



CITY OF WEST LINN, OR

**HOUSING CAPACITY ANALYSIS
(OREGON STATEWIDE PLANNING GOAL 10)**

**20-YEAR HOUSING NEED
2020 - 2040**

June 2021



Acknowledgments

Johnson Economics prepared this report for the City of West Linn. Johnson Economics and the City of West Linn thank the many people who helped to develop this document.

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I. INTRODUCTION

This analysis outlines a forecast of housing need within the City of West Linn. Housing need and resulting land need are forecast to 2040 consistent with 20-year need assessment requirements of Oregon Revised Statutes.¹ This report presents a housing need analysis (presented in number and types of housing units) and a residential land need analysis, based on those projections.

The primary data sources used in generating this forecast were:

- Portland State University Population Research Center
- Metro
- U.S. Census
- Environics Analytics Inc.²
- Oregon Employment Department
- City of West Linn
- Clackamas County
- Other sources are identified as appropriate.

This analysis relies heavily on Census data from both the Decennial Census, and the American Community Survey (ACS). Generally, data from the ACS has a larger statistical margin of error than the 10-year Census. This analysis relies whenever possible on the most recent ACS 5-year estimates. The 5-year estimates have the lowest margin of error in comparison to the ACS 3-year and 1-year estimates. All Census data feature some margin of error but remain the best source of data available on many demographic and housing subjects.

II. CITY OF WEST LINN DEMOGRAPHIC PROFILE

SUMMARY

The following table (Figure 2.1) presents a profile of City of West Linn demographics from the 2000 and 2010 Census. It also reflects the estimated population of this area as of 2019 from PSU estimates, forecasted forward to 2020 using the growth rate since 2010.

- West Linn is a City of nearly 26,000 people located in Clackamas County on the southern edge of the Portland metropolitan area.
- Based on estimated population, West Linn is the 20th largest city in the state by population, similar in size to other regional cities such as Tualatin, Wilsonville, and Frost Grove. West Linn has about 75% of the population of neighboring Oregon City.
- West Linn has grown by over 3,700 people since 2000 or 17%. In contrast, Clackamas County and the state experienced population growth of 25% and 24% respectively. (US Census and PSU Population Research Center)
- West Linn was home to an estimated 9,948 households in 2020, an increase of roughly 2,200 households since 2000. The percentage of families has remained steady since 2000, at near 76% of all households. The city has a larger share of family households than Clackamas County (69%) and the state (63%). Average household size is estimated to have fallen during this period and is similar to the county average.

¹ ORS 197.628; OAR 660-025

² Environics Analytics Inc. is a third-party company providing data on demographics and market segmentation. It licenses data from the Nielson Company which conducts direct market research including surveying of households across the nation. Nielson combines proprietary data with data from the U.S. Census, Postal Service, and other federal sources, as well as local-level sources such as Equifax, Vallassis and the National Association of Realtors. Projections of future growth by demographic segments are based on the continuation of long-term and emergent demographic trends identified through the above sources.

- West Linn’s estimated average household size is 2.6 persons, equal to that of Clackamas County and slightly higher than the statewide average of 2.5.

FIGURE 2.1: WEST LINN DEMOGRAPHIC PROFILE

POPULATION, HOUSEHOLDS, FAMILIES, AND YEAR-ROUND HOUSING UNITS					
	2000	2010	Growth	2020	Growth
	(Census)	(Census)	00-10	(PSU)	10-20
Population ¹	22,261	25,109	13%	25,995	4%
Households ²	7,745	9,523	23%	9,948	4%
Families ³	5,954	7,081	19%	7,580	7%
Housing Units ⁴	8,697	10,035	15%	10,476	4%
Group Quarters Population ⁵	92	127	100%	131	4%
<i>Household Size (non-group)</i>	2.72	2.62	-4%	2.60	-1%
<i>Avg. Family Size</i>	3.11	3.02	-3%	2.99	-1%
PER CAPITA AND MEDIAN HOUSEHOLD INCOME					
	2000	2010	Growth	2020	Growth
	(Census)	(Census)	00-10	(Proj.)	10-20
Per Capita (\$)	na	\$41,319	na	\$51,969	26%
Median HH (\$)	na	\$86,611	na	\$104,061	20%

SOURCE: Census, PSU Population Research Center, and Johnson Economics

Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

1 From PSU Population Research Center, growth rate 2000-2019 extended to 2020

2 2020 Households = (2020 population - Group Quarters Population)/2020 HH Size

3 Ratio of 2020 Families to total HH is based on 2018 ACS 5-year Estimates

4 2020 housing units are the '10 Census total plus new units permitted from '10 through '20 (source: Census, City)

5 Ratio of 2020 Group Quarters Population to Total Population is kept constant from 2010.

A. POPULATION GROWTH

Since 2000, West Linn has grown by over 3,700 people within the UGB, or 17% in 20 years. This was lower than the countywide rate of growth. Clackamas County as a whole has grown an estimated 25% since 2000, while other cities in the county such as Oregon City and Happy Valley grew by 38% and 400% respectively. Portland’s population also grew by an estimated 17% during this period (PSU Population Research Center).

