauna, flexible lease lengths, dog park
Stonehill 3501 Xenium Ln N StuartCo	1988	224 0 0.0%	6 - Studio 90 - 1BR 110 - 2BR 12 - 2BR/D 6 - 3BR	540 781 - 893 1,084 - 1,260 1,294 1,447	\$950 - \$995 \$1,160 - \$1,225 \$1,410 - \$1,460 \$1,595 - \$1,665 \$1,685 - \$1,725	\$1.76 - \$1.84 \$1.37 - \$1.49 \$1.16 - \$1.30 \$1.23 - \$1.29 \$1.16 - \$1.19	No	Billiard room, fitness center, indoor whirlpool, outdoor pool, party room, theater room, underground heated parking, car wash station, balcony/patio, in-unit washer & dryer, central air
Coachman Trails 1405 Olive Ln N StuartCo	1988	156 2 1.3%	3 - Studio 42 - 1BR 6 - 1BR/D 96 - 2BR 9 - 2BR/D	545 832 - 979 1,159 1,142 - 1,499 1,296	\$975 - \$1,000 \$1,100 - \$1,175 \$1,200 - \$1,250 \$1,310 - \$1,560 \$1,495 - \$1,550	\$1.79 - \$1.83 \$1.20 - \$1.32 \$1.04 - \$1.08 \$1.04 - \$1.15 \$1.15 - \$1.20	No	BBQ & picnic area, billiards room, community room, business center, outdoor pool with sundeck, playground, two fitness centers, heated underground parking, balcony
Parkers Lake Apartments 15100 18th Ave N Timberland Partners	1988	248 6 2.4%	74 - 1BR 144 - 2BR 30 - 3BR	870 - 910 1,000 - 1,150 1,250	\$1,318 - \$1,569 \$1,299 - \$1,926 \$1,784 - \$2,389	\$1.51 - \$1.72 \$1.30 - \$1.67 \$1.43 - \$1.91	No	Attached garage, business center, clubhouse, fitness center, BBQ, playground, outdoor pool with sundeck, on-site management, patio/balcony, dishwasher, fireplace, in-unit washer & dryer, walk-in closet
Hummingbird Cove 10405 45th Ave N Hornig Companies	1988	74 0 0.0%	24 - 1BR 48 - 2BR 2 - 3BR	801 1,112 - 1,194 1,473	\$950 - \$1,000 \$1,060 - \$1,185 \$1,500 - \$1,600	\$1.19 - \$1.25 \$0.95 - \$0.99 \$1.02 - \$1.09	No	BBQ, car wash with vacuum, community room, fitness center, heated underground parking, pool, dishwasher, in-unit washer & dryer, patio/balcony
Plymouth Square at 37th 15300 37th Ave N Weidner Apartment Homes	1987	160 1 0.6%	80 - 1BR 68 - 2BR 12 - 3BR	752 - 857 1,003 - 1,238 1,231	\$1,150 - \$1,765 \$1,235 - \$2,110 \$1,615 - \$2,310	\$1.53 - \$2.06 \$1.23 - \$1.70 \$1.31 - \$1.88	No	Business center, fitness center, spa/hot tub, pool, tennis courts, dishwasher, additional storage, fireplace, in-unit washer & dryer
Plymouth Ponds 4545 Nathan Ln N Thies & Talle Management	1987	200 0 0.0%	60 - 1BR 130 - 2BR 10 - 3BR	788 1,018 - 1,378 \$1,435	\$1,080 - \$1,250 \$1,090 - \$1,575 \$1,610 - \$1,710	\$1.37 - \$1.59 \$1.07 - \$1.14 \$1.12 - \$1.19	Yes	Outdoor pool, heated underground garage, car wash facility, patio/balcony, BBQ, in-unit washer & dryer, bicycle racks, flexible lease lengths, picnic area, dishwasher
Parkside at Medicine Lake 12102 41st Ave N StuartCo	1986	148 6 4.1%	13 - Studio 44 - 1BR 87 - 2BR 4 - 3BR	560 770 - 808 1,008 - 1,233 1,233 - 1,344	\$920 \$1,095 - \$1,135 \$1,200 - \$1,290 \$1,545 - \$1,610	\$1.64 \$1.40 - \$1.42 \$1.19 - \$1.28 \$1.20 - \$1.25	No	Outdoor pool, sauna, lounge, underground parking, laundry facilities, two fitness centers, additional storage space, picnic area with grill, near walking/biking trail, dishwasher
Summer Creek 3900 Plymouth Boulevard NA	1985	72 1 1.4%	21 - 1BR 45 - 2BR 6 - 3BR	742 - 768 976 - 1,076 1,194 - 1,225	\$1,000 - \$1,145 \$1,000 - \$1,295 \$1,245 - \$1,495	\$1.35 - \$1.49 \$1.02 - \$1.20 \$1.04 - \$1.22	No	Fitness center, sauna, pool, tennis court, near walking/bike trails, patio/balcony, dishwasher, additional storage space, in-unit washer & dryer, fireplace
Fox Forest Townhomes 1798 Magnolia Ln N Park Avenue of Wayzata	1985	160 5 3.1%	80 - 2BR 80 - 3BR	1,008 - 1,382 1,434	\$1,620 - \$1,715 \$1,799 - \$1,880	\$1.24 - \$1.61 \$1.25 - \$1.31	No	Patio, in-unit washer & dryer, two-car garage, playground, grill, boat docks, walk-in closet, dishwasher
Park Place Apartments 14550 34th Avenue N Greystar	1985	500 11 2.2%	120 - 1BR 380 - 2BR	958 1,144 - 1,308	\$1,196 - \$1,684 \$1,356 - \$1,767	\$1.25 - \$1.76 \$1.19 - \$1.35	No	Dishwasher, clubhouse, fitness center, walk-in closet, central air, horse shoes, two pools with sun deck, covered parking, business center, near walking/biking trails

RENTAL MARKET ANALYSIS

Continued TABLE R-4 SELECT GENERAL OCCUPANCY RENTAL DEVELOPMENT SURVEY PLYMOUTH August 2017								
Property Name/Location	Year Built	Units/ Vacant	Unit Mix	Unit Size	Monthly Rent	Rent per Square Foot	Accept Vouchers	Amenities/Comments
Market Rate								
Medicine Lake Woods 11210 12th Ave N NA	1984	17 1 5.9%	2 - 1BR 14 - 2BR 1 - 3BR	750 850 1,100	\$950 - \$995 \$1,095 \$1,250	\$1.27 - \$1.33 \$1.29 \$1.14	No	Additional storage, patio, garage & surface parking, dishwasher, walk-in closet
Oakwood 17600 14th Ave Bigos Management	1978	107 4 3.7%	44 - 1BR 61 - 2BR 2 - 2BR/D	717 - 741 961 - 1,011 1,100	\$980 - \$1,095 \$1,070 - \$1,295 \$1,285 - \$1,355	\$1.37 - \$1.48 \$1.11 - \$1.28 \$1.17 - \$1.23	No	DVD library, outdoor pool, fitness center, BBQ & picnic area, underground heated parking, playground, party room, laundry facilities, patio/balcony, central air, dishwasher
Medicine Lake Apartments 1300 W Medicine Lake Dr Bigos Management	1977	81 3 3.7%	1 - Studio 55 - 1BR 25 - 2BR	848 900 1,152 - 1,185	\$1,065 - \$1,115 \$1,150 - \$1,200 \$1,130 - \$1,524	\$1.26 - \$1.31 \$1.28 - \$1.33 \$0.98 - \$1.29	No	Underground heated parking, boat docks, outdoor pool, multi-sport court, fitness center, party room, DVD library, sauna, dishwasher
Willow Creek Apartments 135 Nathan Lane N Bigos Management	1977	245 14 5.7%	26 - Studio 84 - 1BR 135 - 2BR	500 - 674 700 800 - 1,000	\$955 - \$1,095 \$1,145 - \$1,220 \$1,255 - \$1,445	\$1.62 - \$1.91 \$1.64 - \$1.74 \$1.45 - \$1.57	No	Tennis & volleyball court, playground, outdoor pool, tanning, business center, fitness center, sauna, indoor pool, whirlpool, DVD library, community room, underground & surface parking, patio/balcony, dishwasher, central air
Lancaster Village 3610 Lancaster Ln N CSM Corporation	1974	128 1 0.8%	62 - 1BR 64 - 2BR 2 - 3BR	700 - 750 900 - 950 1,100	\$885 - \$970 \$1,065 - \$1,200 \$1,560	\$1.26 - \$1.29 \$1.18 - \$1.26 \$1.42	Yes	Clubhouse, fitness center, outdoor heated pool with sundeck, picnic area with grills, playground, surface & garage parking
Wellington Apartments 17210 County Road 6 NA	1973	39 1 2.6%	16 - 1BR 23 - 2BR	840 1,000	\$925 - \$1,075 \$1,005 - \$1,155	\$1.10 - \$1.28 \$1.01 - \$1.16	No	Dishwasher, patio/balcony, laundry facilities, BBQ, picnic area, fitness center, playground, garage parking, near walking/biking trails
Plymouth Commons 3301 Hwy 169 N Gary Brummer Management	1972	212 0 0.0%	29 - Studio 83 - 1BR 3 - 1BR/D 97 - 2BR	583 850 900 1,034 - 1,227	\$750 - \$825 \$850 - \$975 \$900 - \$1,000 \$950 - \$1,250	\$1.29 - \$1.42 \$1.00 - \$1.15 \$1.00 - \$1.11 \$0.92 - \$1.02	No	Walk-in closets, volleyball court, pool, sauna, laundry facilities, additional storage units, balcony, BBQ, garage and surface parking
Currents 3205 Harbor Ln N Miramar Inc	1971	262 0 0.0%	196 - 1BR 66 - 2BR	518 - 818 1,150	\$962 - \$1,020 \$1,150 - \$1,299	\$1.25 - \$1.86 \$1.00 - \$1.13	Yes	Outdoor & indoor pool, dry sauna, fitness center, outdoor courtyard, picnic area with BBQ stations, multi-sport court, dog park, playground, tanning suite, coffee café, business center, DVD rentals, dry cleaning service
At the Lake 2500 Nathan Ln N MN Apartment People	1971	143 0 0.0%	8 - Studio 76 - 1BR 51 - 2BR 8 - 3BR	490 - 500 750 - 750 950 - 1,050 1,200 - 1,200	\$729 - \$779 \$859 - \$969 \$979 - \$1,109 \$1,149 - \$1,415	\$1.49 - \$1.56 \$1.15 - \$1.29 \$1.03 - \$1.06 \$0.96 - \$1.18	Yes	Grill & picnic area, laundry facility, tanning salon, dishwasher, balcony, fitness center, playground, pool, sauna, basketball & volleyball court
Manor Royal 3930 Lancaster Ln N Real Estate Equities Inc	1971	132 3 2.3%	72 - 1BR 60 - 2BR	800 1,130 - 1,200	\$985 - \$1,005 \$1,125 - \$1,225	\$1.23 - \$1.26 \$1.00 - \$1.02	No	Flexible lease terms, dishwasher, laundry facilities, underground heated parking, patio/balcony, indoor pool, community room, fitness center
Granite Woods 3925 Lancaster Ln N Main Street Companies	1971	192 1 0.5%	42 - 1BR 150 - 2BR	786 980 - 1,080	\$929 - \$999 \$1,150 - \$1,200	\$1.18 - \$1.27 \$1.11 - \$1.17	No	Walk-in closet, tennis court, pool, sauna, fitness center, clubhouse, additional storage space, dishwasher, underground & surface parking

RENTAL MARKET ANALYSIS

<i>Continued</i> TABLE R-4 SELECT GENERAL OCCUPANCY RENTAL DEVELOPMENT SURVEY PLYMOUTH August 2017								
Property Name/Location	Year Built	Units/ Vacant	Unit Mix	Unit Size	Monthly Rent	Rent per Square Foot	Accept Vouchers	Amenities/Comments
Market Rate								
Plymouth Pointe 9630 37th Pl N <i>KMS Management Inc</i>	1969	96 2 2.1%	2 - Studio 40 - 1BR 54 - 2BR	650 800 1,000 - 1,100	\$785 - \$865 \$855 - \$995 \$996 - \$1,165	\$1.21 - \$1.33 \$1.07 - \$1.24 \$1.00 - \$1.06	No	Party room, laundry facilities, property manger on-site, dishwasher, sundeck, clubhouse, additional storage space, fitness center, pool
South Shore 10890 South Shore Dr <i>NA</i>	1969	17 0 0.0%	17 - 2BR	1,000	\$1,150	\$1.15	No	Balcony, garage & surface parking, nearby parks & playground
Countryside Estates 10101 State Highway 55 <i>Steven Scott Management</i>	1968	72 1 1.4%	35 - 1BR 37 - 2BR	755 855	\$860 - \$925 \$960 - \$990	\$1.14 - \$1.23 \$1.12 - \$1.16	No	Additional storage space, balcony/patio, BBQ, surface & garage parking, dishwasher, picnic area
Four Seasons Estates 9700 37th Pl N <i>MN Apartment People</i>	1968	96 0 0.0%	56 - 1BR 40 - 2BR	860 1,100	\$849 - \$959 \$985 - \$1,049	\$0.99 - \$1.12 \$0.90 - \$0.95	No	Garage & surface parking, balcony, BBQ & picnic area, dishwasher, fitness center, sauna, pool
Four Seasons Villas 3651 Lancaster Ln N <i>Gary Brummer Management</i>	1967	240 0 0.0%	18 - Studio 144 - 1BR 78 - 2BR	600 900 1,000 - 1,250	\$779 - \$799 \$869 \$969	\$1.30 - \$1.33 \$0.97 \$0.78 - \$0.97	No	Additional storage units, housekeeping, clubhouse, fitness center, pool, volleyball court, walk-in closet, sundeck, courtyard, picnic area
Plymouth Colony 1805 County Road 101 <i>MN Apartment People</i>	1945	126 0 0.0%	2 - Studio 22 - 1BR 102 - 2BR	525 832 900 - 1,026	\$750 \$850 - \$985 \$950 - \$1,085	\$1.43 \$1.02 - \$1.18 \$1.06 - \$1.06	Yes	Dishwasher, underground & surface parking, pet play area, additional storage units, balcony, fitness center, sauna, pool, playground, theatre room
Market Rate Total		6,372	115	1.805%				
Plymouth Market Area Totals*		6,972	115	1.649%				
*Vacancy Rate excludes properties that did participate in rental survey.								
Source: City of Plymouth; Maxfield Research & Consulting, LLC								

RENTAL MARKET ANALYSIS

R-5 SURVEYED UNIT TYPE SUMMARY SELECT GENERAL OCCUPANCY RENTAL DEVELOPMENTS CITY OF PLYMOUTH August 2017					
Market Rate			Monthly Rents		
Unit Type	Total Units	% of Total	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
Studio	145	2%	\$729 - \$1,200	\$942	\$1.67
1BR	2299	36%	\$620 - \$2,805	\$1,178	\$1.46
1BR/D	127	2%	\$900 - \$1,695	\$1,378	\$1.36
2BR	3,293	52%	\$745 - \$3,000	\$1,411	\$1.27
2BR/D	139	2%	\$1,285 - \$2,350	\$1,794	\$1.32
3BR	367	6%	\$970 - \$4,208	\$1,875	\$1.36
Total:	6,372	100%	\$620 - \$4,208	\$1,351	\$1.34
Vacant:	115	1.8%			

Affordable			Monthly Rents		
Unit Type	Total Units	% of Total	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
1BR	4	3%	\$764 - \$764	\$764	\$0.80
2BR	52	40%	\$915 - \$1,075	\$958	\$0.87
3BR	73	57%	\$1,054 - \$1,238	\$1,175	\$0.86
Total:	129	100%	\$764 - \$1,238	\$1,075	\$0.86
Vacant:	0	0%			

* This table includes data from rental developments that provided complete survey information

Source: Maxfield Research and Consulting, LLC

Select general occupancy rental projects – Plymouth, MN



The Axis Apartments
350 Nathan Ln



Shenandoah Woods Apartments
2205 Shenandoah Ln N



Parkside Apartments
12105 41st Ave N



Stone Creek Apartments
1020 W Medicine Lake Dr



Vicksburg Village
15730 Rockford Rd



The Quinn Apartments
6110 Quinwood Ln N

RENTAL MARKET ANALYSIS



At the Lake Apartments
2500 Nathan Ln N



Hummingbird Cove Apartments
10405 45th Ave N



Lancaster Park
4015 Lancaster Ln N



Manor Royal Apartments
3930 Lancaster Ln N

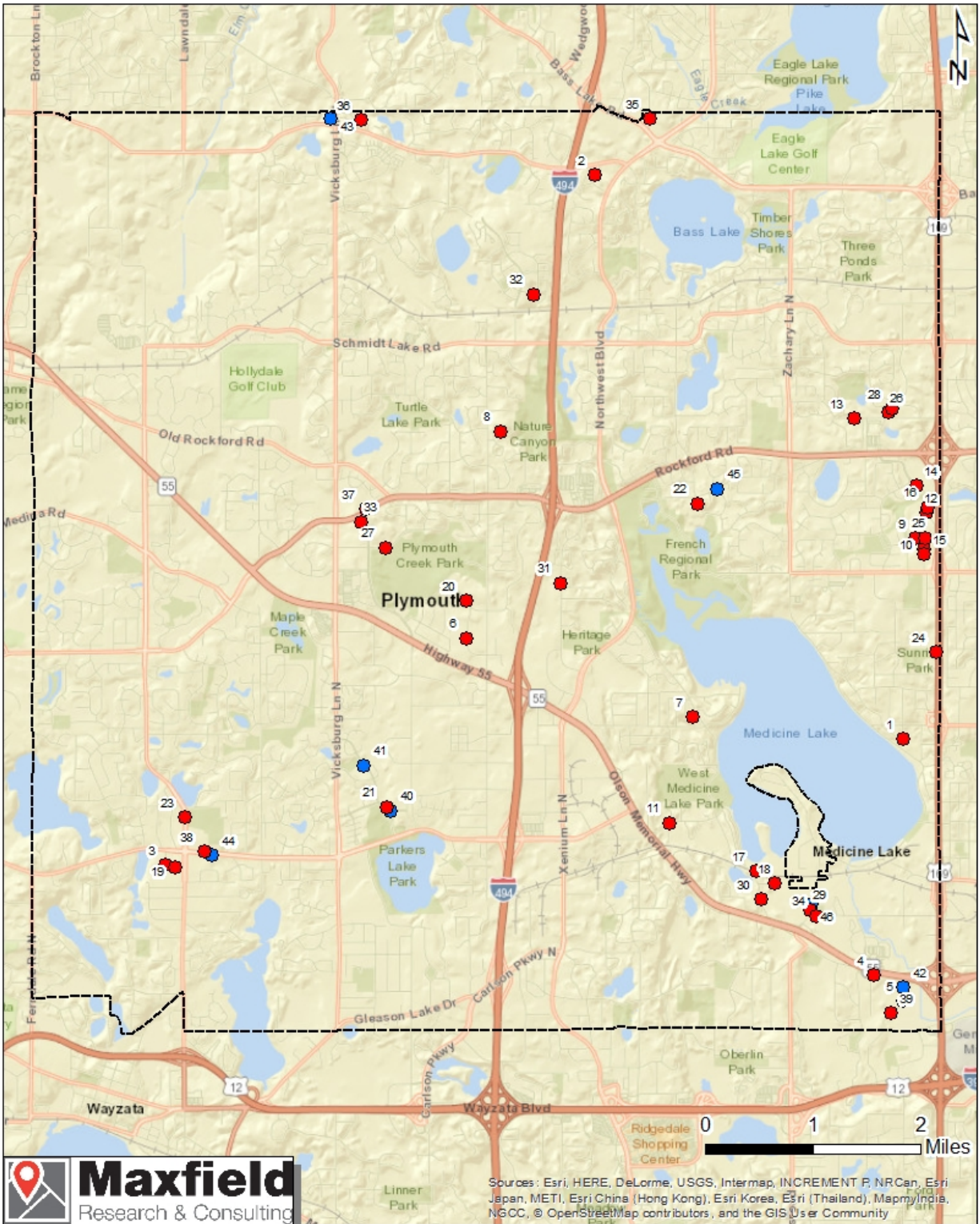


Medicine Lake Apartments
1300 W Medicine Lake Dr



Stoneleigh at the Reserve
5200 Annapolis Ln N

General Occupancy Rental Housing Developments - Plymouth, MN



MAP KEY GENERAL OCCUPANCY RENTAL HOUSING DEVELOPMENTS CITY OF PLYMOUTH August 2017	
1	At the Lake
2	Bass Lake Hills
3	Coachman Trails
4	Countryside Estates
5	Creekside Estates
6	Currents
7	Ellen Villa
8	Fernbrook Townhomes
9	Four Seasons Estates
10	Four Seasons Villas
11	Fox Forest Townhomes
12	Granite Woods
13	Hummingbird Cove
14	Lancaster Park
15	Lancaster Village
16	Manor Royal
17	Medicine Lake Apartments
18	Medicine Lake Woods
19	Oakwood
20	Park Place Apartments
21	Parkers Lake Apartments
22	Parkside at Medicine Lake
23	Plymouth Colony
24	Plymouth Commons
25	Plymouth Pointe
26	Plymouth Ponds
27	Plymouth Square at 37th
28	Shadow Hills
29	South Shore
30	Stone Creek Apartments
31	Stonehill
32	Stoneleigh at the Reserve
33	Summer Creek
34	Sun Valley Mobile Homes
35	The Quinn
36	Vicksburg Commons
37	Vicksburg Village
38	Wellington Apartments
39	Willow Creek
40	Lakeview Commons
41	Shenandoah Woods
42	The Axis
43	West View Estates
44	Kimberly Meadows
45	Mission Oaks
46	Willow Woods Estates

Source: Maxfield Research & Consulting, LLC

Natural Occurring Affordable Housing (i.e. Unsubsidized Affordable)

Although affordable housing is typically associated with an income-restricted property, there are other housing units in communities that indirectly provide affordable housing. Housing units that were not developed or designated with income guidelines (i.e. assisted) yet are more affordable than other units in a community are considered “naturally-occurring” or “unsubsidized affordable” units. This rental supply is available through the private market, versus assisted housing programs through various governmental agencies. Property values on these units are lower based on a combination of factors, such as: age of structure/housing stock, location, condition, size, functionally obsolete, school district, etc.