B. HOUSEHOLD GROWTH & SIZE

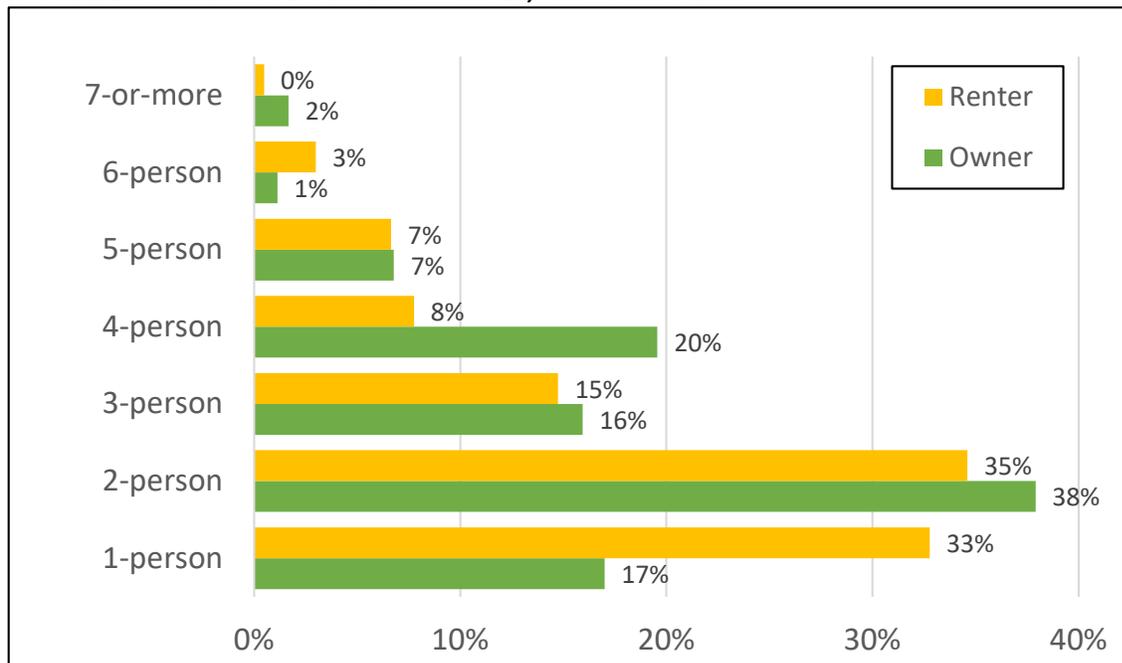
As of 2020, the city has an estimated 9,948 households. Since 2000, West Linn has added an estimated 2,200 households. This is an average of roughly 110 households annually during this period. The growth since 2000 has outpaced the growth in new housing units, which have been permitted at the rate of roughly 90 units per year.

There has been a general trend in Oregon and nationwide towards declining household size as birth rates have fallen, more people have chosen to live alone, and the Baby Boomers have become empty nesters. While this trend of diminishing household size is expected to continue nationwide, there are limits to how far the average can fall.

West Linn’s average household size of 2.6 people is similar to the Clackamas County average.

Figure 2.2 shows the share of households by the number of people for renter and owner households in 2018 (latest data available), according to the Census. Renter households are more likely to have two or fewer persons. Owner households are more likely to have larger households. Household size correlates to housing needs.

FIGURE 2.2: NUMBER OF PEOPLE PER HOUSEHOLD, CITY OF WEST LINN



SOURCE: US Census, JOHNSON ECONOMICS LLC
 Census Tables: B25009 (2018 ACS 5-yr Estimates)

C. FAMILY HOUSEHOLDS

As of the 2010 Census, 76% of West Linn households were family households, roughly the same as 2000. The total number of family households in West Linn is estimated to have grown by over 1,600 since 2000. The Census defines family households as two or more persons, related by marriage, birth or adoption and living together. In 2020, family households in West Linn had an average size of 3.0 people.

D. GROUP QUARTERS POPULATION

The City of West Linn has an estimated group quarters population of 0.5% of the total population, or 131 persons. Group quarters include such shared housing situations as nursing homes, prisons, dorms, group residences, military housing, or shelters. For the purposes of this analysis, these residents are removed from the estimated population total, before determining the amount of other types of housing that are needed for non-group households. (The share of group quarters population is assumed to remain steady over the 20-year forecast period.)

E. HOUSING UNITS

Data from the City of West Linn and the US Census indicate that the city added roughly 1,780 new housing units since 2000, representing 21% growth in the housing stock. This number of new units is somewhat lower than the growth in new households estimated during the same period, indicating that housing growth has not kept pace with growing need.

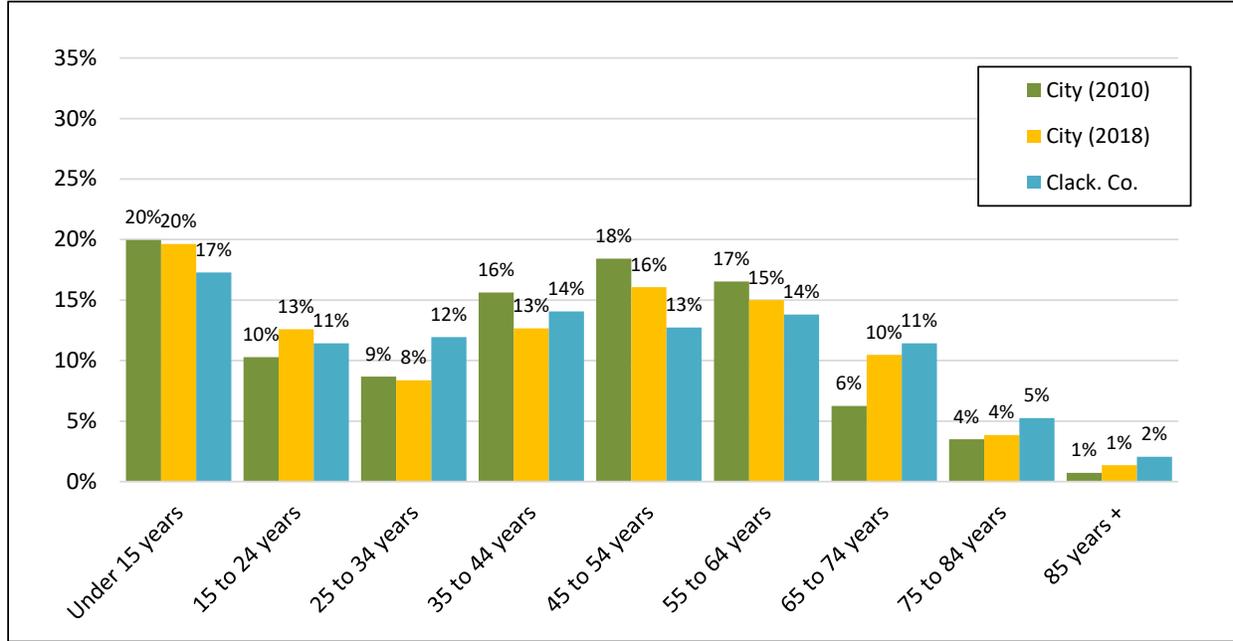
As of 2020, the city had an estimated housing stock of roughly 10,475 units for its 9,948 estimated households. This translates to an estimated average vacancy rate of 5%.

Residential Permits: An average of 90 units have been permitted annually since 2000, with under 12% being multi-family units. Few multi-family housing units have been built in West Linn in the last decade.

F. AGE TRENDS

The following figure shows the share of the population falling in different age cohorts between the 2010 Census and the most recent 5-year American Community Survey estimates. As the chart shows, there is a general trend for middle age cohorts to fall as share of total population, while older cohorts have grown in share. This is in keeping with the national trend caused by the aging of the Baby Boom generation. Overall, West Linn has a younger population than the county, with a greater share of children, but a smaller share of those aged 25 to 34 years.

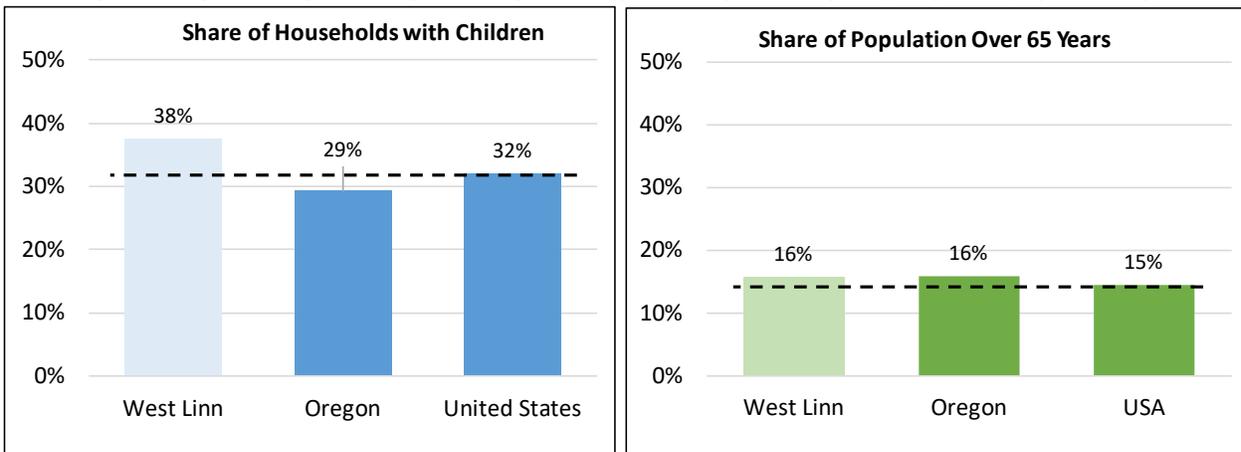
FIGURE 2.3: AGE COHORT TRENDS, 2000 - 2018



SOURCE: US Census, JOHNSON ECONOMICS LLC
 Census Tables: QT-P1 (2000); S0101 (2018 ACS 5-yr Estimates)

- The cohort which grew the most in share during this period were those aged 65 to 74 years. Still, an estimated 85% of the population is under 65 years of age.
- In the 2018 ACS, the local median age was an estimated 42 years, compared to 38 years in Oregon.

FIGURE 2.4: SHARE OF HOUSEHOLDS WITH CHILDREN/ POPULATION OVER 65 YEARS (WEST LINN)



SOURCE: US Census, JOHNSON ECONOMICS LLC
 Census Tables: B11005; S0101 (2018 ACS 5-yr Estimates)

Figure 2.4 presents the share of households with children, and the share of population over 65 years for comparison. Compared to state and national averages, West Linn has a higher share of households with children. At 16%, the share of population over 65 is similar to the state and national figures.

G. INCOME TRENDS

The following figure presents data on West Linn’s income trends. (2000 Census data on income is not available for West Linn.)