According to the *Joint Center for Housing Studies of Harvard University*, the privately unsubsidized housing stock supplies three times as many low-cost affordable units than assisted projects nationwide. Unlike assisted rental developments, most unsubsidized affordable units are scattered across small properties (one to four unit structures) or in older multifamily structures. Many of these older developments are vulnerable to redevelopment due to their age, modest rents, and deferred maintenance.

Because many of these projects have affordable rents, project-based and private housing markets cannot be easily separated. Some household’s income-qualify for both market rate and project-based affordable housing. Therefore, it is important to recognize the naturally-occurring affordable housing stock to quantify the proportion of renters that might be eligible for housing assistance based on income. Table R-6 illustrates monthly rents by unit type and household size as they relate to affordability. Table R-7 presents a breakdown of all market rate general-occupancy rental projects by household size and area median income (AMI). Table R-8 summarizes project data from Table R-7 based on unit type and affordability.

- Among the over 5,952 market rate units that were inventoried by unit mix and monthly rents, over 14% of the units are affordable to householders at 50% AMI. Together with 32% of the units affordable at 60% AMI, over 46% of the market rate rental housing inventory is affordable at 50% to 60% AMI.
- Over 47% of market rate one-bedroom units are affordable at 50% AMI. Comparatively, two-bedroom units and three-bedroom units were 44% and 1%, respectively.
- About 53% of the inventoried market rate units have monthly rents that would be affordable to householders earning 80% to 120% of AMI. These households would qualify for “workforce” housing. Comparatively, roughly 94% of the inventoried market rate units have monthly rents that would be affordable to householders earning 50% to 80% of AMI.

RENTAL MARKET ANALYSIS

**TABLE R-6
MAXIMUM RENT BASED ON HOUSEHOLD SIZE AND AREA MEDIAN INCOME
HENNEPIN COUNTY - 2017**

Unit Type ¹	HHD Size		Maximum Rent Based on Household Size (@30% of Income)											
	Min	Max	30%		50%		60%		80%		100%		120%	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Studio	1	1	\$451	-\$451	\$751	-\$751	\$902	-\$902	\$1,202	-\$1,202	\$1,503	-\$1,503	\$1,803	-\$1,803
1BR	1	2	\$451	-\$515	\$751	-\$858	\$902	-\$1,029	\$1,202	-\$1,372	\$1,503	-\$1,715	\$1,803	-\$2,058
2BR	2	4	\$515	-\$644	\$858	-\$1,073	\$1,029	-\$1,287	\$1,372	-\$1,716	\$1,715	-\$2,145	\$2,058	-\$2,574
3BR	3	6	\$579	-\$746	\$965	-\$1,244	\$1,158	-\$1,493	\$1,544	-\$1,990	\$1,930	-\$2,488	\$2,316	-\$2,985
4BR	4	8	\$644	-\$850	\$1,073	-\$1,416	\$1,287	-\$1,700	\$1,716	-\$2,266	\$2,145	-\$2,833	\$2,574	-\$3,399

¹ One-bedroom plus den and two-bedroom plus den units are classified as 1BR and 2BR units, respectively. To be classified as a bedroom, a den must have a window and closet.

Note: 4-person Hennepin County AMI is \$85,800 (2016)

Sources: HUD, Novogradac, Maxfield Research and Consulting, LLC

RENTAL MARKET ANALYSIS

**TABLE R-7
MULTIFAMILY MARKET RATE RENTAL DEVELOPMENTS
NATURALLY OCCURRING AFFORDABLE RENTAL HOUSING
CITY OF PLYMOUTH
August 2017**

Unit Type/Project Name	Total Units	Rent Range		Min. Income Needed to Afford ¹	Units that are Market Rate Affordability by AMI ²					
		Min	Max		30%	50%	60%	80%	100%	120%
Studio										
At the Lake	8	\$729	\$779	\$29,160 - \$31,160	--	8	--	--	--	--
Coachman Trails	3	\$975	\$1,000	\$39,000 - \$40,000	--	--	3	--	--	--
Four Seasons Villas	18	\$779	\$799	\$31,160 - \$31,960	--	18	--	--	--	--
Medicine Lake Apartments	1	\$1,065	\$1,115	\$42,600 - \$44,600	--	--	1	--	--	--
Parkside at Medicine Lake	13	\$920	\$920	\$36,800 - \$36,800	--	--	13	--	--	--
Plymouth Colony	2	\$750	\$750	\$30,000 - \$30,000	--	2	--	--	--	--
Plymouth Commons	29	\$750	\$825	\$30,000 - \$33,000	--	29	--	--	--	--
Plymouth Pointe	2	\$785	\$865	\$31,400 - \$34,600	--	2	--	--	--	--
Stone Creek Apartments	16	\$1,100	\$1,200	\$44,000 - \$48,000	--	--	--	16	--	--
Stonehill	6	\$950	\$995	\$38,000 - \$39,800	--	--	6	--	--	--
Stoneleigh at the Reserve	21	\$1,120	\$1,120	\$44,800 - \$44,800	--	--	--	21	--	--
Willow Creek Apartments	26	\$955	\$1,095	\$38,200 - \$43,800	--	--	26	--	--	--
Total/ Average					--	60	50	37	--	--
One-Bedroom										
At the Lake	76	\$859	\$869	\$34,360 - \$34,760	--	76	--	--	--	--
Coachman Trails	42	\$1,100	\$1,175	\$44,000 - \$47,000	--	--	42	--	--	--
Countryside Estates	35	\$860	\$925	\$34,400 - \$37,000	--	45	--	--	--	--
Creekside Estates	45	\$1,130	\$1,130	\$45,200 - \$45,200	--	--	45	--	--	--
Currents	139	\$962	\$1,020	\$38,480 - \$40,800	--	--	139	--	--	--
Four Seasons Estates	56	\$849	\$959	\$33,960 - \$38,360	--	28	28	--	--	--
Four Seasons Villas	144	\$869	\$869	\$34,760 - \$34,760	--	144	--	--	--	--
Granite Woods	42	\$929	\$999	\$37,160 - \$39,960	--	--	42	--	--	--
Hummingbird Cove	24	\$950	\$1,000	\$38,000 - \$40,000	--	--	24	--	--	--
Lancaster Park	6	\$1,110	\$1,310	\$44,400 - \$52,400	--	--	3	3	--	--
Lancaster Village	62	\$885	\$970	\$35,400 - \$38,800	--	31	31	--	--	--
Manor Royal	72	\$985	\$1,005	\$39,400 - \$40,200	--	--	72	--	--	--
Medicine Lake Apartments	55	\$1,150	\$1,200	\$46,000 - \$48,000	--	--	--	55	--	--
Medicine Lake Woods	2	\$950	\$995	\$38,000 - \$39,800	--	--	2	--	--	--
Oakwood	44	\$980	\$1,095	\$39,200 - \$43,800	--	--	44	--	--	--
Park Place Apartments	120	\$1,196	\$1,684	\$47,840 - \$67,360	--	--	--	60	60	--
Parkers Lake Apartments	74	\$1,318	\$1,569	\$52,720 - \$62,760	--	--	--	74	--	--
Parkside at Medicine Lake	44	\$1,095	\$1,135	\$43,800 - \$45,400	--	--	--	44	--	--
Plymouth Colony	22	\$850	\$985	\$34,000 - \$39,400	--	11	11	--	--	--
Plymouth Commons	83	\$850	\$975	\$34,000 - \$39,000	--	42	41	--	--	--
Plymouth Pointe	40	\$855	\$995	\$34,200 - \$39,800	--	20	20	--	--	--
Plymouth Ponds	60	\$1,018	\$1,378	\$40,720 - \$55,120	--	--	30	30	--	--
Plymouth Square at 37th	80	\$1,150	\$1,765	\$46,000 - \$70,600	--	--	--	40	40	--
Shadow Hills	119	\$1,156	\$1,326	\$46,240 - \$53,040	--	--	--	119	--	--
Shenandoah Woods	6	\$620	\$695	\$24,800 - \$27,800	--	6	--	--	--	--
Stonehill	90	\$1,160	\$1,225	\$46,400 - \$49,000	--	--	45	45	--	--
Stoneleigh at the Reserve	211	\$1,200	\$1,280	\$48,000 - \$51,200	--	--	--	211	--	--
Summer Creek	21	\$1,000	\$1,145	\$40,000 - \$45,800	--	--	21	--	--	--
The Axis	87	\$1,275	\$1,495	\$51,000 - \$59,800	--	--	--	87	--	--
The Quinn	125	\$1,084	\$2,805	\$43,360 - \$112,200	--	--	--	43	41	41
Vicksburg Village	104	\$1,214	\$1,454	\$48,560 - \$58,160	--	--	--	104	--	--
Wellington Apartments	39	\$925	\$1,075	\$37,000 - \$43,000	--	--	39	--	--	--
Willow Creek Apartments	84	\$1,145	\$1,220	\$45,800 - \$48,800	--	--	42	42	--	--
Total/Average	2,253				--	403	721	957	141	41
One-Bedroom plus Den										
Coachman Trails	6	\$1,200	\$1,250	\$48,000 - \$50,000	--	--	--	6	--	--
Creekside Estates	42	\$1,460	\$1,460	\$58,400 - \$58,400	--	--	--	42	--	--
Parkside at Medicine Lake	30	\$1,200	\$1,270	\$48,000 - \$50,800	--	--	--	30	--	--
Plymouth Commons	3	\$900	\$1,000	\$36,000 - \$40,000	--	--	3	--	--	--
Shadow Hills	18	\$1,280	\$1,305	\$51,200 - \$52,200	--	--	--	18	--	--
Stone Creek Apartments	16	\$1,490	\$2,005	\$59,600 - \$80,200	--	--	--	8	8	8
Stoneleigh at the Reserve	42	\$1,300	\$1,300	\$52,000 - \$52,000	--	--	--	42	--	--
Total/Average	157				--	--	3	138	8	8

Continued

RENTAL MARKET ANALYSIS

TABLE R-7 Continued
MULTIFAMILY MARKET RATE RENTAL DEVELOPMENTS
NATURALLY OCCURRING RENTAL HOUSING
CITY OF PLYMOUTH
August 2017

Unit Type/Project Name	Aff Units	Rent Range		Min. Income Needed to Afford ¹	Units that are Market Rate Affordability by AMI ²					
		Min	Max		30%	50%	60%	80%	100%	120%
Two-Bedroom					30%	50%	60%	80%	100%	120%
At the Lake	51	\$979	\$1,109	\$39,160 - \$44,360	--	26	25	--	--	--
Bass Lake Hills	246	\$1,495	\$1,565	\$59,800 - \$62,600	--	--	--	246	--	--
Coachman Trails	95	\$1,310	\$1,365	\$52,400 - \$54,600	--	--	95	--	--	--
Countryside Estates	37	\$960	\$990	\$38,400 - \$39,600	--	37	--	--	--	--
Creekside Estates	117	\$1,335	\$1,520	\$53,400 - \$60,800	--	--	22	95	--	--
Currents	171	\$1,150	\$1,299	\$46,000 - \$51,960	--	--	171	--	--	--
Fernbrook Townhomes	1	\$1,295	\$1,295	\$51,800 - \$51,800	--	--	1	--	--	--
Four Seasons Estates	40	\$985	\$1,049	\$39,400 - \$41,960	--	40	--	--	--	--
Four Seasons Villas	78	\$969	\$969	\$38,760 - \$38,760	--	78	--	--	--	--
Fox Forest Townhomes	80	\$1,620	\$1,715	\$64,800 - \$68,600	--	--	--	80	--	--
Granite Woods	150	\$1,150	\$1,200	\$46,000 - \$48,000	--	--	150	--	--	--
Hummingbird Cove	48	\$1,060	\$1,185	\$42,400 - \$47,400	--	--	48	--	--	--
Lancaser Park	44	\$1,310	\$1,610	\$52,400 - \$64,400	--	--	--	44	--	--
Lancaster Village	64	\$1,065	\$1,200	\$42,600 - \$48,000	--	--	64	--	--	--
Manor Royal	60	\$1,125	\$1,225	\$45,000 - \$49,000	--	--	60	--	--	--
Medicine Lake Apartments	25	\$1,130	\$1,524	\$45,200 - \$60,960	--	--	20	5	--	--
Medicine Lake Woods	14	\$1,095	\$1,095	\$43,800 - \$43,800	--	14	--	--	--	--
Oakwood	61	\$1,070	\$1,295	\$42,800 - \$51,800	--	--	61	--	--	--
Park Place Apartments	380	\$1,356	\$1,767	\$54,240 - \$70,680	--	--	--	380	--	--
Parkers Lake Apartments	144	\$1,299	\$1,926	\$51,960 - \$77,040	--	--	--	144	--	--
Parkside at Medicine Lake	87	\$1,235	\$1,290	\$49,400 - \$51,600	--	--	87	--	--	--
Plymouth Colony	102	\$950	\$1,085	\$38,000 - \$43,400	--	102	--	--	--	--
Plymouth Commons	97	\$950	\$1,250	\$38,000 - \$50,000	--	--	97	--	--	--
Plymouth Pointe	54	\$996	\$1,165	\$39,840 - \$46,600	--	54	--	--	--	--
Plymouth Ponds	130	\$1,090	\$1,575	\$43,600 - \$63,000	--	--	110	20	--	--
Plymouth Square at 37th Shadow Hills	68	\$1,235	\$2,110	\$49,400 - \$84,400	--	--	22	23	23	--
Shadow Hills	130	\$1,370	\$1,525	\$54,800 - \$61,000	--	--	--	130	--	--
Shenandoah Woods	8	\$745	\$905	\$29,800 - \$36,200	--	8	--	--	--	--
South Shore	17	\$1,150	\$1,150	\$46,000 - \$46,000	--	--	17	--	--	--
Stone Creek Apartments	70	\$1,750	\$2,495	\$70,000 - \$99,800	--	--	--	--	35	35
Stonehill	110	\$1,410	\$1,460	\$56,400 - \$58,400	--	--	--	110	--	--
Stoneleigh at the Reserve	63	\$1,535	\$1,565	\$61,400 - \$62,600	--	--	--	63	--	--
Summer Creek	45	\$1,000	\$1,295	\$40,000 - \$51,800	--	--	45	--	--	--
The Axis	54	\$1,920	\$2,100	\$76,800 - \$84,000	--	--	--	--	54	--
The Quinn	136	\$1,243	\$3,000	\$49,720 - \$120,000	--	--	34	34	34	34
Vicksburg Village	198	\$1,367	\$1,742	\$54,680 - \$69,680	--	--	--	198	--	--
Wellington Apartments	23	\$1,005	\$1,155	\$40,200 - \$46,200	--	--	23	--	--	--
Willow Creek Apartments	135	\$1,255	\$1,445	\$50,200 - \$57,800	--	--	135	--	--	--
Total/ Average	3,433				--	359	1,287	1,572	146	69

Continued

RENTAL MARKET ANALYSIS

TABLE R-7 Continued
MULTIFAMILY MARKET RATE RENTAL DEVELOPMENTS
NATURALLY OCCURRING RENTAL HOUSING
CITY OF PLYMOUTH
August 2017

Unit Type/Project Name	Aff Units	Rent Range		Min. Income Needed to Afford ¹	Units that are Market Rate Affordability by AMI ²					
		Min	Max		30%	50%	60%	80%	100%	120%
Two-Bedroom + Den										
Coachman Trails	9	\$1,495	\$1,550	\$59,800 - \$62,000	--	--	--	9	--	--
Oakwood	2	\$1,285	\$1,355	\$51,400 - \$54,200	--	--	2	--	--	--
Shadow Hills	52	\$1,500	\$1,629	\$60,000 - \$65,160	--	--	--	52	--	--
Stonehill	12	\$1,595	\$1,665	\$63,800 - \$66,600	--	--	--	12	--	--
Stoneleigh at the Reserve	24	\$1,720	\$1,720	\$68,800 - \$68,800	--	--	--	24	--	--
The Axis	4	\$2,350	\$2,350	\$94,000 - \$94,000	--	--	--	--	--	4
Vicksburg Village	36	\$2,229	\$2,294	\$89,160 - \$91,760	--	--	--	--	--	36
Total/ Average	139				--	--	2	97	--	40

Unit Type/Project Name	Aff Units	Rent Range		Min. Income Needed to Afford ¹	Units that are Market Rate Affordability by AMI ²					
		Min	Max		30%	50%	60%	80%	100%	120%
Two-Bedroom - Penthouse										
Coachman Trails	1	\$1,560	\$1,560	\$62,400 - \$62,400	--	--	--	1	--	--
Total/ Average	1				--	--	--	1	--	--

Unit Type/Project Name	Aff Units	Rent Range		Min. Income Needed to Afford ¹	Units that are Market Rate Affordability by AMI ²					
		Min	Max		30%	50%	60%	80%	100%	120%
Three Bedroom										
At the Lake	8	\$1,149	\$1,415	\$45,960 - \$56,600	--	4	4	--	--	--
Bass Lake Hills	38	\$1,800	\$1,930	\$72,000 - \$77,200	--	--	--	38	--	--
Currents	15	\$1,850	\$1,850	\$74,000 - \$74,000	--	--	--	15	--	--
Fernbrook Townhomes	71	\$1,295	\$1,295	\$51,800 - \$51,800	--	--	71	--	--	--
Fox Forest Townhomes	80	\$1,799	\$1,880	\$71,960 - \$75,200	--	--	--	80	--	--
Hummingbird Cove	2	\$1,500	\$1,600	\$60,000 - \$64,000	--	--	2	--	--	--
Lancaster Village	2	\$1,425	\$1,625	\$57,000 - \$65,000	--	--	2	--	--	--
Medicine Lake Woods	1	\$1,250	\$1,250	\$50,000 - \$50,000	--	1	--	--	--	--
Parkers Lake Apartments	30	\$1,784	\$2,389	\$71,360 - \$95,560	--	--	--	15	15	--
Parkside at Medicine Lake	4	\$1,545	\$1,610	\$61,800 - \$64,400	--	--	4	--	--	--
Plymouth Ponds	10	\$1,610	\$1,710	\$64,400 - \$68,400	--	--	--	10	--	--
Plymouth Square at 37th	12	\$1,615	\$2,310	\$64,600 - \$92,400	--	--	--	6	6	--
Shadow Hills	3	\$1,695	\$1,725	\$67,800 - \$69,000	--	--	--	3	--	--
Shenandoah Woods	4	\$970	\$1,130	\$38,800 - \$45,200	--	4	--	--	--	--
Stone Creek Apartments	20	\$2,100	\$2,160	\$84,000 - \$86,400	--	--	--	--	22	--
Stonehill	6	\$1,685	\$1,725	\$67,400 - \$69,000	--	--	--	6	--	--
Summer Creek	6	\$1,245	\$1,495	\$49,800 - \$59,800	--	--	6	--	--	--
The Quinn	40	\$1,920	\$4,208	\$76,800 - \$168,320	--	--	--	14	13	13
Vicksburg Village	32	\$1,766	\$1,958	\$70,640 - \$78,320	--	--	--	32	--	9
Total/ Average	384				--	9	89	219	56	22

¹ Based on a 30% allocation of income to housing for general-occupancy. Senior housing projects were excluded from the calculation.

² Market rate housing that has rents that could be classified as "unsubsidized affordable" units based on the monthly rents and adjusted for household size.