FIGURE 2.5: INCOME TRENDS, 2000 – 2020

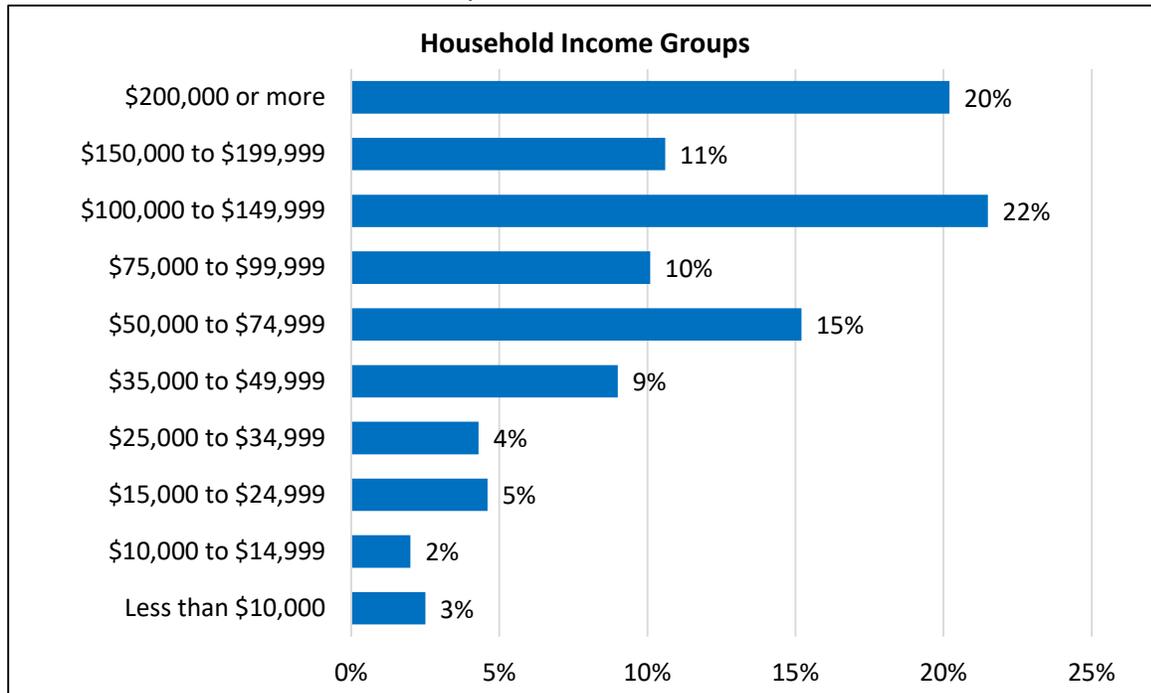
PER CAPITA AND MEDIAN HOUSEHOLD INCOME					
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	(Census)	(Census)	00-10	(Proj.)	10-20
Per Capita (\$)	na	\$41,319	na	\$51,969	26%
Median HH (\$)	na	\$86,611	na	\$104,061	20%

SOURCE: Census, PSU Population Research Center, and Johnson Economics

Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

- West Linn’s estimated median household income was \$105,000 in 2020. This is 30% higher than the Clackamas County median of \$80,500, and almost double the statewide median of \$56,000.
- West Linn’s per capita income is roughly \$52,000.
- Median income has grown an estimated 20% between 2010 and 2019, in real dollars. Inflation was an estimated 18% over this period, so the local median income has exceeded inflation. This is not the case in many regions and nationally, where income growth has not kept pace with inflation.

FIGURE 2.6: HOUSEHOLD INCOME COHORTS, 2018



SOURCE: US Census, Census Tables: S1901 (2018 ACS 5-yr Est.)

Figure 2.6 presents the estimated distribution of households by income as of 2018. The largest income cohorts are those households earning between \$100k and \$150k, followed by households earning over \$200k. Fifty-three percent of households earn more than \$100,000.

- Only 23% of households earn less than \$50k per year, while 77% of households earn \$50k or more.
- Only 10% of households earn less than \$25k per year.

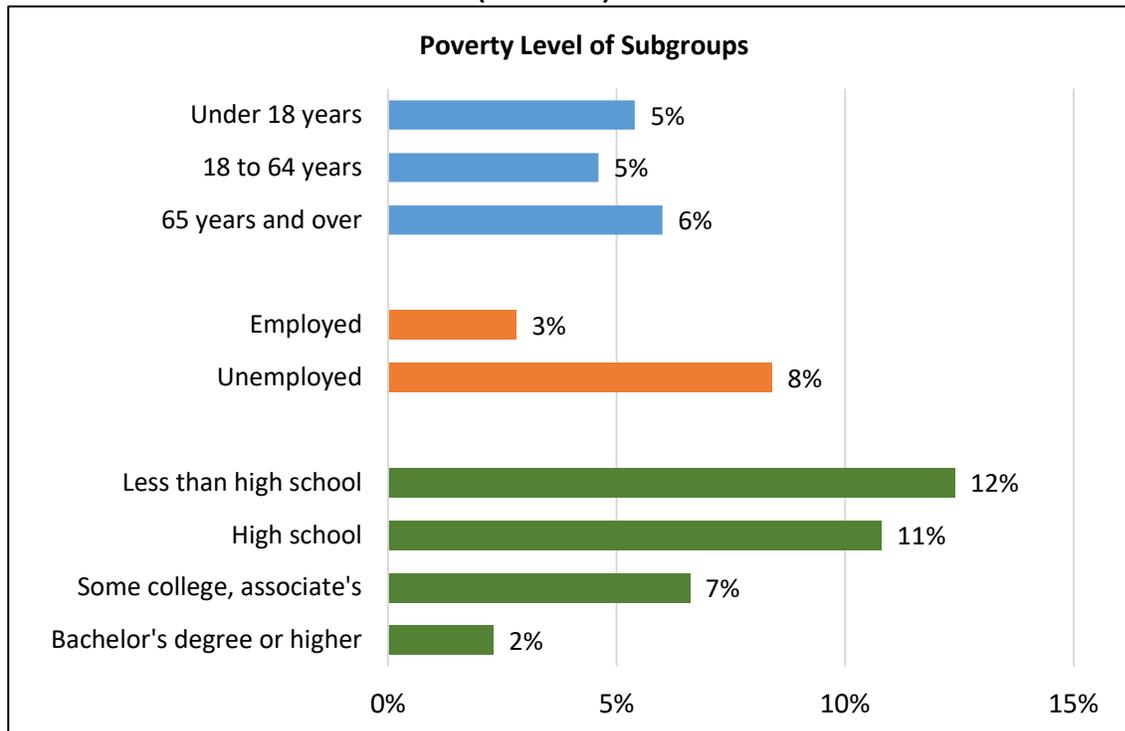
H. POVERTY STATISTICS

According to the US Census, the official poverty rate in West Linn is an estimated 5% over the most recent period reported (2018 5-year estimates).³ This is roughly 1,330 individuals in West Linn. In comparison, the official poverty rate in Clackamas County is 9%, and at the state level is 17%. In the 2014-18 period:

- The West Linn poverty rate is low among all groups, but highest among those over 65 years of age at 6%. The rate is 5% among those under 65 years of age.
- For those with only a high school diploma, the poverty rate is 11%.
- Among those who are employed the poverty rate is 3%, while it is 8% for those who are unemployed.

Information on affordable housing is presented in Section II F of this report.

FIGURE 2.7: POVERTY STATUS BY CATEGORY (WEST LINN)



SOURCE: US Census
Census Tables: S1701 (2018 ACS 5-yr Est.)

³ Census Tables: S1701 (2018 ACS 5-yr Estimates)

I. EMPLOYMENT LOCATION TRENDS

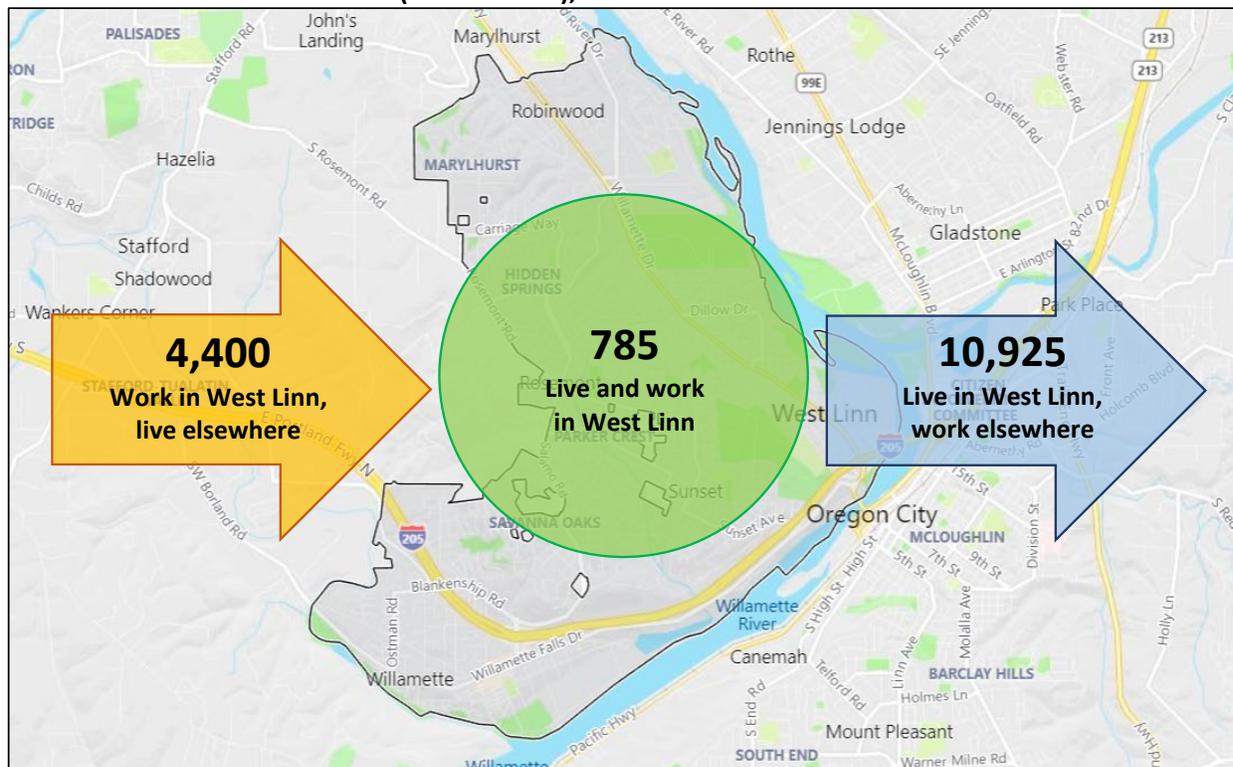
This section provides an overview of employment and industry trends in West Linn that are related to housing.