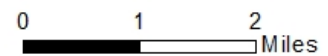
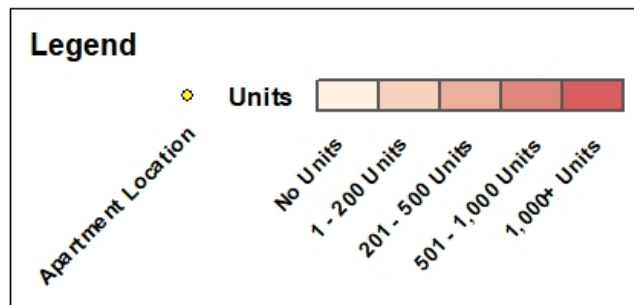
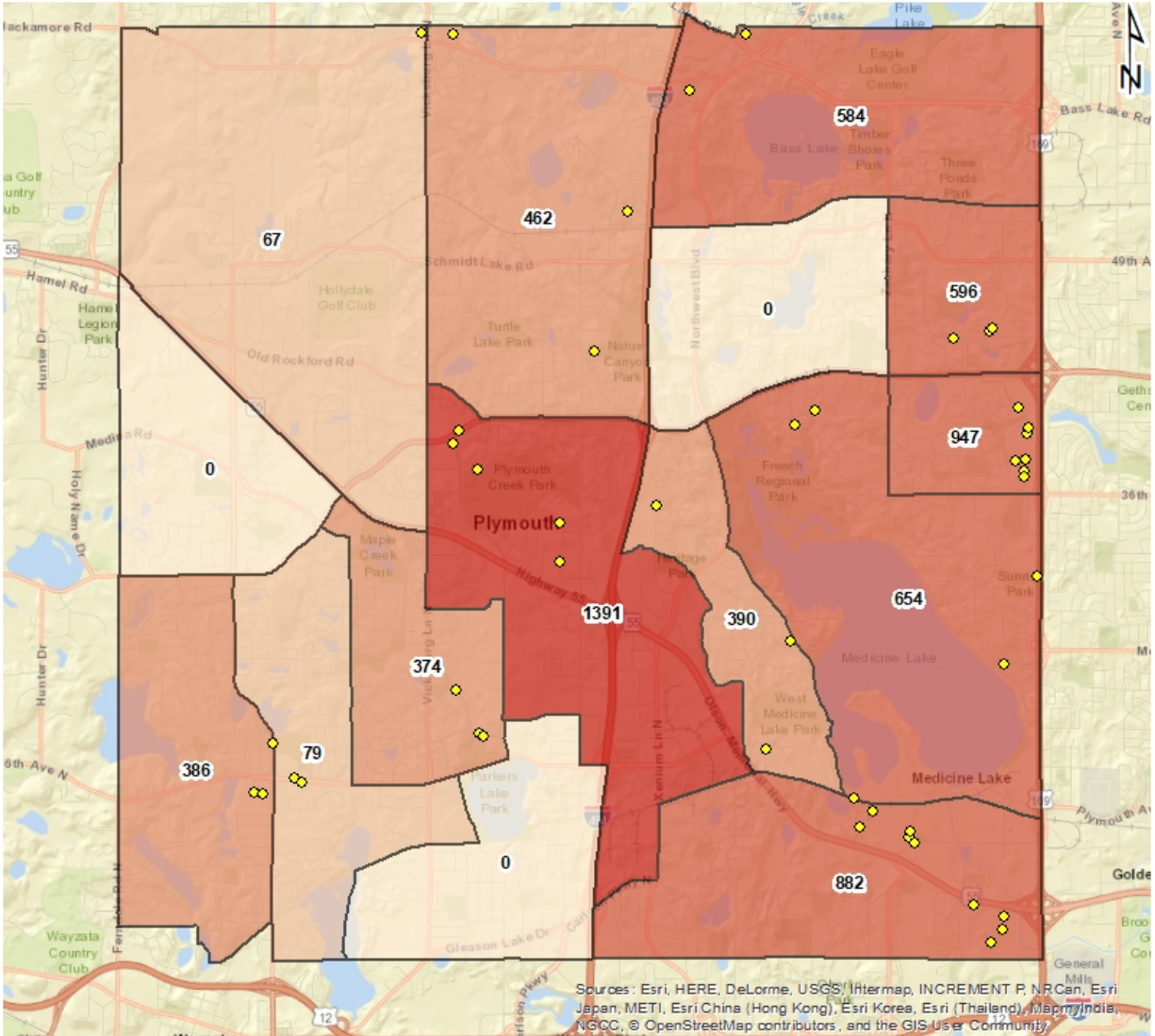
Source: Maxfield Research & Consulting, LLC

TABLE R-8 MULTIFAMILY MARKET RATE RENTAL DEVELOPMENTS NATURAL OCCURRING SUMMARY CITY OF PLYMOUTH August 2017						
Unit Type	Market Rate Affordability by AMI					
	30%	50%	60%	80%	100%	120%
STUDIO	--	60	50	37	--	--
1 BR	--	403	721	957	141	--
1 BR + DEN	--	--	3	138	8	8
2 BR	--	359	1,287	1,572	146	69
2 BR + DEN	--	--	--	97	--	40
2 BR PH	--	--	--	1	--	--
3 BR	--	9	89	219	56	22
Subtotal	--	831	2,150	3,021	351	139
Pct. Of Total	0.0%	12.8%	33.1%	46.5%	5.4%	2.1%
Pct. Of Affordability Category						
STUDIO	--	--	--	1.2%	--	--
1 BR	--	48.5%	33.5%	31.7%	40.2%	--
1 BR + DEN	--	--	--	4.6%	2.3%	5.8%
2 BR	--	43.2%	59.9%	52.0%	41.6%	49.6%
2 BR + DEN	--	--	--	3.2%	--	28.8%
3 BR	--	1.1%	--	7.2%	--	15.8%
Source: Maxfield Research & Consulting, LLC						

Licensed Rental Ordinance

The City of Plymouth has an ordinance that requires the licensing of all rental properties in the community. The ordinance is designed to ensure all rental properties meet local building and fire safety codes. The rental ordinance requires that all landlords or owners register all rental housing units (from single-family homes to traditional multifamily apartment buildings) and apply for a rental dwelling license. The city requires a license renewal every three years for one and two family dwellings and annual renewals for all other rental dwellings. In addition, initial inspection and periodic inspections to ensure minimum code requirements.

General Occupancy Multifamily Rental Housing Units by Census Tract - 2017



Senior Housing Defined

The term “senior housing” refers to any housing development that is restricted to people age 55 or older. Today, senior housing includes an entire spectrum of housing alternatives, which occasionally overlap, thus making the differences somewhat ambiguous. However, the level of support services offered best distinguishes them. Maxfield Research and Consulting LLC classifies senior housing projects into five categories based on the level of support services offered:

Adult/Few Services; where few, if any, support services are provided, and rents tend to be modest;

Congregate/Optional-Services; where support services such as meals and light housekeeping are available for an additional fee;

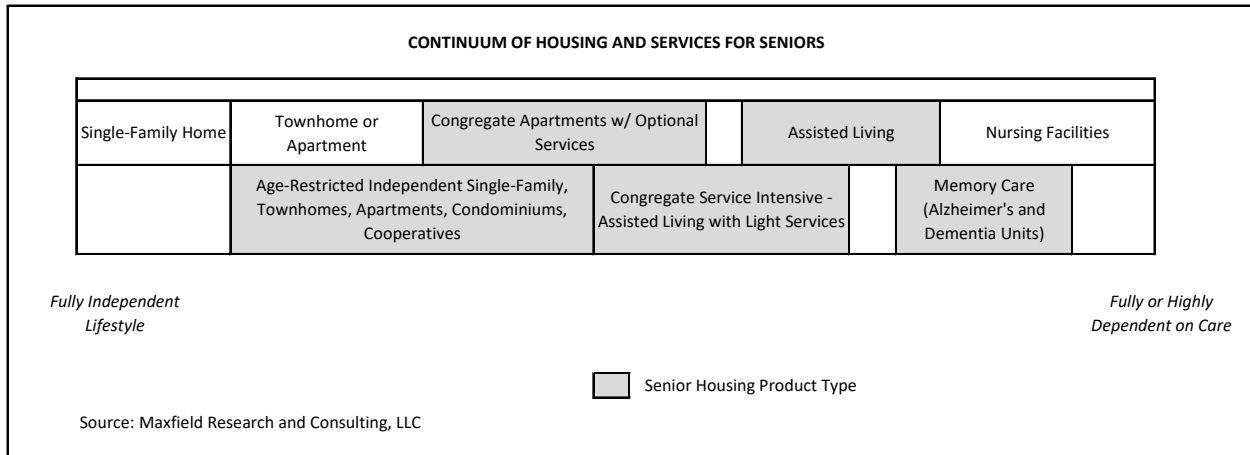
Congregate/Service-Intensive; where support services such as meals and light housekeeping are included in the monthly rents;

Assisted Living; where two or three daily meals as well as basic support services such as transportation, housekeeping and/or linen changes are included in the fees. Personal care services such as assistance with bathing, grooming and dressing is included in the fees or is available either for an additional fee.

Memory Care; where more rigorous and service-intensive personal care is required for people with dementia and Alzheimer’s disease. Typically, support services and meal plans are similar to those found at assisted living facilities, but the heightened levels of personalized care demand more staffing and higher rental fees.

These five senior housing products tend to share several characteristics. First, they usually offer individual living apartments with living areas, bathrooms, and kitchens or kitchenettes. Second, they generally have an emergency response system with pull-cords or pendants to promote security. Third, they often have a community room and other common space to encourage socialization. Finally, they are age-restricted and offer conveniences desired by seniors, although assisted living projects sometimes serve non-elderly people with special health considerations.

The five senior housing products offered today form a continuum of care (see the graphic on the following page), from a low level to a fairly intensive one; often the service offerings at one type overlap with those at another. In general, however, adult/few services projects tend to attract younger, more independent seniors, while assisted living and memory care projects tend to attract older, frailer seniors.



Senior Housing in Plymouth

As of September 2017, Maxfield Research identified nine senior housing developments in Plymouth. These properties contain a total of 914 units. There are 23 vacancies resulting in an overall vacancy rate of 2.5% for senior housing developments. The equilibrium vacancy rate for senior housing is considered to be between 5% and 7%.

Table S-1 provides information on the senior market rate and properties with public assistance. Information in the table includes year built, number of units, unit mix, number of vacant units, rents, and general comments about each project.

The following are key points from our survey of the senior housing supply.

Market Rate Active Adult (Rental)

- Vicksburg Crossing is the only active adult rental project in Plymouth. As of September 2017, there was no vacancy. There are 61 units in this 55+ community.
- Market rate units at Vicksburg Crossing have rents from \$1,090 for a one-bedroom, \$1,250 for a one-bedroom plus den, and range from \$1,325 to \$1,445 for a two-bedroom unit.

Subsidized/Affordable Active Adult (Rental)

- Subsidized active adult senior housing offers affordable rents to qualified low income seniors and handicapped/disabled persons. Typically, incomes are restricted to 30% of the area median income adjusted for household size. For those households meeting the age and income qualifications, subsidized senior housing is usually the most affordable rental option available. Affordable projects are typically tax-credit projects that are limited to households earning less than 60% of Hennepin County’s area median income.

SENIOR HOUSING ANALYSIS

- There are three subsidized/affordable active adult developments in Plymouth. As of September 2017, there were two vacancies, for an overall vacancy rate of 1.1%. Equilibrium for senior subsidized housing projects is usually around 3%, allowing for optimal housing availability for potential residents. Unit sizes at these senior properties are often smaller than many of the market rate senior rental projects. Some of these senior apartments also maintain waiting lists for units.

Active Adult (Owner)

- There are three cooperative/owner active adult facilities in Plymouth. As of September 2017, there were no vacancies across 210 total owner occupied units.
- Tenants purchase their own one-bedroom, two-bedroom, or three-bedroom unit. The current listing prices range from \$42,000 to \$61,299 for a one-bedroom unit, \$52,000 to \$75,824 for a two-bedroom unit, and \$81,000 to \$112,745 for a three-bedroom unit. In addition, buyers pay a monthly fee.

Congregate

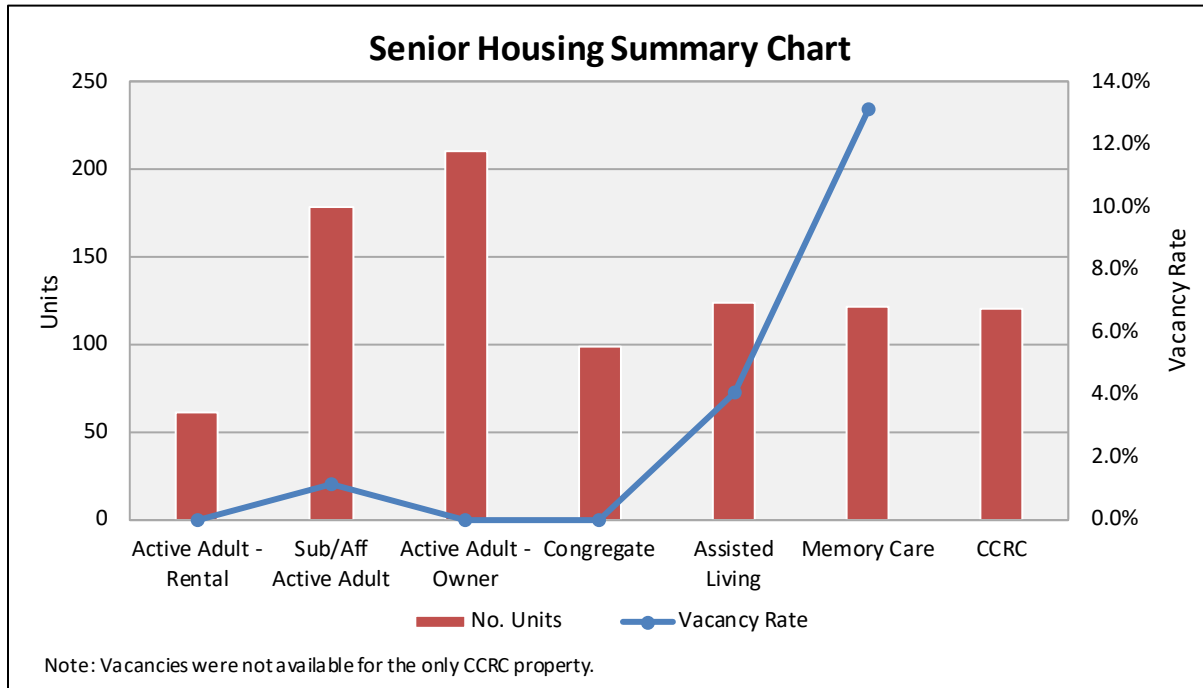
- There are two congregate facilities in Plymouth. As of September 2017, there were no vacancies across 99 total congregate units.
- Unit types offered are one-bedroom, one-bedroom plus den, and two-bedroom units among congregate facilities in Plymouth. Monthly base rents range from \$2,045 for a one-bedroom at Summer Wood of Plymouth to \$3,995 for a two bedroom at the Waters of Plymouth.

Assisted Living

- There are three facilities offering assisted living services in Plymouth. As of September 2017, there were five vacancies across 124 total assisted living units, for a vacancy rate of 2.5%.
- Market rate basic service rents range from \$3,745 for a studio apartment at Cornerstone Commons to \$5,195 for a two-bedroom apartment at Waters of Plymouth. Additional cost is based on service level needed. Some common features include kitchenettes, private bathrooms, meals, laundry, and light housekeeping.
- Trillium Woods is a Continuing Care Retirement Community (CCRC) and offers independent living, assisted living, and memory care units. CCRC commonly have a buy in to the facility or prepay for units and offer services with monthly fees.

Memory Care

- There are four facilities offering memory care services in Plymouth. As of September 2017, there were 16 vacant units across 122 total memory care units, for a vacancy rate of 13.1%.
- Basic market rate rents for memory care range from \$2,855 for a studio at Summer Wood of Plymouth to \$7,075 for a one-bedroom at Cornerstone Commons. There is additional cost based on service level needed. Some features include daily exercise and programs, dining, and common areas for recreation.



SENIOR HOUSING ANALYSIS

TABLE S-1 SENIOR HOUSING PROJECTS PLYMOUTH September 2017									
Project Name/City	Year Built	No. of Units	No. Vacant	No.	Type	Sizes	Monthly Rent/ Sale Price	Rent/Sales price/PSF Min - Max	Services/Amenities/Comments
Market Rate Active Adult									
Vicksburg Crossing 3155 Vicksburg Ln N	2006	61	0	31 - 1BR		852	\$1,090	\$1.28	In-unit washer & dryer, additional storage, dishwasher, fitness center, heated underground parking, library/computer room, 55+
			0.0%	8 - 1BR/D		950	\$1,250	\$1.32	
				22 - 2BR		1174	\$1,325 - \$1,445	\$1.13 - \$1.23	
Sub/Aff Active Adult									
Vicksburg Crossing 3155 Vicksburg Ln N	2006	33	0	33 - 1 BR		852	\$795	\$0.93	In-unit washer & dryer, additional storage, dishwasher, fitness center, heated underground parking, library/computer room, 55+
			0.0%						
Bassett Creek Commons 10505 8th Ave N	1998	46	0	45 - 1 BR		535	\$492	\$0.92	Clubhouse, business center, laundry facilities, 62+
			0.0%	1 - 2 BR		N/A	\$630	N/A	
Plymouth Town Square 15500 37th Ave N	1994	99	2	60 - 1 BR		585	37% of income	N/A	Surface & underground parking, library, activity room with kitchen, 55+
			2.0%	39 - 2 BR		938	37% of income	N/A	
Cooperative/Ownership Active Adult									
Cornerstone Cooperative 3790 Lawndale Ln N	2001	77	0	17 - 1BR		779	\$42,000	\$53.92	Variety of social events, in-unit washer & dryer, car wash bay, heated garage, library, craft room, fitness center, balcony, 54 people on the waiting list, 55+
			0.0%	58 - 2BR		1,083 - 1,368	\$52,000 - \$70,000	\$48.01 - \$51.17	
				2 - 3BR		1,561	\$81,000	\$51.89	
Gramercy Park Cooperative Northwest 6195 Northwest Blvd	2001	77	0	7 - 1BR		840 - 998	\$51,870 - \$61,299	\$61.42 - \$61.75	Social activities, guest suite, craft room, fitness center, library/computer center, underground heated parking, workshop, outdoor deck with grills, 55+
			0.0%	61 - 2BR		992 - 1,237	\$60,879 - \$75,824	\$61.30 - \$61.37	
				9 - 3BR		1,778 - 1,832	\$106,536 - \$112,745	\$59.92 - \$61.54	
Gramercy Park of Plymouth 10400 45th Ave N	N/A	56	0	7 - 1BR		840 - 1,075	\$42,872 - \$57,461	\$51.04 - \$53.45	
			0.0%	49 - 2BR		992 - 1,257	\$54,467 - \$65,488	\$52.10 - \$54.91	
Congregate									
The Waters of Plymouth 11305 Highway 55	2013	31	0	19 - 1BR		582 - 918	\$2,600 - \$3,550	\$3.87 - \$4.47	Spa & salon, housekeeping, laundry, dining, various health & wellbeing programs, cable, wi-fi, in-unit washer and dryer
			0.0%	8 - 1BR/D		868 - 1,173	\$3,500 - \$3,995	\$3.41 - \$4.03	
				4 - 2BR		1,134	\$3,995	\$3.52	
SummerWood of Plymouth 16205 36th Ave N	2003	68	0	45 - 1BR		805 - 995	\$2,045 - \$2,320	\$2.33 - \$2.54	Salon, billiard parlor, community room, convenience store, game room, garage, in-home care, library, message therapy, scheduled transportation, theatre, private storage unit, emergency call equipment
			0.0%	23 - 2BR		945 - 1,094	\$2,740 - \$3,050	\$2.79 - \$2.90	
CCRC									
Trillium Woods 5855 Cheshire Parkway N	2014	120					N/A		Pool, fitness center, library, auditorium, covered parking, wellness programs, all services available

SENIOR HOUSING ANALYSIS

Continued
TABLE S-1
SENIOR HOUSING PROJECTS
PLYMOUTH
September 2017

Project Name/City	Year Built	No. of Units	No. Vacant	No.	Type	Sizes	Monthly Rent/ Sale Price	Rent fee/PSF Min - Max	Comments
Assisted Living									
The Waters of Plymouth 11305 Highway 55	2013	30	0 0.0%	18 - 1BR 8 - 1BR/D 4 - 2BR		582 - 918 868 - 1,173 1,134	\$3,800 - \$4,750 \$4,700 - \$5,195 \$5,195	\$5.17 - \$6.53 \$4.43 - \$5.41 \$4.58	Spa & salon, housekeeping, laundry, dining, various health & wellbeing programs, cable, wi-fi, in-unit washer and dryer
Cornerstone Commons 3750 Lawndale Ln N	2004	66	5 7.6%	4 - Studio 55 - 1BR 7 - 2BR		453 547 - 667 737	\$3,745 \$4,070 - \$4,615 \$5,295	\$8.27 \$6.92 - \$7.44 \$7.18	Walk-in showers, central air, weekly housekeeping, scheduled social events, transportation, spiritual services
Summerwood of Plymouth 16205 36th Ave N	2002	28	0 0.0%	22 - 1BR 6 - 2BR		600 - 803 890 - 896	\$3,170 - \$3,890 \$4,345 - \$4,470	\$4.84 - \$5.28 \$4.88 - \$4.99	Salon, billiard parlor, community room, convenience store, game room, garage, in-home care, library, message therapy, scheduled transportation, theatre, private storage unit, emergency call equipment
Memory Care									
Brookdale Plymouth 15855 22nd Ave N	1999	52	15 28.8%	52 - Studio		300 - 700	\$4,050	\$13.50 - \$5.79	24 hour emergency response, library, beauty/barber shop, daily meals, on-site & off-site activities
Cornerstone Commons 3750 Lawndale Ln N	2004	18	0 0.0%	16 - Studio 2 - 1BR		779 1,083 - 1,368	\$6,220 - \$6,605 \$7,075	\$7.98 - \$8.48 \$6.53 - \$5.17	Walk-in showers, central air, weekly housekeeping, scheduled social events, transportation, spiritual services
SummerWood of Plymouth 16205 36th Ave N	2003	24	1 4.2%	24 - Studio		394 - 469	\$2,855 - \$2,925	\$6.09 - \$7.25	Salon, billiard parlor, community room, convenience store, game room, garage, in-home care, library, message therapy, scheduled transportation, theatre, private storage unit, emergency call equipment
The Waters of Plymouth 11305 Highway 55	2013	28	0 0.0%	24 - Studio 4 - 1BR		414 - 479 493	\$4,750 - \$4,850 \$4,825	\$10.13 - \$11.47 \$9.79	Spa & salon, housekeeping, laundry, dining, various health & wellbeing programs, cable, wi-fi, in-unit washer and dryer