Commuting Patterns: The following figure shows the inflow and outflow of commuters to West Linn according to the Census Employment Dynamics Database. These figures reflect “covered employment” as of 2017, the most recent year available. (Covered employment refers to those jobs where the employee is covered by federal unemployment insurance.) This category does not include many contract employees and self-employed and therefore is not a complete picture of local employment. The figure discussed here is best understood as indicators of the general pattern of commuting and not exact figures.

As of 2017, the most recent year available, the Census estimated there were roughly 5,185 covered employment jobs located in West Linn. Of these, an estimated 785 or 15%, are held by local residents, while over 4,400 employees commute into the city from elsewhere. This general pattern is fairly common among many communities in the Metro area. The most common homes of local workers commuting into the city are Portland or Oregon City.

Similarly, of the estimated 11,700 employed West Linn residents, 93% of them commute elsewhere to their employment. The most common destinations for West Linn commuters are Portland, Lake Oswego and Beaverton. Smaller shares work elsewhere in the Portland metro or in the mid-Willamette Valley.

FIGURE 2.8: COMMUTING PATTERNS (PRIMARY JOBS), WEST LINN



Source: US Census Longitudinal Employer-Household Dynamics

Jobs/Household Ratio: West Linn features a fairly low jobs-to-households ratio. There are an estimated 5,185 jobs in the city of West Linn (covered), and an estimated 9,948 households in West Linn. This represents 0.5 jobs per household. There is no standard jobs-to-households ratio that is right for all communities, but it can provide a guide to the balance between employment uses and residential uses in the city.

There is an average of 1.2 jobs held for each West Linn households, a majority of which are located outside the city.

III. CURRENT HOUSING CONDITIONS

This section presents a profile of the current housing stock and market indicators in West Linn. This profile forms the foundation to which current and future housing needs will be compared.

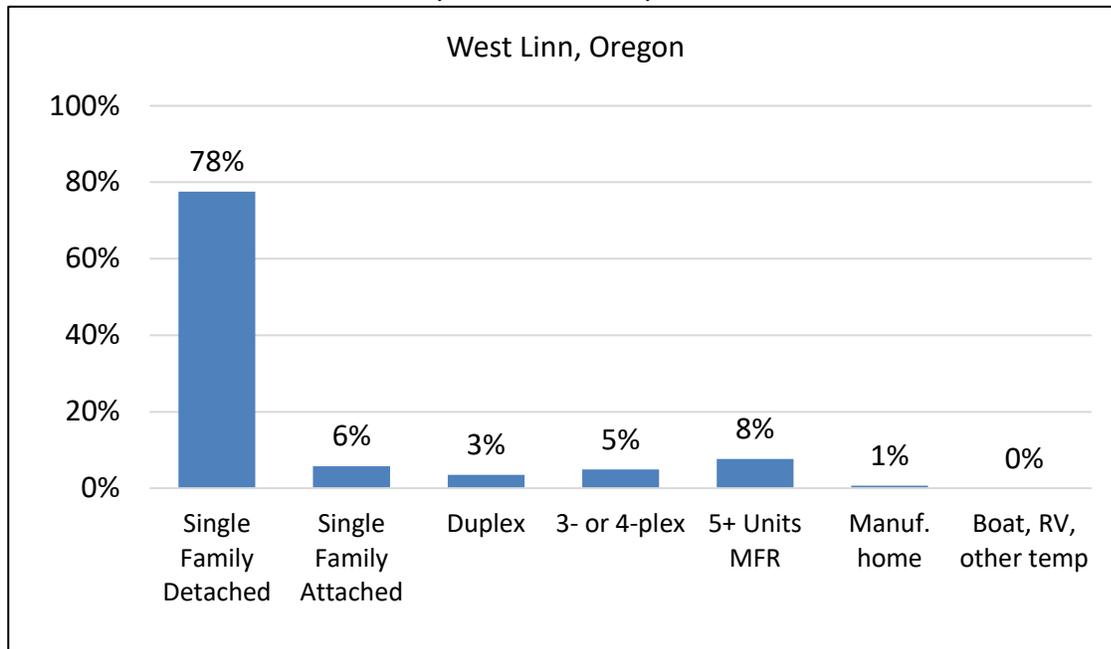
A. HOUSING TENURE

West Linn has a much greater share of homeowner households than renter households. The 2018 American Community Survey estimates that 79% of occupied units were owner occupied, and only 21% renter occupied. The ownership rate has held steady since 2000 (78%). This is significantly higher than the estimated ownership rate across Clackamas County (69%) and statewide (61%).

B. HOUSING STOCK

As shown in Figure 2.1, West Linn had an estimated 10,476 housing units in 2020, with a vacancy rate of 5% (includes ownership and rental units). The housing stock has increased by roughly 1,779 units since 2000, or growth of over 20%.

FIGURE 3.1: ESTIMATED SHARE OF UNITS, BY PROPERTY TYPE, 2018



SOURCE: US Census, City of West Linn

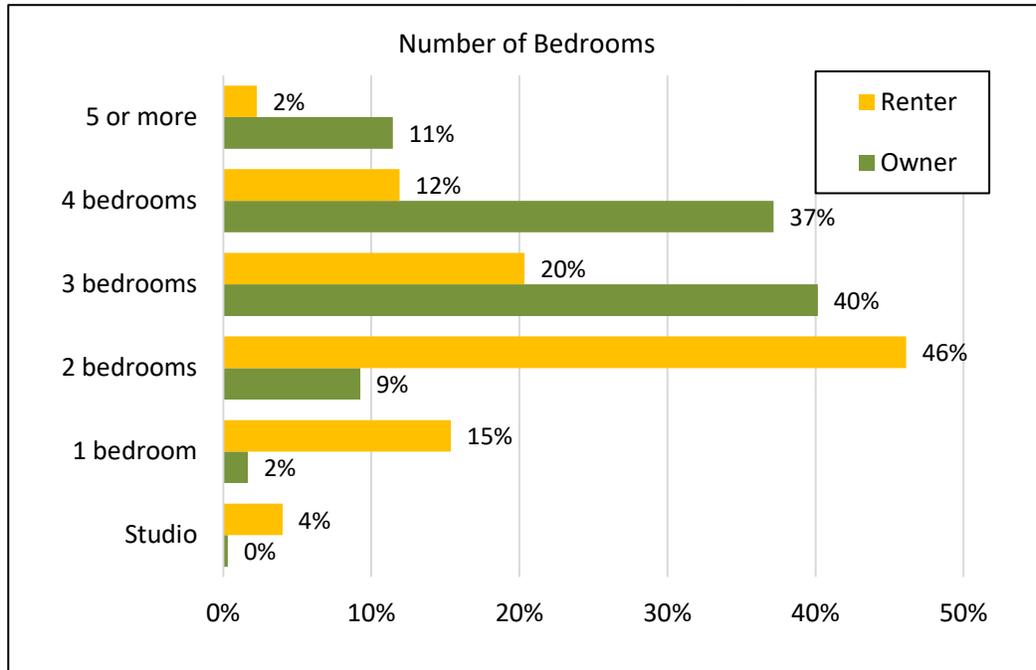
Figure 3.1 shows the estimated number of units by type in 2020 based on US Census. Detached single-family homes represent an estimated 78% of housing units.

Units in larger apartment complexes of 5 or more units represent only 8% of units, and other types of attached homes represent 14% of units. (Attached single family generally includes townhomes, and some 2 to 4-plexes which are separately metered.) Manufactured homes represent less than 1% of the inventory.

C. NUMBER OF BEDROOMS

Figure 3.2 shows the share of units for owners and renters by the number of bedrooms they have. In general, owner-occupied units are much more likely to have three or more bedrooms, while renter-occupied units are much more likely to have two or fewer bedrooms.

FIGURE 3.2: NUMBER OF BEDROOMS FOR OWNER AND RENTER UNITS, 2018



SOURCE: US Census
Census Tables: B25042 (2018 ACS 5-year Estimates)

D. UNIT TYPES BY TENURE

As Figure 3.3 and 3.4 show, a large share of owner-occupied units (90%) are detached homes, which is related to why owner-occupied units tend to have more bedrooms. Renter-occupied units are much more distributed among a range of structure types. About 32% of rented units are estimated to be detached homes or manufactured homes, while the remainder are some form of attached unit. An estimated 29% of rental units are in larger apartment complexes.

FIGURE 3.3: CURRENT INVENTORY BY UNIT TYPE, FOR OWNERSHIP AND RENTAL HOUSING

OWNERSHIP HOUSING

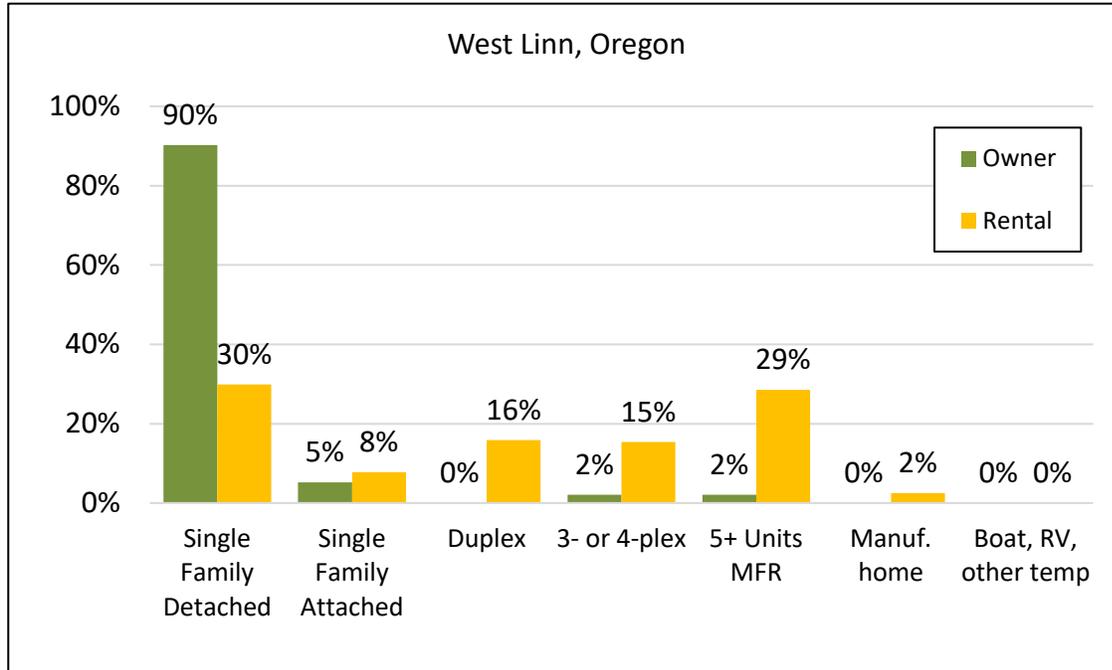
OWNERSHIP HOUSING								
	Single Family Detached	Single Family Attached	Duplex	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units
Totals:	7,460	432	13	175	170	14	0	8,264
Percentage:	90.3%	5.2%	0.2%	2.1%	2.1%	0.2%	0.0%	100%