Source: Maxfield Research and Consulting, LLC

SENIOR HOUSING ANALYSIS

S-2 AVAILABLE SURVEYED UNIT TYPE SUMMARY SENIOR HOUSING DEVELOPMENTS September 2017						
Active Adult MR Rental				Purchase Price Range		
Unit Type	Total Units	% of Total	Avg. Size	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
1BR	31	51%	852	\$1,090	\$1,090	\$1.28
1BR/D	8	13%	950	\$1,250	\$1,250	\$1.32
2BR	22	36%	1,174	\$1,325 - \$1,445	\$1,385	\$1.18
Total:	61	100%	992	\$1,090 - \$1,445	\$1,242	\$1.26
Vacancy Rate: 0.0%						
Active Adult Aff. Rental				Monthly Rents		
Unit Type	Total Units	% of Total	Avg. Size	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
1BR	138	78%	657	\$492 - \$795	\$644	\$0.98
2BR	40	22%	938	\$630	\$630	\$0.67
Total:	178	100%	798	\$492 - \$795	\$637	\$0.83
Vacancy Rate: 1.1%						
Active Adult Owner				Monthly Rents		
Unit Type	Total Units	% of Total	Avg. Size	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
1BR	31	15%	906	\$42,000 - \$61,299	\$51,100	\$56.38
2BR	168	80%	736	\$52,000 - \$75,824	\$63,110	\$85.75
3BR	11	5%	1,724	\$81,000 - \$112,745	\$100,094	\$58.07
Total:	210	100%	1,122	\$42,000 - \$112,745	\$71,435	\$66.73
Vacancy Rate: 0.0%						
Congregate				Base Monthly Rents		
Unit Type	Total Units	% of Total	Avg. Size	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
1BR	64	65%	825	\$2,045 - \$3,550	\$2,629	\$3.19
1BR/D	8	8%	1,021	\$3,500 - \$3,995	\$3,748	\$3.67
2BR	27	27%	1,058	\$2,740 - \$3,995	\$3,262	\$3.08
Total:	99	100%	968	\$2,045 - \$3,995	\$3,213	\$3.31
Vacancy Rate: 0.0%						
Assisted Living				Base Monthly Rents		
Unit Type	Total Units	% of Total	Avg. Size	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
Studio	4	3%	453	\$3,745	\$3,745	\$8.27
1BR	95	77%	686	\$3,170 - \$4,750	\$4,049	\$5.90
1BR/D	8	6%	1,021	\$4,700 - \$5,195	\$4,948	\$4.85
2BR	17	14%	914	\$4,345 - \$5,295	\$4,826	\$5.28
Total:	124	100%	768	\$3,170 - \$5,295	\$4,392	\$6.07
Vacancy Rate: 4.0%						
Memory Care				Base Monthly Rents		
Unit Type	Total Units	% of Total	Avg. Size	Range Low - High	Avg. Rent	Avg. Rent/ Sq. Ft.
Studio	116	95%	391	\$2,855 - \$6,605	\$4,608	\$11.78
1BR	6	5%	601	\$4,825 - \$7,075	\$5,950	\$9.89
Total:	122	100%	458	\$2,855 - \$7,075	\$5,279	\$10.84
Vacancy Rate: 13.1%						
Source: Maxfield Research and Consulting, LLC						

Select Senior Housing Projects – Plymouth, MN



Summer Wood of Plymouth
16205 36th Ave N



Trillium Woods
5855 Cheshire Pkwy



The Waters of Plymouth
11305 Hwy 55



Plymouth Town Square
15300 37th Ave N



Vicksburg Crossing
3155 Vicksburg Ln N



Gramercy Park Cooperative Northwest
6195 Northwest Blvd

SENIOR HOUSING ANALYSIS



Bassett Creek Commons
10505 8th Ave N



Brookdale Plymouth
15855 22nd Ave N

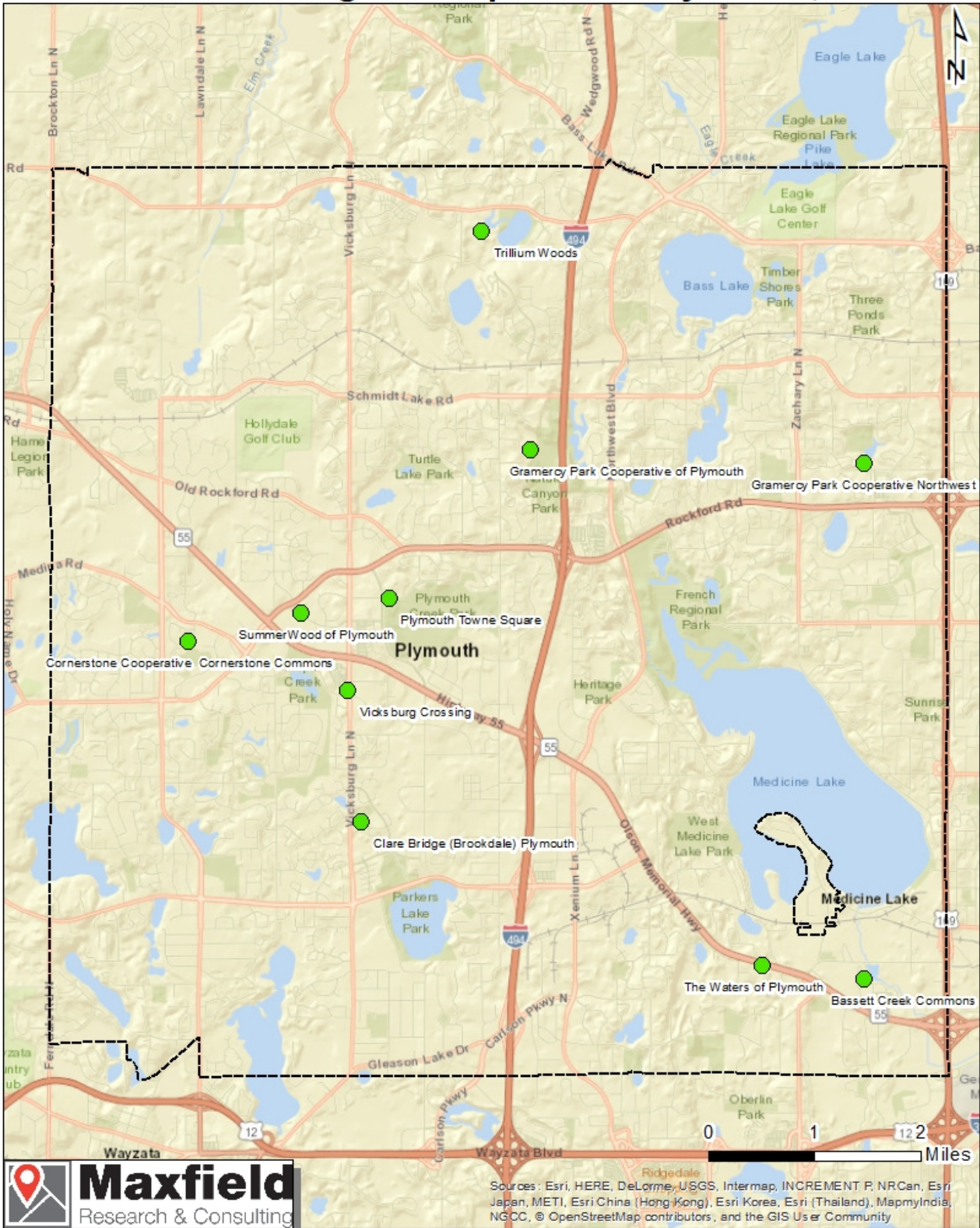


Cornerstone Commons
3750 Lawndale Ln N



**Cherrywood Pointe of Plymouth – Expected
2018**
18405 Old Rockford Rd

Senior Housing Developments - Plymouth, MN



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Senior Housing Comparison

Table S-3 & S-4 provide a comparison on senior housing units broken down by service level in Plymouth compared to neighboring peer cities in the Metro Area.

Table S-3 SENIOR HOUSING COMPARISON PLYMOUTH ANALYSIS AREA		
Senior Housing Summary	65+ Pop. Pct. of Total Pop. (2017)	65+ Penetration Rate (2017)
Plymouth	15.6%	7.7%
Eden Prairie	12.0%	12.4%
Edina	24.2%	17.9%
Golden Valley	23.4%	19.4%
Maple Grove	11.0%	13.3%
Medina	15.6%	0.0%
Minnetonka	21.3%	13.5%
St Louis Park	15.2%	13.4%

Note: Penetration Rate equals the number of senior housing units divided by senior population

Source: ESRI; Twin Cities Senior Housing Guide; Maxfield Research, Inc.

SENIOR HOUSING ANALYSIS

**TABLE S-4
SENIOR HOUSING COMPARISON
PLYMOUTH ANALYSIS AREA**

Senior Housing Summary	Plymouth	Eden Prairie	Edina	Golden Valley	Maple Grove	Medina	Minnetonka	St Louis Park
Total Population (2017)	76,150	64,545	51,476	21,536	69,340	6,259	52,664	48,973
65+ Population (2017)	11,852	7,763	12,440	5,040	7,647	976	11,219	7,429
65+ Pop. Percent of Total Pop.	15.6%	12.0%	24.2%	23.4%	11.0%	15.6%	21.3%	15.2%
MR Active Adult Units (Rental)	61	56	188	0	158	0	73	58
Sub/Aff Active Adult Units (Rental)	178	60	391	202	138	0	314	196
Active Adult/Coop. Units (Owner)	210	337	337	119	176	0	89	106
Congregate Units	99	273	343	225	94	0	485	403
Assisted Living Units	124	188	759	146	293	0	405	149
Memory Care Units	122	51	214	89	157	0	149	80
CCRC Units	120	0	0	199	0	0	0	0
Total Senior Units	914	965	2,232	980	1,016	0	1,515	992
65+ Penetration Rate	7.7%	12.4%	17.9%	19.4%	13.3%	0.0%	13.5%	13.4%

Source: ESRI; Twin Cities Senior Housing Guide; Maxfield Research, Inc.

Introduction

Previous sections of this study analyzed the existing housing supply and the growth and demographic characteristics of the population and household base in Plymouth. This section of the report presents our estimates of housing demand in Plymouth from 2017 through 2030.

Demographic Profile and Housing Demand

The demographic profile of a community affects housing demand and the types of housing that are needed. The housing life-cycle stages are:

1. *Entry-level householders*
 - Often prefer to rent basic, inexpensive apartments
 - Usually singles or couples in their early 20's without children
 - Will often "double-up" with roommates in apartment setting
2. *First-time homebuyers and move-up renters*
 - Often prefer to purchase modestly-priced single-family homes or rent more upscale apartments
 - Usually married or cohabiting couples, in their mid-20's or 30's, some with children, but most are without children
3. *Move-up homebuyers*
 - Typically prefer to purchase newer, larger, and therefore more expensive single-family homes
 - Typically, families with children where householders are in their late 30's to 40's
4. *Empty-nesters (persons whose children have grown and left home) and never-nesters (persons who never have children)*
 - Prefer owning but will consider renting their housing
 - Some will move to alternative lower-maintenance housing products
 - Generally, couples in their 50's or 60's
5. *Younger independent seniors*
 - Prefer owning but will consider renting their housing
 - Will often move (at least part of the year) to retirement havens in the Sunbelt and desire to reduce their responsibilities for upkeep and maintenance
 - Generally, in their late 60's or 70's

6. *Older seniors*

- May need to move out of their single-family home due to physical and/or health constraints or a desire to reduce their responsibilities for upkeep and maintenance
- Generally single females (widows) in their mid-70's or older

Demand for housing can come from several sources including: household growth, changes in housing preferences, and replacement need. Household growth necessitates building new housing unless there is enough desirable vacant housing available to absorb the increase in households. Demand is also affected by shifting demographic factors such as the aging of the population, which dictates the type of housing preferred. New housing to meet replacement need is required, even in the absence of household growth, when existing units no longer meet the needs of the population and when renovation is not feasible because the structure is physically or functionally obsolete.

Rural areas tend to have higher proportions of younger households that own their housing than in the larger growth centers or metropolitan areas such as the Twin Cities Metro Area. In addition, senior households tend to move to alternative housing at an older age. These conditions are a result of housing market dynamics, which typically provide more affordable single-family housing for young households and a scarcity of senior housing alternatives for older households.

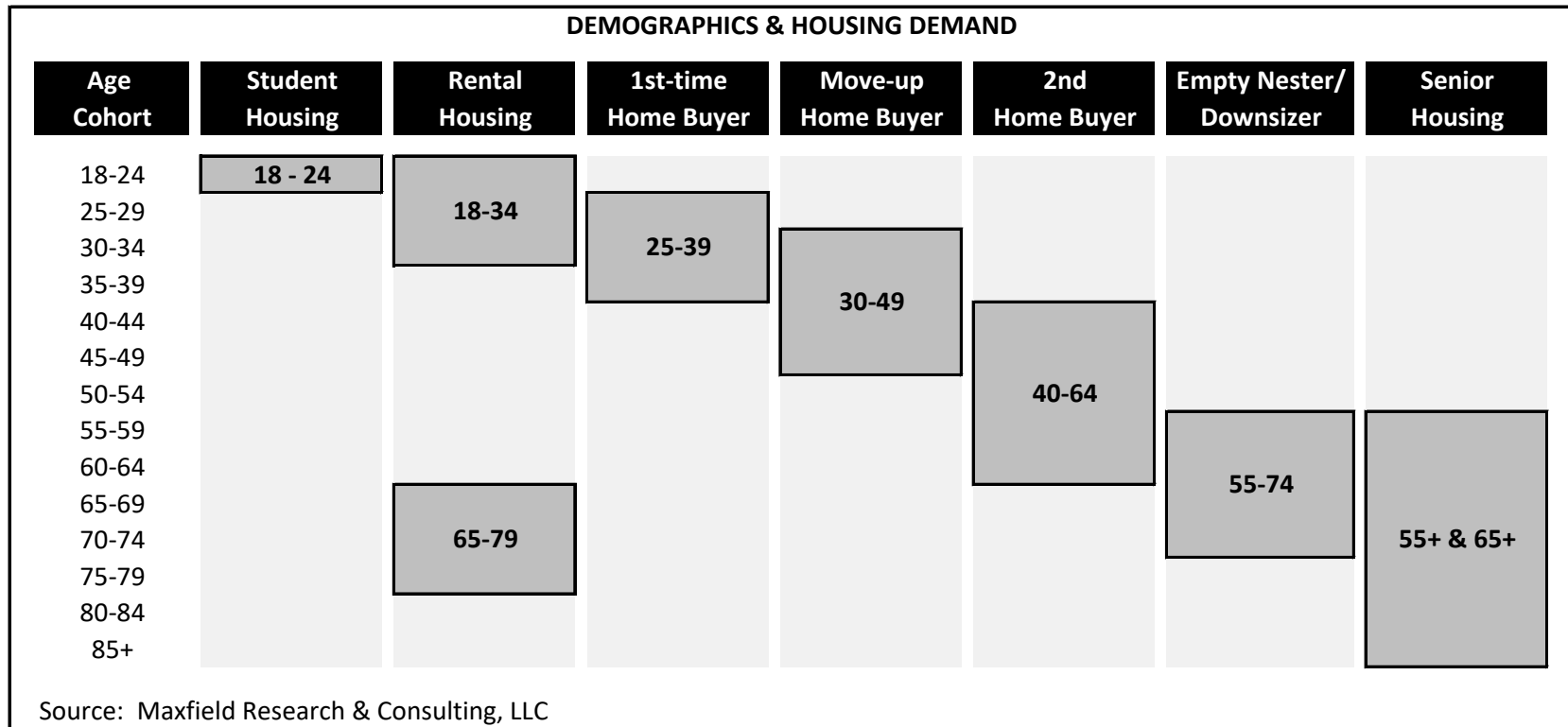
The graphic on the following page provides greater detail of various housing types supported within each housing life cycle. Information on square footage, average bedrooms/bathrooms, and lot size is provided on the subsequent graphic.

Housing Demand Overview

The previous sections of this assessment focused on demographic and economic factors driving demand for housing in Plymouth. In this section, we utilize findings from the economic and demographic analysis to calculate demand for new general occupancy housing units in Plymouth.

Housing markets are driven by a range of supply and demand factors that vary by location and submarket. The following points outline several of the key variables driving housing demand.

HOUSING DEMAND ANALYSIS



HOUSING DEMAND ANALYSIS

TYPICAL HOUSING TYPE CHARACTERISTICS				
	Housing Types	Target Market/ Demographic	Unit/Home Characteristics	Lot Sizes/ Units Per Acre ¹
For-Sale Housing	Entry-level single-family	First-time buyers: Families, couples w/no children, some singles	1,200 to 2,200 sq. ft. 2-4 BR 2 BA	80'+ wide lot 2.5-3.0 DU/Acre
	Move-up single-family	Step-up buyers: Families, couples w/no children	2,000 sq. ft.+ 3-4 BR 2-3 BA	80'+ wide lot 2.5-3.0 DU/Acre
	Executive single-family	Step-up buyers: Families, couples w/no children	2,500 sq. ft.+ 3-4 BR 2-3 BA	100'+ wide lot 1.5-2.0 DU/Acre
	Small-lot single-family	First-time & move-down buyers: Families, couples w/no children, empty nesters, retirees	1,700 to 2,500 sq. ft. 3-4 BR 2-3 BA	40' to 60' wide lot 5.0-8.0 DU/Acre
	Entry-level townhomes	First-time buyers: Singles, couples w/no children	1,200 to 1,600 sq. ft. 2-3 BR 1.5BA+	6.0-12.0 DU/Acre
	Move-up townhomes	First-time & step-up buyers: Singles, couples, some families, empty-nesters	1,400 to 2,000 sq. ft. 2-3 BR 2BA+	6.0-8.0 DU/Acre
	Executive townhomes/twinhomes	Step-up buyers: Empty-nesters, retirees	2,000+ sq. ft. 3 BR+ 2BA+	4.0-6.0 DU/Acre
	Detached Townhome	Step-up buyers: Empty-nesters, retirees, some families	2,000+ sq. ft. 3 BR+ 2BA+	4.0-6.0 DU/Acre
	Condominiums	First-time & step-up buyers: Singles, couples, empty-nesters, retirees	800 to 1,700 sq. ft. 1-2 BR 1-2 BA	Low-rise: 18.0-24.0 DU/Acre Mid-rise: 25.0+ DU/Acre Hi-rise: 75.0+ DU/Acre
Rental Housing	Apartment-style rental housing	Singles, couples, single-parents, some families, seniors	675 to 1,250 sq. ft. 1-3 BR 1-2 BA	Low-rise: 18.0-24.0 DU/Acre Mid-rise: 25.0+ DU/Acre Hi-rise: 75.0+ DU/Acre
	Townhome-style rental housing	Single-parents, families w/children, empty nesters	900 to 1,700 sq. ft. 2-4 BR 2BA	8.0-12.0 DU/Acre
	Student rental housing	College students, mostly undergraduates	550 to 1,400 sq. ft. 1-4BR 1-2 BA	Low-rise: 18.0-24.0 DU/Acre Mid-rise: 25.0+ DU/Acre Hi-rise: 50.0+ DU/Acre
Both	Senior housing	Retirees, Seniors	550 to 1,500 sq. ft. Suites - 2BR 1-2 BA	Varies considerably based on senior product type

¹ Dwelling units(DU) per acre expressed in net acreage (minus right-of-way)

Source: Maxfield Research & Consulting, LLC

Demographics

Demographics are major influences that drive housing demand. Household growth and formations are critical (natural growth, immigration, etc.), as well as household types, size, age of householders, incomes, etc.

Economy & Job Growth

The economy and housing market are intertwined; the health of the housing market affects the broader economy and vice versa. Housing market growth depends on job growth (or the prospect of); jobs generate income growth which results in the formation of more households and can stimulate household turnover. Historically low unemployment rates have driven both existing home purchases and new-home purchases. Lack of job growth leads to slow or diminishing

household growth, which in-turn relates to reduced housing demand. Additionally, low income growth results in fewer move-up buyers which results in diminished housing turnover across all income brackets.

Consumer Choice/Preferences

A variety of factors contribute to consumer choice and preferences. Many times a change in family status is the primary factor for a change in housing type (i.e. growing families, empty-nest families, etc.). However, housing demand is also generated from the turnover of existing households who decide to move for a range of reasons. Some households may want to move-up, downsize, change their tenure status (i.e. owner to renter or vice versa), or simply move to a new location.

Supply (Existing Housing Stock)

The stock of existing housing plays a crucial component in the demand for new housing. There are a variety of unique household types and styles, not all of which are desirable to today's consumers. The age of the housing stock is an important component for housing demand, as communities with aging housing stocks have higher demand for remodeling services, replacement new construction, or new home construction as the current inventory does not provide the supply that consumers seek. Plymouth and suburbs like it have an older housing that results in higher demand for remodeling services and infill redevelopment.

Pent-up demand may also exist if supply is unavailable as householders postpone a move until new housing product becomes available.

Housing Finance

Household income is the fundamental measure that dictates what a householder can afford to pay for housing costs. According to the U.S. Department of Housing and Urban Development (HUD), the definition of affordability is for a household to pay no more than 30% of its annual income on housing (including utilities). Families who pay more than 30% of their income for housing (either rent or mortgage) are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care.

After the Great Recession lenders "tightened the belts" on mortgage lending and it was difficult for many buyers to obtain financing. The ability of buyers to obtain mortgage financing has recently lightened as lenders have eased restrictions that had been in place since the recession. However, lenders are still requiring substantially higher credit scores and equity than last decade.

Mobility

It is important to note that demand is somewhat fluid between other west/northwest Twin Cities Metro Area communities and will be impacted by development activity in nearby areas.

Estimated Demand for General-Occupancy Rental Housing

Table HD-1 presents our calculation of general-occupancy rental housing demand in Plymouth. This analysis identifies potential demand for rental housing that is generated from both new households and turnover households. A portion of the demand will be drawn from existing households in Plymouth that want to upgrade their housing situations.

The 65 and older cohort is typically not a target market for new general occupancy rental housing, therefore, we limit demand from household growth to only those households under the age of 65. According to our projections, Plymouth is expected to add 3,300 new households between 2017 and 2030 (651 households non-senior households). We estimate that 32% will be renting their housing, which produces demand for 208 new general occupancy rental housing units between 2017 and 2030.

Demand is also forecast to emerge from existing Market Area householders through turnover. An estimated 7,592 renter-occupied households under the age of 65 are located in Plymouth in 2017. Based on mobility data from the Census Bureau, an estimated 85% of renter households will turnover in a 15-year period, resulting in 6,453 existing households projected to turnover. Finally, we estimate 15% of the existing renter households will seek new rental housing, resulting in demand for 968 rental units through 2030.

Next, we estimate that 25% of the total demand for new rental units in Plymouth will come from people currently living outside of the City of Plymouth. Adding demand from outside Plymouth to the existing demand potential, results in a total estimated demand for 1,568 rental housing units by 2030.

Based on a review of rental household incomes and sizes and monthly rents at existing projects, we estimate that approximately 12% of the total demand will be for subsidized housing (30% AMI), 26% will be for affordable housing (40% to 60% AMI), and 62% will be for market rate housing (non-income restricted).

As of September 2017, there are no pending or under construction market rate rental housing projects that will satisfy the calculated rental housing demand, which results in an overall demand for 188 subsidized units, 408 affordable units, and 972 market rate units.

HOUSING DEMAND ANALYSIS

TABLE HD-1 RENTAL HOUSING DEMAND CITY OF PLYMOUTH 2017 to 2030																		
Demand from Projected Household Growth																		
Projected HH growth under age 65 in Plymouth 2017 to 2030 ¹			651															
(times) Estimated % to be renting their housing ²	x	32%																
(equals) Projected demand from new HH growth	=		208															
Demand from Existing Renter Households																		
Number of renter HHs (age 64 and younger) in Plymouth (2017) ³			7,592															
(times) Estimated percent of renter turnover ⁴	x	85%																
(equals) Total existing households projected to turnover	=		6,453															
(times) Estimated percent desiring new rental housing	x	15%																
(equals) Demand from existing households	=		968															
(equals) Total demand from HH growth and existing HHs 2017 to 2030	=		1,176															
(times) Demand from outside Plymouth			25%															
(equals) Total demand potential for rental housing, 2017 to 2030			1,568															
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Deep Subsidy</th> <th style="width: 33%;">Shallow Subsidy</th> <th style="width: 33%;">Market Rate</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">12%</td> <td style="text-align: center;">26%</td> <td style="text-align: center;">62%</td> </tr> <tr> <td style="text-align: center;">188</td> <td style="text-align: center;">408</td> <td style="text-align: center;">972</td> </tr> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">188</td> <td style="text-align: center;">408</td> <td style="text-align: center;">972</td> </tr> </tbody> </table>	Deep Subsidy	Shallow Subsidy	Market Rate	12%	26%	62%	188	408	972	0	0	0	188	408	972	
Deep Subsidy	Shallow Subsidy	Market Rate																
12%	26%	62%																
188	408	972																
0	0	0																
188	408	972																
(times) Percent of rental demand by product type ⁵	x																	
(equals) Total demand potential for general-occupancy rental housing units	=																	
(minus) Units under construction or pending ⁶	-																	
(equals) Excess demand for new general occupancy rental housing	=																	
¹ Estimated household growth based on projections as adjusted by Maxfield Research and Consulting LLC ² Pct. of renter households under the age of 65 (ACS - 2015, ESRI, Maxfield Research and Consulting LLC). ³ Estimate based on 2015 ACS renter households and new renter household growth 2010 to 2017 (under age 65) ⁴ Based on on turnover from 2015 American Community Survey for households moving over 15-year period. ⁵ Based on the combination of current rental product and household incomes of area renters (non-senior households) ⁶ Pending/proposed/under construction at 95% occupancy.																		
Source: Maxfield Research and Consulting LLC																		

Estimated Demand for Independent Adult/Few Service Senior Housing

Table HD-2 presents our demand calculations for market rate independent senior housing in Plymouth in 2017 and 2022.

In order to determine demand for independent senior housing, the potential market is reduced to those households that are both age and income qualified. The age-qualified market is defined as seniors age 55 and older, although independent living projects will primarily attract seniors age 65 and older.

We calculate that the minimum income needed to afford monthly rents is \$35,000 or more plus homeowner households with incomes between \$25,000 and \$34,999 who would be able to supplement their incomes with the proceeds from a home sale. We estimate the number of age/income-qualified senior households in the Plymouth in 2017 to be 12,077 households.

Adjusting to include appropriate long-term capture rates for each age cohort (0.5% of households age 55 to 64, about 5.5% of households age 65 to 74, and 16.5% of households age 75 and over) results in a market rate demand potential for 620 independent senior rental units in 2017.

Some additional demand will come from outside the Plymouth. We estimate that 25% of the long-term demand for independent senior housing will be generated by seniors currently residing outside the Plymouth. This demand will consist primarily of parents of adult children living in the Plymouth area, individuals who live just outside of Plymouth and have an orientation to the area, as well as former residents who desire to return. Together, the demand from Plymouth seniors and demand from seniors who would relocate to Plymouth results in a demand for 827 market rate active adult units in 2017.

Independent demand in Plymouth is apportioned between ownership and rental housing. Based on the age distribution, homeownership rates and current product available in Plymouth, we project that 50% of Plymouth's demand will be for adult ownership housing (413 units) and 50% will be for rental housing (413 units).

Next, we subtract existing competitive market rate units (minus a vacancy factor of 5% to allow for sufficient consumer choice and turnover) from the owner and rental demand. Subtracting the existing competitive market rate units results in total demand potential for 214 adult owner-occupied units and 261 active adult rental units.

HOUSING DEMAND ANALYSIS

TABLE HD-2 MARKET RATE ACTIVE ADULT HOUSING DEMAND CITY OF PLYMOUTH 2017 and 2030						
	2017			2030		
	Age of Householder			Age of Householder		
	55-64	65-74	75+	55-64	65-74	75+
# of Households w/ Incomes of >\$35,000 ¹	5,725	3,639	2,024	5,816	4,594	2,462
# of Households w/ Incomes of \$25,000 to \$34,999 ¹	+ 240	234	358	+ 227	300	458
(times) Homeownership Rate	x 87%	89%	76%	x 87%	89%	76%
(equals) Total Potential Market Base	= 5,934	3,847	2,296	= 6,013	4,861	2,810
(times) Potential Capture Rate	x 0.5%	5.5%	16.5%	x 0.5%	5.5%	16.5%
(equals) Demand Potential	= 30	212	379	= 30	267	464
Potential Demand from Residents	= 620			= 761		
(plus) Demand from Outside Plymouth (25%)	+ 207			+ 254		
(equals) Total Demand Potential	= 827			= 1,015		
	Owner-Occupied	Renter-Occupied		Owner-Occupied	Renter-Occupied	
(times) % by Product Type	x 50%	x 50%		x 50%	x 50%	
(equals) Demand Potential by Product Type	= 413	= 413		= 507	= 507	
(minus) Existing and Pending MR Active Adult Units ²	- 200	- 152		- 200	- 245	
(equals) Excess Demand for MR Active Adult Units	= 214	= 261		= 308	= 262	

¹ 2030 calculations define income-qualified households as all households with incomes greater than \$45,000 and homeowner households with incomes between \$35,000 and \$44,999.
² Existing and pending are deducted at market equilibrium (95% occupancy).

Source: Maxfield Research and Consulting LLC

Adjusting for inflation, we have estimated that households with incomes of \$45,000 or more and homeowners with incomes of \$35,000 to \$44,999 would income qualify for market rate independent senior housing in 2030. Considering the growth in the older adult base, the income distribution of the older adult population in 2030, and planned and under construction units at Cherrywood Pointe and Agora the methodology projected that demand will be 308 adult owner-occupied units and 262 adult rental units in the City of Plymouth.

Estimated Demand for Subsidized/ Affordable Independent Senior Housing

Table HD-3 presents our demand calculations for subsidized/affordable independent senior housing in the City of Plymouth in 2017 and 2030.

In order to arrive at the potential age and income qualified base for low income and affordable housing, we exclude all senior (65+) households with incomes more than \$40,000. We exclude homeowner households with incomes between \$35,000 and \$39,999, as these households would have additional equity that could be converted to monthly income following the sales of their single-family homes.

Households in a need-based situation (either requiring services or financial assistance) more readily move to housing alternatives than those in non-need based situations. Hence, the capture rate among each age group is higher than for market rate housing. Capture rates are employed at 2.0% for households age 55 to 64, 10.0% for households age 65 to 74 and 20.0% for households age 75 and older.

Seniors in need-based situations are less selective when securing housing than those in non-need based situations. We estimate that a high-quality site would capture a greater proportion of total demand for financially-assisted housing than for market rate housing.

Using the methodology described above results in a demand potential for 463 total subsidized or affordable senior units. However, after adjusted for household incomes demand results for 236 subsidized units and 227 affordable units.

Next we subtract existing competitive units from the overall demand. There are 96 existing subsidized independent units and 77 affordable independent units in Plymouth (minus a vacancy factor of 3% to allow for sufficient consumer choice and turnover). After we subtract the existing units, there is 140 units demand for subsidized units and demand for 150 affordable units in 2017.

Adjusting for inflation, we estimate that households with incomes up to \$45,000 would be candidates for financially-assisted independent housing in 2030. We reduce the potential market by homeowner households earning between \$40,000 and \$44,999 that would exceed income-restrictions once equity from their home sales is converted to monthly income.

Following the same methodology, we project demand in Plymouth for 227 subsidized units and 234 affordable units in 2030.

HOUSING DEMAND ANALYSIS

TABLE HD-3 DEEP-SUBSIDY/SHALLOW SUBSIDY INDEPENDENT HOUSING DEMAND CITY OF PLYMOUTH 2017 and 2030						
	2017			2030		
	Age of Householder			Age of Householder		
	55-64	65-74	75+	55-64	65-74	75+
# of Households w/ Incomes of <\$40,000 ¹	839	884	1,315	834	1,134	1,819
Less Households w/ Incomes of \$35,000 to \$39,999 ¹ (times) Homeownership Rate	- 135 x 87%	- 139 x 89%	- 195 x 76%	- 114 x 87%	- 150 x 89%	- 229 x 76%
(equals) Total Potential Market Base	= 722	= 760	= 1,167	= 735	= 1,001	= 1,645
(times) Potential Capture Rate	x 2.0%	x 10.0%	x 20.0%	x 2.0%	x 10.0%	x 20.0%
(equals) Demand Potential	= 14	= 76	= 233	= 15	= 100	= 329
(equals) Potential Demand from Residents		= 324			= 444	
(plus) Demand from outside Plymouth (30%)		+ 139			+ 190	
(equals) Total Demand Potential		= 463			= 634	
	Deep-Subsidy		Shallow-Subsidy		Deep-Subsidy	
(times) % by Product Type	x 51%		x 49%	x 51%		x 49%
(equals) Demand Potential by Product Type	= 236	= 227	= 323	= 311		
(minus) Existing and Pending Independent Units ²	- 96	- 77	- 96	- 77		
(equals) Excess Demand for Aff/Sub Units	= 140	= 150	= 227	= 234		

¹ 2030 calculations define income-qualified households as all households with incomes less than \$45,000. Homeowner households with incomes between \$40,000 and \$44,999 are excluded from the market potential for financially-assisted housing.

² Existing units are deducted at market equilibrium, or 97% occupancy.

Source: Maxfield Research and Consulting LLC

Estimated Demand for Congregate Senior Housing

Table HD-4 presents our demand calculations for congregate housing in Plymouth in 2017 and 2030.

The potential age- and income-qualified base for congregate senior housing includes all senior (65+) households with incomes of \$35,000 as well as homeowner households with incomes between \$30,000 and \$34,999 who would qualify with the proceeds from the sales of their homes. The proportion of eligible homeowners is based on the 2010 Census homeownership rates of the Plymouth seniors. The number of age, income, and asset-qualified households in Plymouth is estimated to be 5,903 households in 2017.

Demand for congregate housing is need-drive, which reduces the qualified market to only the portion of seniors who need some assistance. Adjusting to include appropriate capture rates for each age cohort (1.5% of households age 65 to 74 and 13.0% of households age 75 and older) results in a local demand potential for 337 congregate units in 2017.

We estimate that seniors currently residing outside of the Plymouth will generate 25% of the demand for congregate senior housing. Together, the demand from Plymouth seniors and demand from seniors who are willing to locate to the Plymouth totals 449 congregate units in 2017.

HOUSING DEMAND ANALYSIS

As of September 2017, there are no pending or under construction senior housing projects with congregate units. This results in an overall demand for 355 congregate units.

Adjusting for inflation, we estimate that households with incomes of \$45,000 or more and senior homeowners with incomes between \$40,000 and \$44,999 would qualify for congregate housing in 2030. Following the same methodology, demand is calculated to increase to 457 units through 2030.

TABLE HD-4				
MARKET RATE CONGREGATE RENTAL HOUSING DEMAND				
CITY OF PLYMOUTH				
2017 and 2030				
	2017		2030	
	Age of Householder		Age of Householder	
	65-74	75+	65-74	75+
# of Households w/ Incomes of >\$35,000 ¹	3,639	2,024	4,594	2,462
# of Households w/ Incomes of \$30,000 to \$34,999 ¹	+	117	+	150
(times) Homeownership Rate	x	89%	x	89%
(equals) Total Potential Market Base	=	3,743	=	4,728
		2,160		2,636
(times) Potential Capture Rate ²	x	1.5%	x	1.5%
(equals) Potential Demand	=	56	=	71
		+ 281		+ 343
Potential Demand from Plymouth Residents	=	337	=	414
(plus) Demand from Outside Plymouth (25%)	+	112	+	138
(equals) Total Demand Potential	=	449	=	551
(minus) Existing and Pending Congregate Units ³	-	94	-	94
(equals) Total Congregate Demand Potential	=	355	=	457
<p>¹ 2030 calculations define income-qualified households as all households with incomes greater than \$45,000 and homeowner households with incomes between \$40,000 and \$44,999.</p> <p>² The potential capture rate is derived from data from the Summary Health Statistics for the U.S. Population: National Health Interview Survey, 2008 by the U.S. Department of Health and Human Services. The capture rate used is the percentage of seniors needing assistance with IADLs, but not ADLs (seniors needing assistance with ADLs typically need assistance with multiple IADLs and are primary candidates for service-intensive assisted living).</p> <p>³ Competitive units include congregate units at 95% occupancy (market equilibrium).</p>				
Source: Maxfield Research and Consulting LLC				

Estimated Demand for Assisted Living Housing

Table HD-5 presents our demand calculations for assisted living senior housing in Plymouth in 2017 and 2030. This analysis focuses on the potential *private pay/market rate* demand for assisted living units.

The availability of more intensive support services such as meals, housekeeping and personal care at assisted living facilities usually attracts older, frailer seniors. According to the 2009 Overview of Assisted Living (which is a collaborative research project by the American Association of Homes and Services for the Aging, the American Seniors Housing Association, National Center for Assisted Living, and National Investment Center for the Seniors Housing and Care Industry), the average age of residents in freestanding assisted living facilities was 87 years in 2008. Hence, the age-qualified market for assisted living is defined as seniors ages 75 and over, as we estimate that of the half of demand from seniors under age 87, almost all would be from seniors over age 75. In 2017, there are a projected 4,052 seniors age 75 and older in Plymouth.

Demand for assisted living housing is need-driven, which reduces the qualified market to only the portion of seniors who need assistance. According to a study completed by the U.S. Census Bureau (1999 panels of the Survey of Income and Program Participation (SIPP) files), 30% of seniors needed assistance with everyday activities (from 25.5% of 75-to-79-year-olds, to 33.6% of 80-to-84-year-olds and 51.6% of 85+ year olds). Applying these percentages to the senior population yields a potential assisted living market of 1,658 seniors in Plymouth.

Due to the supportive nature of assisted living housing, most daily essentials are included in monthly rental fees, which allow seniors to spend a higher proportion of their incomes on housing with basic services. Therefore, the second step in determining the potential demand for assisted living housing in Plymouth is to identify the income-qualified market based on a senior's ability to pay the monthly rent. We consider seniors in households with incomes of \$40,000 or greater to be income-qualified for assisted living senior housing in Plymouth. Households with incomes of \$40,000 could afford monthly assisted living fees of \$3,000 by allocating 90% of their income toward the fees.

According to the 2009 Overview of Assisted Living, the average arrival income of assisted living residents in 2008 was \$27,260, while the average annual assisted living fee was \$37,281 (\$3,107/month). This data highlights that seniors are spending down assets to live in assisted living and avoid institutional care. Thus, in addition to households with incomes of \$40,000 or greater, there is a substantial base of senior households with lower incomes who income-qualify based on assets – their homes, in particular.

Seventy-one percent of the age 75+ households in the Plymouth are homeowners, and the median resale price of homes through 2016 in Plymouth was \$325,000. Seniors selling their homes for the median resale price would generate about \$302,250 in proceeds after selling costs. With an average monthly fee of \$3,000, these proceeds would last about 101 months in

HOUSING DEMAND ANALYSIS

an assisted living facility, which is higher than the average length of stay in assisted living (27 months according to the 2009 Overview of Assisted Living). For each age group in Table HD-5, we estimate the income-qualified percentage to be all seniors in households with incomes above \$40,000 (who could afford monthly rents of \$3,000+ per month) plus 40% of the estimated seniors in homeowner households with incomes below \$40,000 (who will spend down assets, including home-equity, in order to live in assisted living housing). This results in a total potential market of 1,177 units in 2017.

Because the vast majority of assisted living residents are single (88% according to the 2009 Overview of Assisted Living), our demand methodology multiplies the total potential market by the percentage of seniors age 75+ in Plymouth living alone. Based on 2010 Census data, only 47% of age 75+ households in Plymouth lived alone. Applying this percentage results in a total base of 554 age/income-qualified singles. The 2009 Overview of Assisted Living found that 12% of residents in assisted living were couples. There are a total of 629 age/income-qualified seniors needing assistance in Plymouth including both couples and singles.

We estimate that roughly 60% of the qualified market needing significant assistance with Activities of Daily Living (“ADLs”) would either remain in their homes or less service-intensive senior housing with the assistance of a family member or home health care, or would need greater care provided in a skilled care facility. The remaining 40% could be served by assisted living housing. Applying this potential market penetration rate of 40% results in demand for 252 assisted living units in 2017.

We estimate that a portion of demand for assisted living units (25%) will come from outside of the Plymouth. Applying this figure results in total potential demand for 336 market rate assisted living units in Plymouth.

There are a total of 115 assisted living units in Plymouth. After deducting these competitive units (minus a 93% occupancy rate) from the total demand potential, we calculate that there is a demand for 220 assisted living units in the Plymouth in 2017.

While incorporating 83 under construction or pending assisted living units, the same calculations are applied to the age/income-qualified base in 2030, resulting in demand for 234 units.

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TABLE HD-5 MARKET RATE ASSISTED LIVING DEMAND CITY OF PLYMOUTH 2017 and 2030						
	2017			2030		
	People	Percent Needing Assistance ¹	Number Needing Assistance ¹	People	Percent Needing Assistance ¹	Number Needing Assistance ¹
Age group						
75 - 79	2,067	25.5%	527	3,178	25.5%	810
80 - 84	1,365	33.6%	459	1,948	33.6%	655
85+	1,302	51.6%	672	1,726	51.6%	891
Total	4,734		1,658	6,852		2,356
Percent Income-Qualified²			71%			61%
Total potential market			1,177			1,437
(times) Percent living alone			x 47%			49%
(equals) Age/income-qualified singles needing assistance			= 554			704
(plus) Proportion of demand from couples (12%) ³			+ 76			96
(equals) Total age/income-qualified market needing assistance			= 629			800
(times) Potential penetration rate ⁴			x 40%			40%
(equals) Potential demand from Plymouth residents			= 252			320
(plus) Proportion from outside Plymouth (25%)			+ 84			107
(equals) Total potential assisted living demand			= 336			427
(minus) Existing market rate assisted living units ⁵			- 115			193
(equals) Total excess market rate assisted living demand			= 220			234
¹ The percentage of seniors unable to perform or having difficulty with ADLs, based on the publication Health, United States, 1999 Health and Aging Chartbook, conducted by the Centers for Disease Control and Prevention and the National Center for Health Statistics.						
² Includes households with incomes of \$40,000 or more (who could afford monthly rents of \$3,000+ per month) plus 40% of estimated owner households with incomes below \$40,000 (who will spend down assets, including home-equity, in order to live in assisted living housing).						
³ The 2009 Overview of Assisted Living (a collaborative project of AAHSA, ASHA, ALFA, NCAL & NIC) found that 12% of assisted living residents are couples.						
⁴ We estimate that 60% of the qualified market needing assistance with ADLs could either remain in their homes or reside at less advanced senior housing with the assistance of a family member or home health care, or would need greater care provided in a skilled care facility.						
⁵ Existing and pending units at 93% occupancy.						
Source: Maxfield Research and Consulting LLC						

Additional demand could come from seniors that will need to receive supplemental income in order to afford assisted living or memory care housing. While some of these seniors will receive income from the sales of their homes, others will need to rely on other sources of public aid. The Elderly Waiver program has provided public funding for seniors who wish to receive “alternative” care that allows them to stay in the community as opposed to receiving similar care at a nursing home.

Most assisted living developments require residents to have lived in their facility for a certain amount of time before they can use a waiver, and many try to limit the amount of waivers accepted within the community to around roughly 10% to 20%. Some facilities accept higher amounts of residents on waivers and many newer facilities do not accept any waivers.

Estimated Demand for Memory Care Housing

Table HD-6 presents our demand calculations for market rate memory care senior housing in Plymouth in 2017 and 2030.

Demand is calculated by starting with the estimated Plymouth senior (age 65+) population in 2017 and multiplying by the incidence rate of Alzheimer’s/dementia among this population’s age cohorts. According to the Alzheimer’s Association (Alzheimer’s Disease Facts and Figures, 2007), 2% of seniors ages 65 to 74, 19% of seniors ages 75 to 84, and 42% of seniors ages 85+ are afflicted with Alzheimer’s Disease. This yields a potential market of 1,320 seniors in Plymouth in 2017.

Because of the staff-intensive nature of dementia care, typical monthly fees for this type of housing are at least \$4,000 and range upwards of \$5,000 to \$6,000 when including service packages. Based on our review of senior household incomes in Plymouth, homeownership rates and home sale data, we estimate that 65% of seniors in Plymouth would have incomes and/or assets to sufficiently cover the costs of memory care housing. This figure takes into account married couple households where one spouse may have memory care needs and allows for a sufficient income for the other spouse to live independently. Multiplying the number of seniors with Alzheimer’s/dementia (1,320 seniors) by the income-qualified percentage results in a total of 858 age/income-qualified seniors in the Plymouth in 2017.

According to data from the National Institute of Aging, about 25% of all individuals with memory care impairments comprise the market for memory care housing units. This figure considers that seniors in the early stages of dementia will be able to live independently with the care of a spouse or other family member, while those in the later stages of dementia will require intensive medical care that would only be available in skilled care facilities. Applying this figure to the estimated population with memory impairments yields a potential market of about 215 seniors in the Plymouth.

HOUSING DEMAND ANALYSIS

We estimate that 25% of the overall demand for memory care housing would come from outside of Plymouth. Together, demand totals 286 memory care units in 2017.

TABLE HD-6 MARKET RATE MEMORY CARE DEMAND CITY OF PLYMOUTH 2017 and 2030		
	2017	2030
65 to 74 Population	7,208	9,985
(times) Dementia Incidence Rate ¹	x <u>2%</u>	x <u>2%</u>
(equals) Estimated Age 65 to 74 Pop. with Dementia	= 144	= 200
75 to 84 Population	3,367	5,126
(times) Dementia Incidence Rate ¹	x <u>19%</u>	x <u>19%</u>
(equals) Estimated Age 75 to 84 Pop. with Dementia	= 640	= 974
85+ Population	1,277	1,726
(times) Dementia Incidence Rate ¹	x <u>42%</u>	x <u>42%</u>
(equals) Estimated Age 85+ Pop. with Dementia	= 536	= 725
(equals) Total Senior Population with Dementia	= 1,320	= 1,899
(times) Percent Income/Asset-Qualified ²	x <u>65%</u>	x <u>69%</u>
(equals) Total Income-Qualified Market Base	= 858	= 1,310
(times) Percent Needing Specialized Memory Care Assistance	x <u>25%</u>	x <u>25%</u>
(equals) Total Need for Dementia Care	= 215	= 328
(plus) Demand from Outside the City of Plymouth (25%)	+ <u>72</u>	+ <u>109</u>
Total Demand for Memory Care Units	= 286	437
(minus) Existing and Pending Memory Care Units ³	- 113	- 157
(equals) Excess Demand Potential	= 173	= 279
¹ Alzheimer's Association: Alzheimer's Disease Facts & Figures (2007)		
² Includes seniors with income at \$60,000 or above (\$75,000 in 2030) plus 40% of homeowners with incomes below this threshold (who will spend down assets, including home-equity), in order to live in memory care housing.		
³ Existing memory care units at 7% vacancy rate.		
Source: Maxfield Research and Consulting LLC		

We reduce the demand potential by accounting for the existing memory care product in Plymouth. There are a total of 122 units; however, we reduce the competitive units to include memory care units at a 7% vacancy rate. Subtracting these competitive units results in a demand for 173 units.

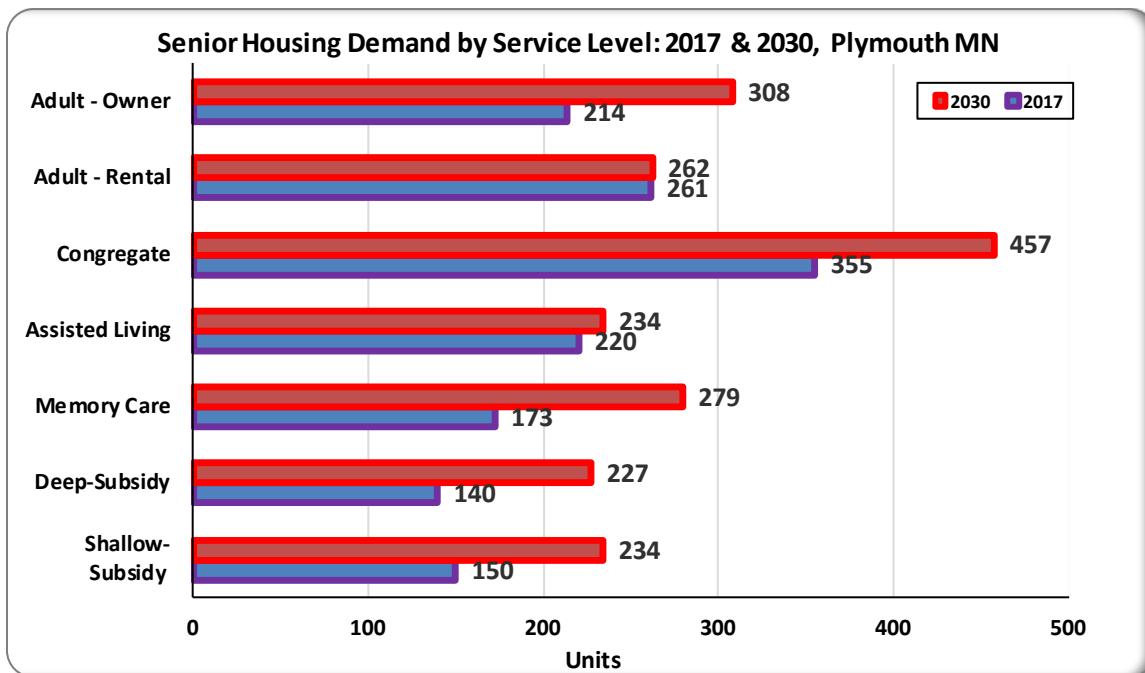
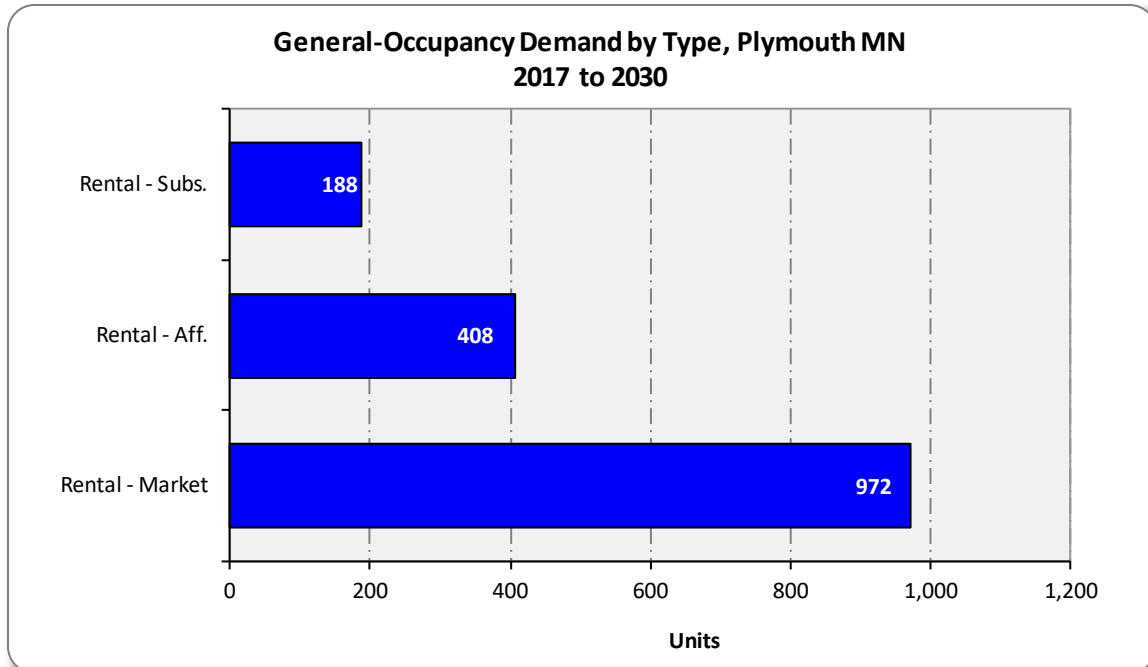
The same calculations are applied to the age/income-qualified base in 2030, while incorporating 47 units at a 7% vacancy rate that are under construction or pending. Following the same methodology, potential demand for market rate memory care units is expected to increase to 279 units in Plymouth through 2030.

Introduction/Overall Housing Recommendations

This section summarizes demand calculated for specific housing products in Plymouth and recommends development concepts to meet the housing needs forecast for the City. All recommendations are based on findings of the *Comprehensive Rental Housing Market Study*. The following table and charts illustrate calculated demand by product type. It is important to recognize that housing demand is highly contingent on projected household growth and land availability; household growth could be higher if additional acreage was available for housing development/redevelopment.

TABLE CR-1 SUMMARY OF HOUSING DEMAND CITY OF PLYMOUTH September 2017		
Type of Use	2017-2030	
General-Occupancy		
Rental Units - Market Rate	972	
Rental Units - Shallow-Subsidy	408	
Rental Units - Deep-Subsidy	188	
Total General Occupancy Supportable	1,568	
	2017	2030
Age-Restricted (Senior)		
Market Rate		
Adult Few Services (Active Adult)	475	570
<i>Ownership</i>	214	308
<i>Rental</i>	261	262
Congregate	355	457
Assisted Living	220	234
Memory Care	173	279
Total Market Rate Senior Supportable	1,223	1,541
Shallow-Subsidy/Deep-Subsidy		
Active Adult - Shallow-Subsidy	150	234
Active Adult - Deep-Subsidy	140	227
Total Shallow/Deep-Subsidy Senior Supportable	290	461
Source: Maxfield Research & Consulting, LLC		

RECOMMENDATIONS AND CONCLUSIONS



Based on the finding of our analysis and demand calculations, Table CR-2 provides a summary of the recommended development concepts by product type for the City of Plymouth. It is important to note that these proposed concepts are intended to act as a development guide to most effectively meet the housing needs of existing and future households in Plymouth. The recommended development types do not directly coincide with total demand as illustrated in Table CR-1.

RECOMMENDATIONS AND CONCLUSIONS

TABLE CR-2 RECOMMENDED HOUSING DEVELOPMENT CITY OF PLYMOUTH 2017 to 2030					
	Purchase Price/ Monthly Rent Range ¹	No. of Units 2017 - 2020	No. of Units 2021 - 2025	No. of Units 2026 - 2030	Total
General Occupancy Rental Housing					
Market Rate Rental Housing					
Apartment-style	\$1,000/1BR - \$2,800/3BR	280 - 300	180 - 200	350 - 400	810 - 900
Townhomes	\$2,300/2BR - \$2,700/3BR	50 - 60	40 - 50	30 - 40	120 - 150
Total		330 - 360	220 - 250	380 - 440	930 - 1,050
Affordable Rental Housing					
Apartment-style	Moderate Income ³	130 - 140	100 - 120	130 - 140	360 - 400
Subsidized	30% of Income ⁴	50 - 60	50 - 60	50 - 60	150 - 180
Total		180 - 200	150 - 180	180 - 200	510 - 580
Total Renter-Occupied		510 - 560	370 - 430	560 - 640	1,440 - 1,630
Senior Housing (i.e. Age Restricted)					
Senior Coop./Ownership Active Adult	\$50,000 - \$200,000+	60 - 70	80 - 90	90 - 100	230 - 260
Active Adult Market Rate Rental ⁵	\$1,400/1BR - \$2,700/2BR	70 - 80	90 - 100	80 - 90	240 - 270
Active Adult Affordable Rental ⁵	Moderate Income ³	80 - 90	60 - 70	80 - 90	220 - 250
Active Adult Subsidized Rental ⁵	30% of Income ⁴	50 - 60	50 - 60	80 - 90	180 - 210
Independent Living/Congregate	\$2,050/1BR - \$4,000/2BR	120 - 130	140 - 150	150 - 160	410 - 440
Assisted Living	\$3,750/EFF - \$5,300/2BR	50 - 60	70 - 80	100 - 110	220 - 250
Memory Care	\$2,900/EFF - \$6,000/2BR	60 - 70	70 - 80	90 - 100	220 - 250
Total Senior Units		490 - 560	560 - 630	670 - 740	1,720 - 1,930
Total - All Units		1,000 - 1,120	930 - 1,060	1,230 - 1,380	3,160 - 3,560
¹ Pricing in 2017 dollars. Pricing can be adjusted to account for inflation. ² Replacement need, infill, and redevelopment. ³ Affordability subject to income guidelines per Minnesota Housing Finance Agency (MHFA). See Table HA-1 for Hennepin County Income limits. ⁴ Subsidized housing will be difficult to develop financially ⁵ Alternative development concept is to combine active adult affordable and market rate active adult into mixed-income senior community Note - Recommended development does not coincide with total demand. Plymouth may not be able to accommodate all recommended housing types based on land availability and development constraints.					
Source: Maxfield Research & Consulting, LLC					

Recommended Housing Product Types

General Occupancy Rental Housing

Our competitive inventory identified that the vacancy rates for all types of general occupancy rental product is below market equilibrium (1.6% vacancy rate) indicating pent-up demand for rental housing.

Due to the age and positioning of the existing rental supply (pre-1990 construction), a significant portion of units are priced at or below guidelines for affordable housing, which indirectly satisfies demand from some households that income-qualify for financially assisted housing.

RECOMMENDATIONS AND CONCLUSIONS

However, the growing renter base is seeking newer rental properties with additional and updated amenities that are not offered in older developments. As a result, there are numerous new market rate apartments buildings with vacancies near or below market equilibrium.

- Market Rate Rental – Currently, there are no general-occupancy units under construction or planned in the short-term; and there is substantial demand (972 units) found through 2030. As of September 2017, there were only 115 vacancies found among market rate properties for a total vacancy of 1.7% which is well below market equilibrium and suggest the demand for more market rate rental units. Plymouth can accommodate a variety of development types; from higher-density suburban five-story buildings to lower-density townhome rentals. Because the land supply is dwindling fast in Plymouth, the majority of new construction will likely be multifamily style with densities of at least 12 - 20 units per acre.
- Affordable General Occupancy Multifamily Housing– There are five affordable rental projects in Plymouth; these developments have been very successful and are all 100% occupied as of September 2017. The existing products target households between 50% and 60% of area median income. However, new affordable projects would have income-restrictions established by HUD and could target households with incomes between 50% to 80% of area median income; however, some could be workforce units with affordability up to 120% AMI.

We find that demand exists for about 408 affordable units through 2030. Affordable housing attracts households that cannot afford market rate housing units but do not income-qualify for deep subsidy housing. One-bedroom units target singles and couples, whereas two and three-bedroom units target families. Some retired seniors would also be attracted to an affordable concept. We recommend an affordable concept that would target residents at 50% to 60% AMI.

Demand is strong for both stand-alone tax credit projects and for mixed-income market rate developments that have a small proportion of units at 50% to 60% AMI. Similar to market rate general-occupancy rental housing, new affordable development will likely occur in multifamily development with higher densities.

- Subsidized General Occupancy Multifamily Housing– There are four subsidized rental projects in Plymouth; these developments also are all 100% occupied as of September 2017. The existing products target households at 30% Adjusted Gross Income (AGI). These properties should consist of the standard one- & two-bedroom unit types but should also include some three- & four-bedroom units for families with children. However, because of lack of funding sources for subsidized housing it will be exceptionally challenging to develop future deep subsidy projects.

Senior Housing

As illustrated in Table CR-1, demand exists for all types of senior housing product types in Plymouth. Over the course of the next decade, there is demand for roughly 2,000 new senior units through 2030. The unmet of additional senior housing is recommended in order to provide housing opportunity to these aging residents in their stages of later life. The development of additional senior housing serves a two-fold purpose in meeting the housing needs in Plymouth: older adult and senior residents are able to relocate to new age-restricted housing in Plymouth, and existing homes and rental units that were occupied by seniors become available to other new households. Hence, development of additional senior housing does not mean the housing needs of younger households are neglected; it simply means that a greater percentage of housing need is satisfied by housing unit turnover. The types of housing products needed to accommodate the aging population base are discussed individually in the following section.

- *Active Adult Rental* – Demand was projected for about 262 market rate active adult rental units in Plymouth through 2030. Currently, there is only one market rate rental active adult products in Plymouth; *Vicksburg Crossing* which has 61 market rate units.

Development of this product could be in a separate stand-alone facility or in a mixed-income project. A mixed-income building could include a portion of units that would be affordable to seniors with incomes established the Minnesota Housing Finance Agency. We recommend a new project of about 70 to 80 units later this decade. The project modest rents with base monthly rents starting at \$1,400 per month for one-bedroom units and from \$2,700 or more for two-bedroom units. The project should offer transportation, activities, and optional services for housekeeping, etc.

- *Active Adult Senior Cooperative/Owner* – There are three senior age-restricted for-sale developments in Plymouth at this time – *Cornerstone Cooperative* which has 77 units, *Gramercy Park Cooperative Northwest* also with 77 units, and *Gramercy Park of Plymouth* with 56 units. Maxfield Research and Consulting, LLC projected demand for 308 active adult ownership units through 2030. The cooperative model, in particular, appeals to a larger base of potential residents in that it has characteristics of both rental and ownership housing. Cooperative developments allow prospective residents an ownership option and homestead tax benefits without a substantial upfront investment as would be true in a condominium development or life care option. Maxfield Research & Consulting, LLC has found the cooperative model to be very well-accepted in suburban communities in the Twin Cities Metro Area and across the Midwest. As such, we recommend a 60 to 70-unit senior cooperative later this decade with sliding scale share costs starting at about \$50,000.

RECOMMENDATIONS AND CONCLUSIONS

- *Affordable/Subsidized Active Adult Rental* – Plymouth’s demand for affordable and subsidized senior housing is approximately 234 affordable units and 227 subsidized units through 2030. Although this product would be well received by seniors in and near the Plymouth area; it can be difficult to develop given financing challenges and development costs. Affordable senior housing will likely be a low-income tax credit project through the Minnesota Housing Finance Agency (MHFA). MHFA recently started to consider affordable senior housing projects under the tax credit program and is slowly starting to expand financing for this product type. Affordable/subsidized senior housing products can also be incorporated into a mixed-income building which may increase the projects financial feasibility.
- *Independent Living/Congregate* – There are two designated congregate units (meals and limited support service) in Plymouth, *The Waters of Plymouth* with 31 units and *Summer Wood of Plymouth* with 68 units. Demand was calculated for upwards of 457 congregate units through 2030. Based on this demand, multiple projects could be supported in the community to meet this forthcoming demand. The approved Agora senior project would meet a portion of this demand if the project moves forward. We recommend a mix of one-bedroom, one-bedroom plus den, and two-bedroom units. Base monthly rents should range from \$2,000 for one-bedroom units to \$4,000 for two-bedroom units. The monthly fees should include all utilities (except telephone and basic cable/satellite television) and the following services:
 - I’m OK program;
 - Daily noon meal;
 - Regularly scheduled van transportation;
 - Social, health, wellness and educational programs;
 - 24-hour emergency call system; and
 - Complimentary use of laundry facilities.

In addition, meals and other support and personal care services will be available to congregate residents on a fee-for-service basis, such as laundry, housekeeping, etc. When their care needs increase, residents also have the option of receiving assisted living packages in their existing units.

New independent housing could be developed adjacent to an existing senior project or in a stand-alone development.

- *Assisted Living and Memory Care Senior Housing* – Based on our analysis, there is substantial demand for assisted living and memory care in Plymouth through 2030. We project demand to support an additional 234 assisted living units and 279 memory care units through 2030. Although we find strong demand today, the demand will grow with each subsequent year as the baby boomers start to desire services next decade. Demand will be strongest after 2020.

RECOMMENDATIONS AND CONCLUSIONS

We recommend assisted living units include a mix of studio, and one-bedroom, and a few two-bedroom units with base monthly rents ranging from \$3,750 to \$5,300. Memory care unit mix should be mostly studios and one-bedroom units with a few two-bedroom units for couples with base monthly rents ranging from \$2,900 to \$6,000. Memory care units should be located in a secured, self-contained wing located on the first floor of a building and should feature its own dining and common area amenities including a secured outdoor patio and wandering area.

The base monthly fees should include all utilities (except telephone and basic cable/satellite television) and the following services:

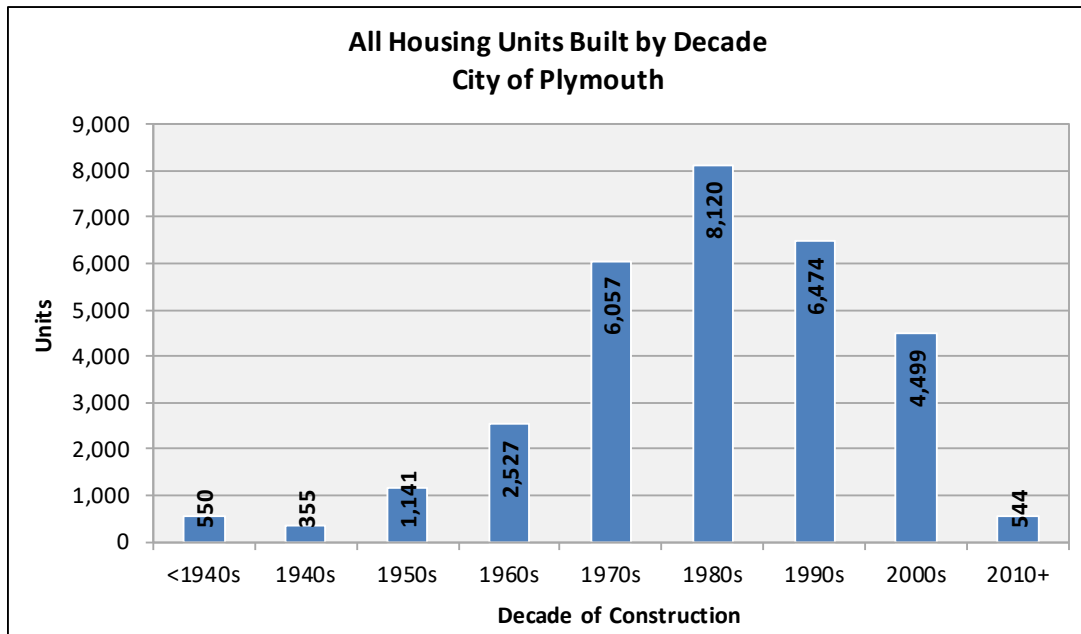
- Three meals per day;
- Weekly housekeeping and linen service;
- Two loads of laundry per week;
- Weekly health and wellness clinics;
- Meal assistance;
- Regularly scheduled transportation;
- Professional activity programs and scheduled outings;
- Nursing care management;
- I'm OK program;
- 24-hour on site staffing;
- Personal alert pendant with emergency response; and
- Nurse visit every other month.

Additional personal care packages should also be available for an extra monthly charge above the required base care package. A care needs assessment is recommended to be conducted to determine the appropriate level of services for prospective residents.

Challenges and Opportunities

Table CR-2 identified and recommended housing types that would satisfy the housing needs in Plymouth over the next thirteen years. The following were identified as the greatest challenges and opportunities for developing the recommended housing types (in no particular order - alphabetically).

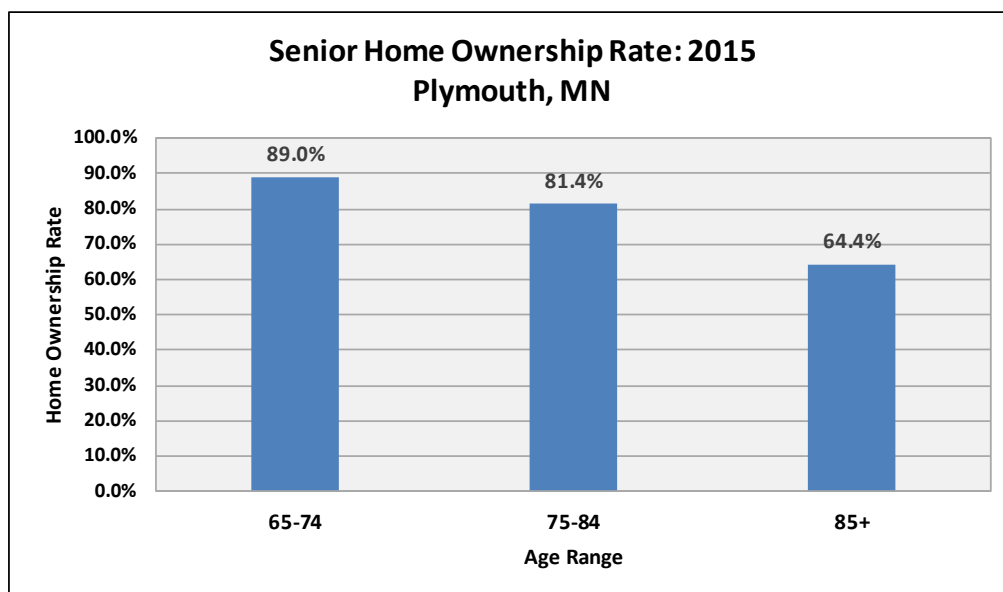
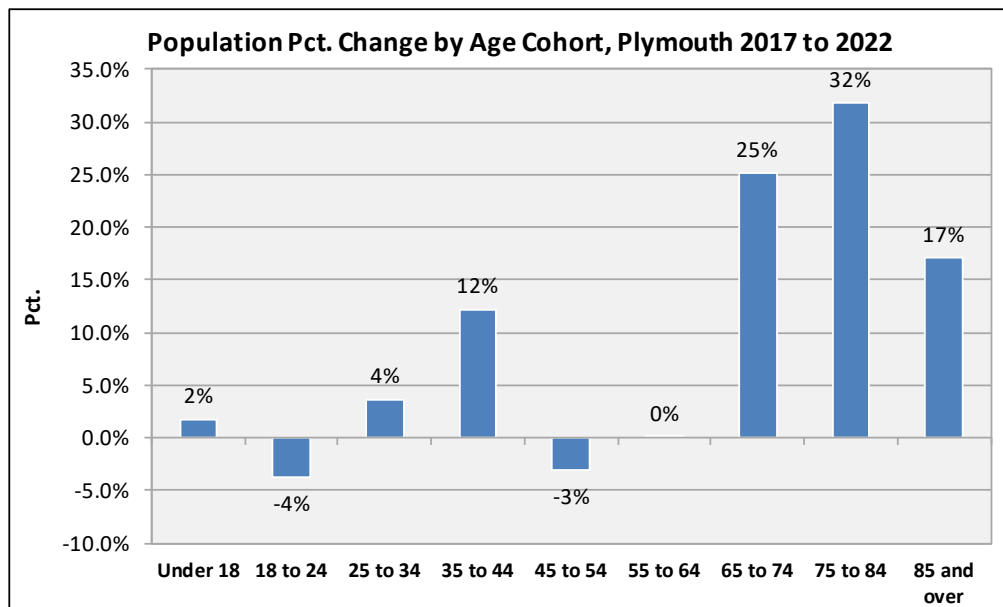
- Age of Housing Stock.** As illustrated in *the Housing Characteristics* Section of the report (Table HC-3, the median year built for a home in Plymouth is 1965 and about 35% of the housing stock was built prior to 1980. Although the housing stock is newer compared to other inner-ring suburban communities, a portion of the housing stock in Plymouth may be in need of remodeling programs that reinvestment into the city’s owner and renter housing stock.



- Affordability.** As illustrated in Table HA-5, most householders (84%) can afford the average market rate rent for a one-bedroom at an existing rental project (\$950) in Plymouth. However, when adjusted for rental household incomes the affordability decreases as 65% of renters could afford a one-bedroom rent of \$1,300. Because of the higher rent structures at the new market rental buildings being constructed in Plymouth, the minimum incomes needed to afford a luxury rental are significantly higher than that of the existing rental housing stock in Plymouth. The new rental housing development target “lifestyle renters” or those with higher incomes who have enough money to buy a house but choose to rent for the convenience and lifestyle. Many of these renters may be cost burdened, but they choose so for the location, amenities, and proximity to transit.

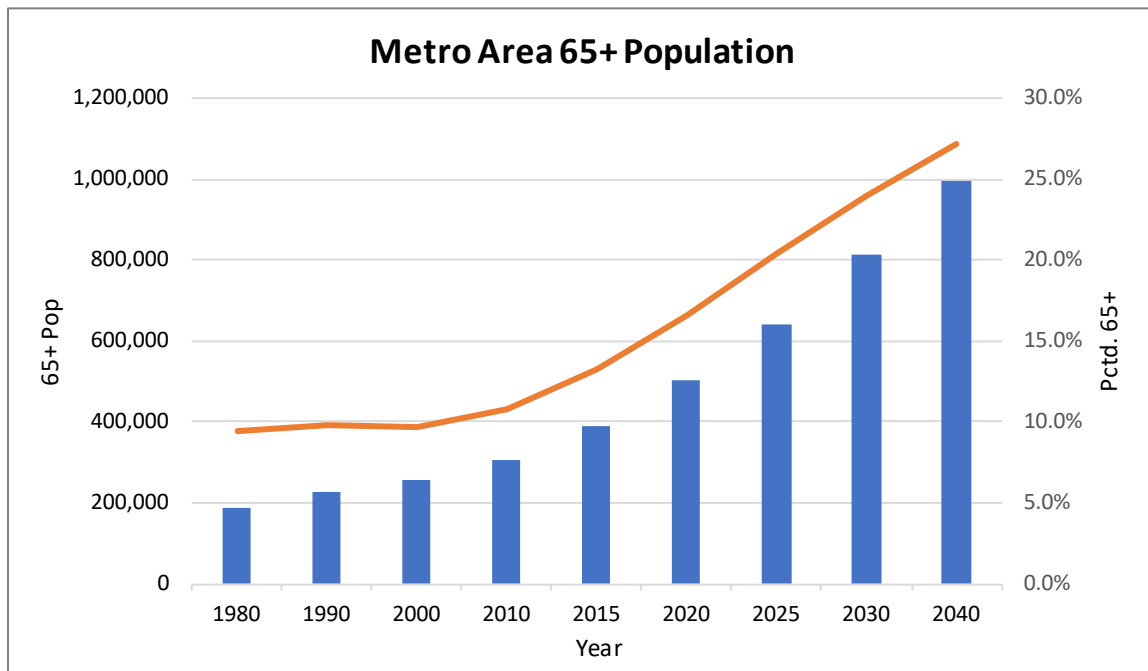
CHALLENGES AND OPPORTUNITIES

- **Aging Population/City Services.** As illustrated in Table D-2, there is significant growth in the Plymouth senior population, especially among ages 75 to 84 (+32% growth through 2022). In addition, Table D-6 shows the Plymouth homeownership rates among seniors 65+ is approximately 83%. High homeownership rates among seniors indicate there could be lack of senior housing options, or simply that many seniors prefer to live in their home and age in place. Because of the rising population of older adults, demand for alternative maintenance-free housing products should be rising. In addition, demand for home health care services and home remodeling programs to assist seniors with retrofitting their existing homes should also increase.



CHALLENGES AND OPPORTUNITIES

The following chart illustrates the historic and projected growth rates of the senior (ages 65+) population in the seven-county Metro Area. At present, seniors account for about 13.5% of the Twin Cities population in 2017 which is projected to double over the next two decades. By 2040, 27% of the population in the Twin Cities (993,000+) will be 65 and nearly 75% of all seniors in the State of Minnesota will be residing in the Metro Area.



The vast majority of older adults desire to stay in their home as they age. Because many seniors will remain in their homes, these households will desire various services such as remodeling/home modifications, snow removal, lawn care, transportation, home health care, etc. Many of these older adults and boomers will also desire to “down size or right size” from single-family homes into maintenance-free options with fewer stairs and upkeep. At the same time, there is a growing demand for seniors residing with relatives (primarily children) increasing the demand for multi-generational households.

Because of the anticipated increase in multi-generational households, the demand for accessory dwelling units (ADU) will increase; more commonly termed “granny flats” or “in-law apartments.” Granny flats are designed for 1-2 persons and are a separate structure from the single-family home and are receiving more attention today in part because of the tiny house trend on home improvement shows. Granny flats provide affordability and independence for seniors and allow many seniors to age in place.

CHALLENGES AND OPPORTUNITIES

The demand for senior services will increase and today's boomers will have higher expectations. Senior programming was historically tied to a senior center; however, today's active seniors want to walk, run, bike, play tennis or pickleball, and want proximity to cultural amenities and transit. As people age, they generally drive less and rely more on transit and walking. Many seniors will eventually decide to own only one car and will seek walkable neighborhoods and convenient access to transit, commercial goods and services, health care, and cultural and recreational activities. Finally, seniors desire to live in close proximity to their adult children and grandchildren. Plymouth has a large population of adult children and vibrant schools, which will aid future senior housing growth in Plymouth.

Although service needs change as people age; seniors can be a fiscal plus to cities as they generate tax revenue but not students attending public school. Seniors are typically less dependent on automobiles, and rely more on walking, biking and on public transit. At the same time, seniors will desire other services such as library usage, community center/fitness centers, and first responder calls. Generally, service-intensive senior housing buildings generate a higher volume of emergency calls than other residential land uses. On average, it is estimated a senior housing building will generate 1 call per unit per year. We recommend Plymouth consider policies that will assist the housing and service needs of seniors in the future.

- **Housing Resources & Programs.** Many communities and local Housing and Redevelopment Authorities (HRAs) offer programs to promote and preserve the existing housing stock. In addition, there are various regional and state organizations that assist local communities enhance their housing stock. The City of Plymouth utilizes numerous housing programs, including Architectural Design Service, Community Fix Up Loans, Emergency Repair Grant Fund, First – Time Homebuyer, Foreclosure Prevention, Home Improvement Deferred Loan, Rehabilitation Loans, and Reverse Mortgage Assistance, among other housing programs and services. The following is a sampling of potential programs that could be explored to aid and improve Plymouth's housing stock.
 - Construction Management Services – Assist homeowners regarding local building codes, reviewing contractor bids, etc. Typically provided as a service by the building department. This type of service could also be rolled into various remodeling related programs.
 - Corridor Housing Program - Program where city provides a funding source to acquire sites for multifamily housing development on or near community, commercial, or transit corridors. Funds can also be utilized to assemble larger redevelopment sites for new mixed-income and ownership multifamily housing. At least 20% of the units need to be affordable. Typically located near a TOD or BRTOD location.
 - Density Bonuses – Since the cost of land is a significant barrier to housing affordability, increasing densities can result in lower housing costs by reducing the land costs per unit. The City of Plymouth can offer density bonuses as a way to encourage higher-density residential development while also promoting an affordable housing component.

CHALLENGES AND OPPORTUNITIES

- Fast Track Permitting – Program designed to reduce delays during the development process that ultimately add to the total costs of housing development. By expediting the permitting process costs can be reduced to developers while providing certainty into the development process. Typically, no-cost to the local government jurisdiction.
- Home Improvement Area (HIA) - HIAs allow a townhome or condo association low interest loans to finance improvements to common areas. Unit owners repay the loan through fees imposed on the property, usually through property taxes. Typically, a "last resort" financing tool when associations are unable to obtain traditional financing due to the loss of equity from the real estate market or deferred maintenance on older properties.
- Inclusionary Housing – Inclusionary housing policies and programs rely on private sector housing developers to create affordable housing as they develop market rate projects. Inclusionary zoning encourages or mandates the inclusion of a set proportion of affordable housing units in each new market rate housing development above a certain size. These programs are popular approaches for local and state governments, in high cost urban areas to encourage the development of affordable housing.
- Infill Lots – The City or HRA purchase blighted or substandard housing units from willing sellers. After the home has been removed, the vacant land is placed into the program for future housing redevelopment. Future purchasers can be builders or the future owner-occupant who has a contract with a builder. Typically, all construction must be completed within an allocated time-frame (one year in most cases).
- Land Banking – Land Banking is a program of acquiring land with the purpose of developing at a later date. After a holding period, the land can be sold to a developer (often at a price lower than market) with the purpose of developing affordable housing.
- Live Where You Work - Program designed to promote homeownership in the same community where employees work. City provides a grant to eligible employees to purchase a home near their workplace. Employers can also contribute or match the city's contribution. Participants must obtain a first mortgage through participating lenders. The grant can be allocated towards down payment assistance, closing costs, and gap financing. Some restrictions apply (i.e. length of employment, income, home buyer education, etc.)
- Realtor Forum - Typically administered by City with partnership by local school board. Inform local Realtors about school district news, current development projects, and other marketing factors related to real estate in the community. In addition, Realtors usually receive CE credits.
- Remodeling Tours - City-driven home remodeling tour intended to promote the enhancement of the housing stock through home renovations/additions. Homeowners open their homes to the public to showcase home improvements.
- Rent to Own - Income-eligible families rent for a specified length of time with the end-goal of buying a home. The HRA saves a portion of the monthly rent that will be allocated for a down payment on a future house.
- Shallow Rent Subsidy: The HRA funds a shallow rent subsidy program to provide program participants living in market rate rentals a rent subsidy (typically about \$100 to \$300 per month).

CHALLENGES AND OPPORTUNITIES

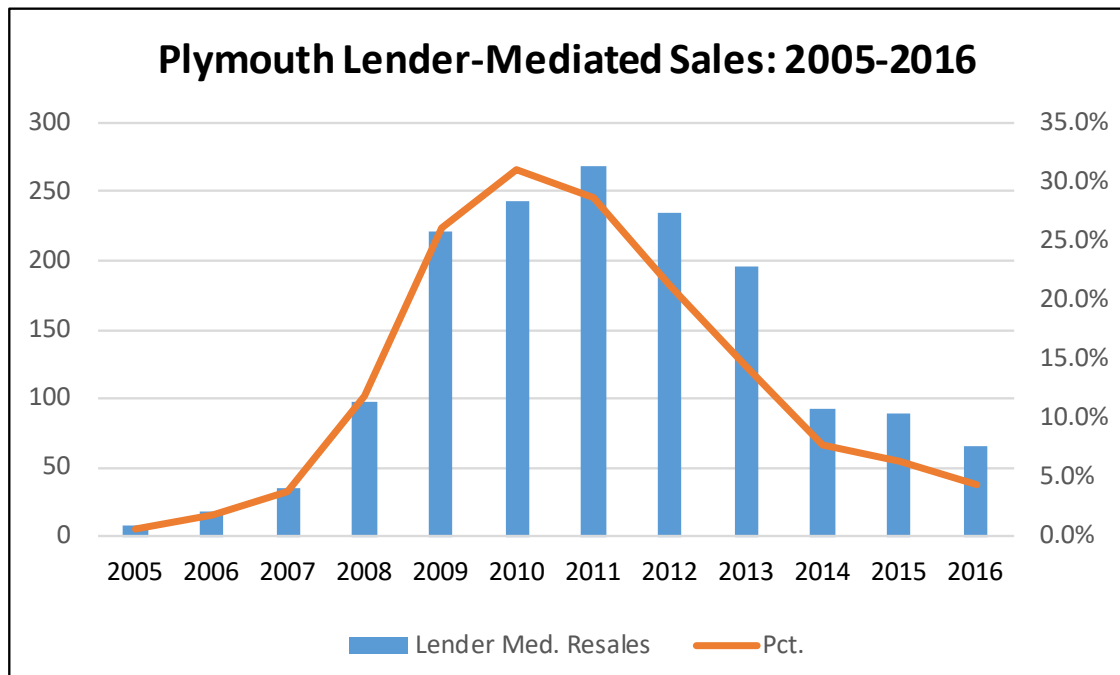
- Tax Increment Financing (TIF): Program that offers communities a flexible financing tool to assist housing projects and related infrastructure. TIF enables communities to dedicate the incremental tax revenues from new housing development to help make the housing more affordable or pay for related costs. TIF funds can be used to provide a direct subsidy to a particular housing project or they can also be used to promote affordable housing by setting aside a portion of TIF proceeds into a dedicated fund from other developments receiving TIF.
 - Transfer of Development Rights – Transfer of Development Rights (TDR) is a program that shifts the development potential of one site to another site or different location, even a different community. TDR programs allow landowners to sever development rights from properties in government-designated low-density areas, and sell them to purchasers who want to increase the density of development in areas that local governments have selected as higher density areas.
 - Waiver or Reduction of Development Fees – There are several fees developers must pay including impact fees, utility and connection fees, park land dedication fees, etc. To help facilitate affordable housing, some fees could be waived or reduced to pass the cost savings onto the housing consumer.
- **Job Growth/Employment/Inflow.** Historically, low unemployment rates have driven both existing home purchases and new-home purchases. Lack of job growth leads to slow or diminishing household growth, which in-turn relates to reduced housing demand. Like most areas across the Twin Cities and Minnesota, the unemployment rate peaked in 2009 during the Great Recession at 9.1%. However, over the past 8 years the unemployment rate has decreased annually and is presently at only 3.1% in Plymouth through 2016. Although the low unemployment rate is positive, if the unemployment rate continues to decline it could be difficult for Plymouth businesses to find enough labor to fill job openings.

In addition, Plymouth is home to many large companies that are job generators in the Twin Cities. Nearly 90% of the jobs in Plymouth are filled by non-residents of the community. As a result, there is a tremendous opportunity to capture these workers as residents and employees in the City of Plymouth.

- **Land Supply (Dwindling).** The City of Plymouth continues to develop and with each passing year has fewer areas that can accommodate single-family and multifamily residential development. Most of the vacant land is located in the northwest sector of Plymouth and most this land will be developed over the next decade. As a result, many of the housing concepts identified on Table CR-1 may have to seek out infill or redevelopment sites. As the land supply dwindles upward pressure on land costs will likely ensue resulting in higher acquisition costs for development that may drive up the consumer's price on housing.
- **Lender-mediated Properties.** Lender-mediated properties in Plymouth have declined substantially since the housing downturn and Great Recession of last decade. Lender mediated properties (i.e. foreclosures and short sales) accounted for 20% to 30% of transactions in between 2009 and 2012 before declining annually since and comprising about 4.4% of

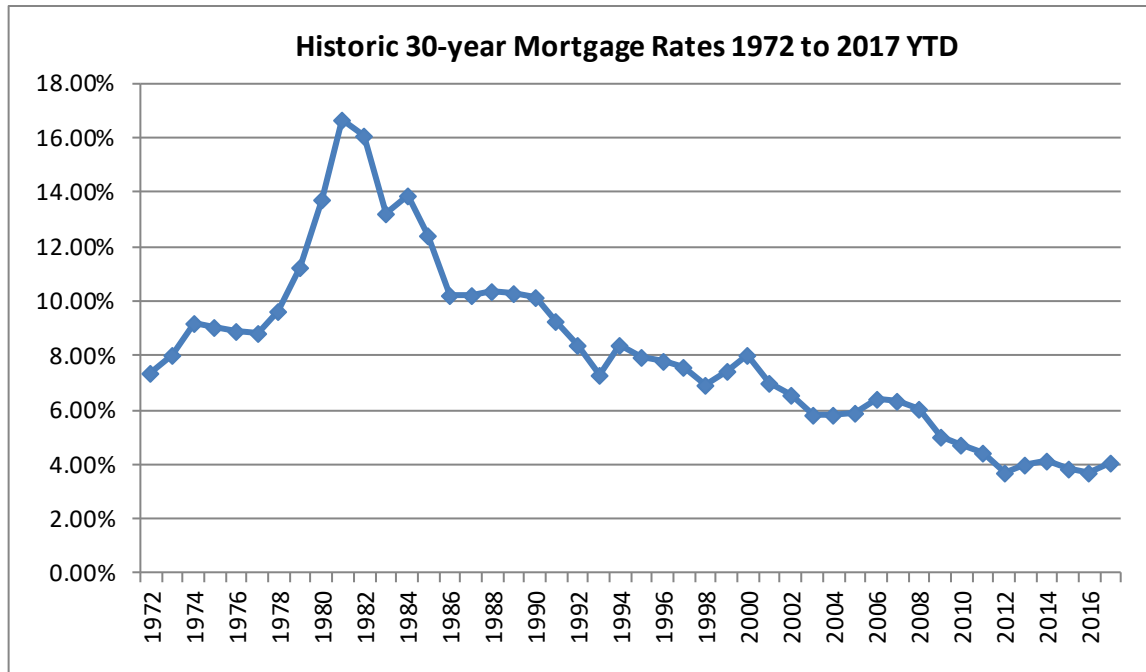
CHALLENGES AND OPPORTUNITIES

transactions in 2016. Plymouth experienced far fewer foreclosures than many communities across the Metro Area that experienced much higher rates of short sales and foreclosures. The continued decline in lender-mediated properties will enhance the overall real estate market and pricing will continue to gain from all the losses of last decade. As most homeowners have regained lost equity, the Plymouth housing market should continue to experience stronger velocity as existing homeowners who were unable to move now may have the equity to pursue a trade-up home.



- **Mortgage Rates.** Mortgage rates play a crucial part in housing affordability. Lower mortgage rates result in a lower monthly mortgage payment and buyers receiving more home for their dollar. Rising interest rates often require homebuyers to raise their down payment in order to maintain the same housing costs. Mortgage rates have remained at historic lows over the past several years coming out of the Great Recession. The Federal Reserve has raised the short-term interest rate only twice since the recession; however, they have hinted at rates increasing in 2017. However, at this time it is unknown if the central bank will raise rates to head off inflation. A significant increase in rates (+1% or more; over 5% in the short term) would greatly affect the housing market and would slow projected for-sale housing demand.

The following chart illustrates historical mortgage rate averages as compiled by Freddie Mac. The Freddie Mac Market Survey (PMMS) has been tracking mortgage rates since 1971 and is the most relied upon benchmark for evaluating mortgage interest market conditions. The Freddie Mac survey is based on 30-year mortgages with a loan-to-value of 80%.



- **Millennials.** The Millennials (generally defined as persons born in the 1980 and 1990s) are now bigger than the Baby Boom generation and have begun impacting real estate development. The 80 million Millennials have begun to influence real estate as they formed new households. However, many Millennials' are delaying home ownership due to high student loan debt and social changes (i.e. delayed marriage, delayed childbearing, delayed careers, etc.). The median first-time home buyer is now age 32 (an older Millennial) which is up from age 30 about a decade ago. Increasing monthly rents for rental housing in the Twin Cities has also affected the ability of Millennials' to save for a down payment and qualify for a mortgage.

Although Millennials' have favored more urban locations and are typically renters today, survey's show they are not that different in their preferences from other generations. Many millennials' have indicated they still desire to live in the suburbs, however they desire communities with amenities such as parks, walking trails, shopping, proximity to jobs, and entertainment. Once Millennials' start having kids, many will begin households that will shift from renters to buyers.

Because Plymouth has strong employment and relatively affordable older housing stock compared to other inner-ring suburban areas, we believe there is an opportunity to capture the Millennials in Plymouth from households currently residing in other inner-ring areas seeking more housing value for their dollar.

- **Naturally Occurring Affordable Housing/Preservation.** As illustrated in Table R-8 in the *Rental Market Analysis* section, about 46% of the market rate rental housing stock in Plymouth is affordable at 50% to 60% of area median incomes. According to the Harvard's Joint Center for Housing Studies (JCHS) unsubsidized rentals account for more than 75% of the affordable housing stock in the United States. It is estimated that over one-third of the naturally occurring affordable housing stock is composed of smaller multifamily buildings from 5 to 49 units. Within the Twin Cities Metro Area, it is estimated that about 60% of the rental stock is unsubsidized rentals affordable to households at or below 50% AMI.

Because the unsubsidized housing market is unregulated and is fluid, there is the chance some affordable market rate units could be lost. New construction costs for apartments in Plymouth will likely exceed \$200,000 per unit; whereas an older Class B or Class C rental building may be acquired for under \$100,000 per unit. Therefore, it is typically more economical to rehabilitate an existing property than build a new one. Because of the high cost of new construction, we recommend the City monitor and maintain the unsubsidized rental market as an effort to maintain the affordable housing product type.

- **Shadow Rental Inventory.** Shadow rentals are generally considered nontraditional rentals that were previously owner-occupied single-family homes, townhomes, or condominiums. The shadow market has originally particularly fueled by homeowners who lost their home to foreclosure after the recession who opt to not rent in a traditional rental complex. Typically, short sales and foreclosures between 2009 and 2012 resulted in substantial price reductions which allowed buyers or investors to charge rents below market while still maintaining a profit. Although the shadow market rentals tend to be more affordable, renters run the risk of evictions if the owner does not pay the mortgage.

Because the City of Plymouth enforces rental licenses, the City has been able to monitor the number of non-traditional rental units in the community. According to Table HC-4, there are about 1,915 one- and two-unit homes in Plymouth serving as rental properties (22% of rental housing stock). As the housing market continues to rebound, many of these properties will likely transition back to the for-sale market. Plymouth should continue to monitor the shadow rental market to mitigate any problem properties and improve the overall rental housing stock.

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Definitions

Absorption Period – The period of time necessary for newly constructed or renovated properties to achieve the stabilized level of occupancy. The absorption period begins when the first certificate of occupancy is issued and ends when the last unit to reach the stabilized level of occupancy has signed a lease.

Absorption Rate – The average number of units rented each month during the absorption period.

Active adult (or independent living without services available) – Active Adult properties are similar to a general-occupancy apartment building, in that they offer virtually no services but have age-restrictions (typically 55 or 62 or older). Organized activities and occasionally a transportation program are usually all that are available at these properties. Because of the lack of services, active adult properties typically do not command the rent premiums of more service-enriched senior housing.

Adjusted Gross Income “AGI” – Income from taxable sources (including wages, interest, capital gains, income from retirement accounts, etc.) adjusted to account for specific deductions (i.e. contributions to retirement accounts, unreimbursed business and medical expenses, alimony, etc.).

Affordable housing – Housing that is income-restricted to households earning at or below 80% AMI, though individual properties can have income-restrictions set at 40%, 50%, 60% or 80% AMI. Rent is not based on income but instead is a contract amount that is affordable to households within the specific income restriction segment. It is essentially housing affordable to low or very low-income tenants.

Amenity – Tangible or intangible benefits offered to a tenant in the form of common area amenities or in-unit amenities. Typical in-unit amenities include dishwashers, washer/dryers, walk-in showers and closets and upgraded kitchen finishes. Typical common area amenities include detached or attached garage parking, community room, fitness center and an outdoor patio or grill/picnic area.

Area Median Income “AMI” – AMI is the midpoint in the income distribution within a specific geographic area. By definition, 50% of households earn less than the median income and 50% earn more. The U.S. Department of Housing and Urban Development (HUD) calculates AMI annually and adjustments are made for family size.

Assisted Living – Assisted Living properties come in a variety of forms, but the target market for most is generally the same: very frail seniors, typically age 80 or older (but can be much younger, depending on their particular health situation), who are in need of extensive support services and personal care assistance. Absent an assisted living option, these seniors would otherwise need to move to a nursing facility. At a minimum, assisted living properties include

two meals per day and weekly housekeeping in the monthly fee, with the availability of a third meal and personal care (either included in the monthly fee or for an additional cost). Assisted living properties also have either staff on duty 24 hours per day or at least 24-hour emergency response.

Building Permit – Building permits track housing starts and the number of housing units authorized to be built by the local governing authority. Most jurisdictions require building permits for new construction, major renovations, as well as other building improvements. Building permits ensure that all the work meets applicable building and safety rules and is typically required to be completed by a licensed professional. Once the building is complete and meets the inspector’s satisfaction, the jurisdiction will issue a “CO” or “Certificate of Occupancy.” Building permits are a key barometer for the health of the housing market and are often a leading indicator in the rest of the economy as it has a major impact on consumer spending.

Capture Rate – The percentage of age, size, and income-qualified renter households in a given area or “Market Area” that the property must capture to fill the units. The capture rate is calculated by dividing the total number of units at the property by the total number of age, size and income-qualified renter households in the designated area.

Comparable Property – A property that is representative of the rental housing choices of the designated area or “Market Area” that is similar in construction, size, amenities, location and/or age.

Concession – Discount or incentives given to a prospective tenant to induce signature of a lease. Concessions typically are in the form of reduced rent or free rent for a specific lease term, or free amenities, which are normally charged separately, such as parking.

Congregate (or independent living with services available) – Congregate properties offer support services such as meals and/or housekeeping, either on an optional basis or a limited amount included in the rents. These properties typically dedicate a larger share of the overall building area to common areas, in part, because the units are smaller than in adult housing and in part to encourage socialization among residents. Congregate properties attract a slightly older target market than adult housing, typically seniors age 75 or older. Rents are also above those of the active adult buildings, even excluding the services.

Contract Rent – The actual monthly rent payable by the tenant, including any rent subsidy paid on behalf of the tenant, to the owner, inclusive of all terms of the lease.

Demand – The total number of households that would potentially move into a proposed new or renovated housing project. These households must be of appropriate age, income, tenure and size for a specific proposed development. Components vary and can include, but are not limited to: turnover, people living in substandard conditions, rent over-burdened households, income-qualified households and age of householder. Demand is project specific.

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Density – Number of units in a given area. Density is typically measured in dwelling units (DU) per acre – the larger the number of units permitted per acre the higher the density; the fewer units permitted results in lower density. Density is often presented in a gross and net format:

- **Gross Density** – The number of dwelling units per acre based on the gross site acreage.
Gross Density = Total residential units/total development area
- **Net Density** - The number of dwelling units per acre located on the site, but excludes public right-of-way (ROW) such as streets, alleys, easements, open spaces, etc.
Net Density = Total residential units/total residential land area (excluding ROWs)

Detached housing – a freestanding dwelling unit, most often single-family homes, situated on its own lot.

Effective Rents – Contract rent less applicable concessions.

Elderly or Senior Housing – Housing where all the units in the property are restricted for occupancy by persons age 62 years or better, or at least 80% of the units in each building are restricted for occupancy by households where at least one household member is 55 years of age or better and the housing is designed with amenities, facilities and services to meet the needs of senior citizens.

Extremely low-income – person or household with incomes below 30% of Area Median Income, adjusted for respective household size.

Fair Market Rent – Estimates established by HUD of the Gross Rents needed to obtain modest rental units in acceptable conditions in a specific geographic area. The amount of rental income a given property would command if it were open for leasing at any given moment and/or the amount derived based on market conditions that is needed to pay gross monthly rent at modest rental housing in a given area. This figure is used as a basis for determining the payment standard amount used to calculate the maximum monthly subsidy for families on at financially assisted housing.

Fair Market Rent – Hennepin County 2017

	Fair Market Rent				
	EFF	1BR	2BR	3BR	4BR
Fair Market Rent	\$699	\$862	\$1,086	\$1,538	\$1,799

Floor Area Ratio (FAR) Ratio of the floor area of a building to area of the lot on which the building is located.

Foreclosure – A legal process in which a lender or financial institute attempts to recover the balance of a loan from a borrower who has stopped making payments to the lender by using the sale of the house as collateral for the loan.

Gross Rent – The monthly housing cost to a tenant which equals the Contract Rent provided for in the lease, plus the estimated cost of all utilities paid by tenants. Maximum Gross Rents for Hennepin County in 2016 are as follows:

**Gross Rent
Hennepin County – 2017**

	Maximum Gross Rent				
	EFF	1BR	2BR	3BR	4BR
30% of median	\$474	\$543	\$610	\$678	\$732
50% of median	\$791	\$905	\$1,017	\$1,130	\$1,221
60% of median	\$949	\$1,086	\$1,221	\$1,356	\$1,465
80% of median	\$1,266	\$1,448	\$1,628	\$1,808	\$1,954
100% of median	\$1,582	\$1,810	\$2,035	\$2,260	\$2,442
120% of median	\$1,899	\$2,172	\$2,442	\$2,712	\$2,931

Household – All persons who occupy a housing unit, including occupants of a single-family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements.

Household Trends – Changes in the number of households for any particular areas over a measurable period of time, which is a function of new household’s formations, changes in average household size, and net migration.

Housing Choice Voucher Program – The federal government's major program for assisting very low-income families, the elderly, and the disabled to afford decent, safe, and sanitary housing in the private market. A family that is issued a housing voucher is responsible for finding a suitable housing unit of the family's choice where the owner agrees to rent under the program. Housing choice vouchers are administered locally by public housing agencies. They receive federal funds from the U.S. Department of Housing and Urban Development (HUD) to administer the voucher program. A housing subsidy is paid to the landlord directly by the public housing agency on behalf of the participating family. The family then pays the difference between the actual rent charged by the landlord and the amount subsidized by the program.

Housing unit – House, apartment, mobile home, or group of rooms used as a separate living quarters by a single household.

HUD Project-Based Section 8 – A federal government program that provides rental housing for very low-income families, the elderly, and the disabled in privately owned and managed rental

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units. The owner reserves some or all of the units in a building in return for a Federal government guarantee to make up the difference between the tenant's contribution and the rent. A tenant who leaves a subsidized project will lose access to the project-based subsidy.

HUD Section 202 Program – Federal program that provides direct capital assistance and operating or rental assistance to finance housing designed for occupancy by elder household who have incomes not exceeding 50% of Area Median Income.

HUD Section 811 Program – Federal program that provides direct capital assistance and operating or rental assistance to finance housing designed for occupancy of persons with disabilities who have incomes not exceeding 50% Area Median Income.

HUD Section 236 Program – Federal program that provides interest reduction payments for loans which finance housing targeted to households with income not exceeding 80% Area Median Income who pay rent equal to the greater or market rate or 30% of their adjusted income.

Income limits – Maximum household's income by a designed geographic area, adjusted for household size and expressed as a percentage of the Area Median Income, for the purpose of establishing an upper limit for eligibility for a specific housing program.

	Income Limits by Household Size							
	1 pph	2 pph	3 pph	4 pph	5 pph	6 pph	7 pph	8 pph
30% of median	\$18,990	\$21,720	\$24,420	\$27,120	\$29,310	\$31,470	\$33,630	\$35,820
50% of median	\$31,650	\$36,200	\$40,700	\$45,200	\$48,850	\$52,450	\$56,050	\$59,700
60% of median	\$37,980	\$43,440	\$48,840	\$54,240	\$58,620	\$62,940	\$67,260	\$71,640
80% of median	\$50,640	\$57,920	\$65,120	\$72,320	\$78,160	\$83,920	\$89,680	\$95,520
100% of median	\$63,300	\$72,400	\$81,400	\$90,400	\$97,700	\$104,900	\$112,100	\$119,400
120% of median	\$75,960	\$86,880	\$97,680	\$108,480	\$117,240	\$125,880	\$134,520	\$143,280

Inflow/Outflow – The Inflow/Outflow Analysis generates results showing the count and characteristics of worker flows in to, out of, and within the defined geographic area.

Low-Income – Person or household with gross household incomes below 80% of Area Median Income, adjusted for household size.

Low-Income Housing Tax Credit – A program aimed to generate equity for investment in affordable rental housing authorized pursuant to Section 42 of the Internal Revenue Code. The program requires that a certain percentage of units built be restricted for occupancy to households earning 60% or less of Area Median Income, and rents on these units be restricted accordingly.

Market analysis – The study of real estate market conditions for a specific type of property, geographic area or proposed (re)development.

Market rent – The rent that an apartment, without rent or income restrictions or rent subsidies, would command in a given area or “Market Area” considering its location, features and amenities.

Market study – A comprehensive study of a specific proposal including a review of the housing market in a defined market or geography. Project specific market studies are often used by developers, property managers or government entities to determine the appropriateness of a proposed development, whereas market specific market studies are used to determine what house needs, if any, existing within a specific geography.

Market rate rental housing – Housing that does not have any income-restrictions. Some properties will have income guidelines, which are minimum annual incomes required in order to reside at the property.

Memory Care – Memory Care properties, designed specifically for persons suffering from Alzheimer’s disease or other dementias, is one of the newest trends in senior housing. Properties consist mostly of suite-style or studio units or occasionally one-bedroom apartment-style units, and large amounts of communal areas for activities and programming. In addition, staff typically undergoes specialized training in the care of this population. Because of the greater amount of individualized personal care required by residents, staffing ratios are much higher than traditional assisted living and thus, the costs of care are also higher. Unlike conventional assisted living, however, which deals almost exclusively with widows or widowers, a higher proportion of persons afflicted with Alzheimer’s disease are in two-person households. That means the decision to move a spouse into a memory care facility involves the caregiver’s concern of incurring the costs of health care at a special facility while continuing to maintain their home.

Migration – The movement of households and/or people into or out of an area.

Mixed-income property – An apartment property contained either both income-restricted and unrestricted units or units restricted at two or more income limits.

Mobility – The ease at which people move from one location to another.

Moderate Income – Person or household with gross household income between 80% and 120% of the Area Median Income, adjusted for household size.

Multifamily – Properties and structures that contain more than two housing units.

Naturally Occurring Affordable Housing – Although affordable housing is typically associated with an income-restricted property, there are other housing units in communities that indirectly provide affordable housing. Housing units that were not developed or designated with income guidelines (i.e. assisted) yet are more affordable than other units in a community are

considered “naturally-occurring” or “unsubsidized affordable” units. This rental supply is available through the private market, versus assisted housing programs through various governmental agencies. Property values on these units are lower based on a combination of factors, such as: age of structure/housing stock, location, condition, size, functionally obsolete, school district, etc.

Net Income – Income earned after payroll withholdings such as state and federal income taxes, social security, as well as retirement savings and health insurance.

Net Worth – The difference between assets and liabilities, or the total value of assets after the debt is subtracted.

Pent-up demand – A market in which there is a scarcity of supply and as such, vacancy rates are very low or non-existent.

Population – All people living in a geographic area.

Population Density – The population of an area divided by the number of square miles of land area.

Population Trends – Changes in population levels for a particular geographic area over a specific period of time – a function of the level of births, deaths, and in/out migration.

Project-Based rent assistance – Rental assistance from any source that is allocated to the property or a specific number of units in the property and is available to each income eligible tenant of the property or an assisted unit.

Redevelopment – The redesign, rehabilitation or expansion of existing properties.

Rent burden – gross rent divided by adjusted monthly household income.

Restricted rent – The rent charged under the restriction of a specific housing program or subsidy.

Saturation – The point at which there is no longer demand to support additional market rate, affordable/subsidized, rental, for-sale, or senior housing units. Saturation usually refers to a particular segment of a specific market.

Senior Housing – The term “senior housing” refers to any housing development that is restricted to people age 55 or older. Today, senior housing includes an entire spectrum of housing alternatives. Maxfield Research Inc. classifies senior housing into four categories based on the level of support services. The four categories are: Active Adult, Congregate, Assisted Living and Memory Care.

Short Sale – A sale of real estate in which the net proceeds from selling the property do not cover the sellers' mortgage obligations. The difference is forgiven by the lender, or other arrangements are made with the lender to settle the remainder of the debt.

Single-family home – A dwelling unit, either attached or detached, designed for use by one household and with direct street access. It does not share heating facilities or other essential electrical, mechanical or building facilities with another dwelling.

Stabilized level of occupancy – The underwritten or actual number of occupied units that a property is expected to maintain after the initial lease-up period.

Subsidized housing – Housing that is income-restricted to households earning at or below 30% AMI. Rent is generally based on income, with the household contributing 30% of their adjusted gross income toward rent. Also referred to as extremely low income housing.

Subsidy – Monthly income received by a tenant or by an owner on behalf of a tenant to pay the difference between the apartment's contract/market rate rent and the amount paid by the tenant toward rent.

Substandard conditions – Housing conditions that are conventionally considered unacceptable and can be defined in terms of lacking plumbing facilities, one or more major mechanical or electrical system malfunctions, or overcrowded conditions.

Target population – The market segment or segments of the given population a development would appeal or cater to.

Tenant – One who rents real property from another individual or rental company.

Tenant-paid utilities – The cost of utilities, excluding cable, telephone, or internet necessary for the habitation of a dwelling unit, which are paid by said tenant.

Tenure – The distinction between owner-occupied and renter-occupied housing units.

Turnover – A measure of movement of residents into and out of a geographic location.

Turnover period – An estimate of the number of housing units in a geographic location as a percentage of the total house units that will likely change occupants in any one year.

Unrestricted units – Units that are not subject to any income or rent restrictions.

Vacancy period – The amount of time an apartment remains vacant and is available on the market for rent.

Workforce housing – Housing that is income-restricted to households earning between 80% and 120% AMI. Also referred to as moderate-income housing.

Zoning – Classification and regulation of land use by local governments according to use categories (zones); often also includes density designations and limitations