RENTAL HOUSING

RENTAL HOUSING								
	Single Family Detached	Single Family Attached	Duplex	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units
Totals:	662	172	352	341	631	54	0	2,212
Percentage:	29.9%	7.8%	15.9%	15.4%	28.5%	2.5%	0.0%	100%

Sources: US Census, JOHNSON ECONOMICS, CITY OF WEST LINN

FIGURE 3.4: CURRENT INVENTORY BY UNIT TYPE, BY TENURE

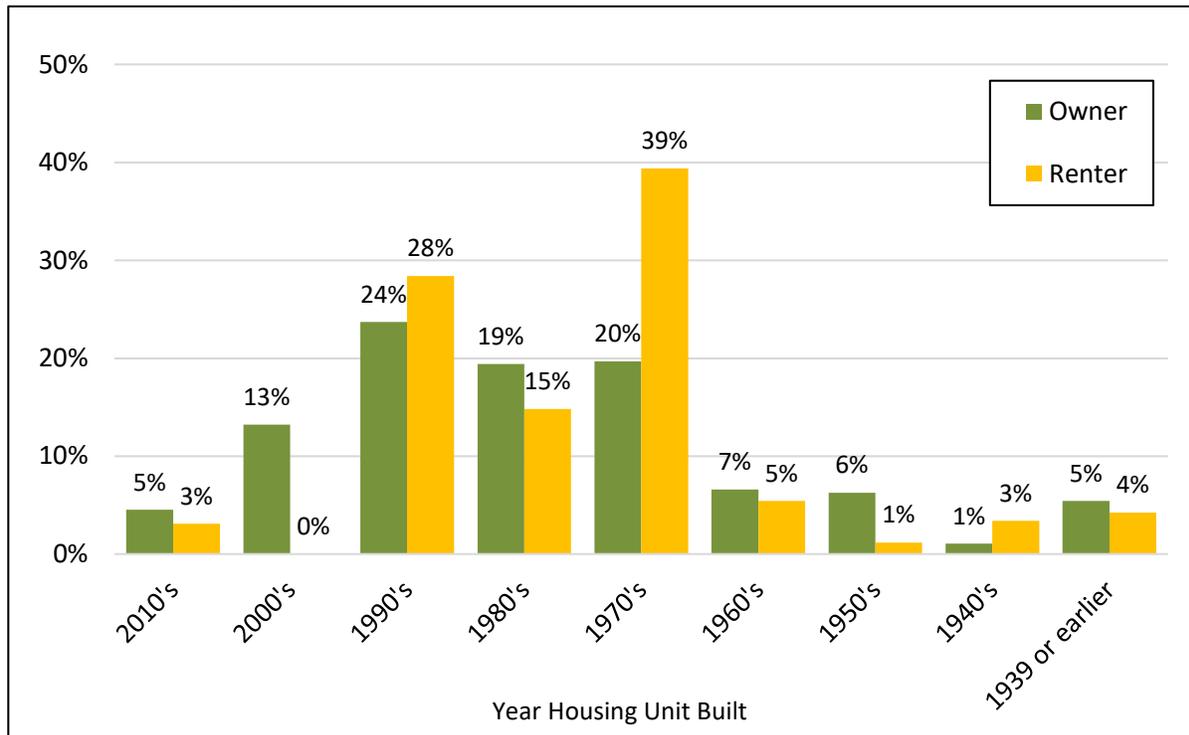


Sources: US Census, JOHNSON ECONOMICS, CITY OF WEST LINN

E. AGE AND CONDITION OF HOUSING STOCK

West Linn’s housing stock reflects the pattern of development over time. The largest share of housing stock has been built from the 1970’s to 1990’s. Most housing built since 2000 has been single-family detached housing for homeowners. The largest single share of renter units date to the 1970’s.

FIGURE 3.5: AGE OF UNITS FOR OWNERS AND RENTERS



SOURCE: US Census
Census Tables: B25036 (2018 ACS 5-year Estimates)

- Unfortunately, good quantitative data on housing condition is generally unavailable without an intensive on-site survey of all local housing that is beyond the scope of this analysis. Census categories related to housing condition are ill-suited for this analysis, dealing with such issues as units without indoor plumbing, which was more common in the mid-20th Century, but is an increasingly rare situation. Age of units serves as the closest reliable proxy for condition with available data.
- For ownership units, older homes may be in poor condition, but are also more likely to have undergone some repair and renovation over the years. Rental units are more likely to degrade steadily with age and wear-and-tear, and less likely to receive sufficient reinvestment to keep them in top condition, though this is not universally true.

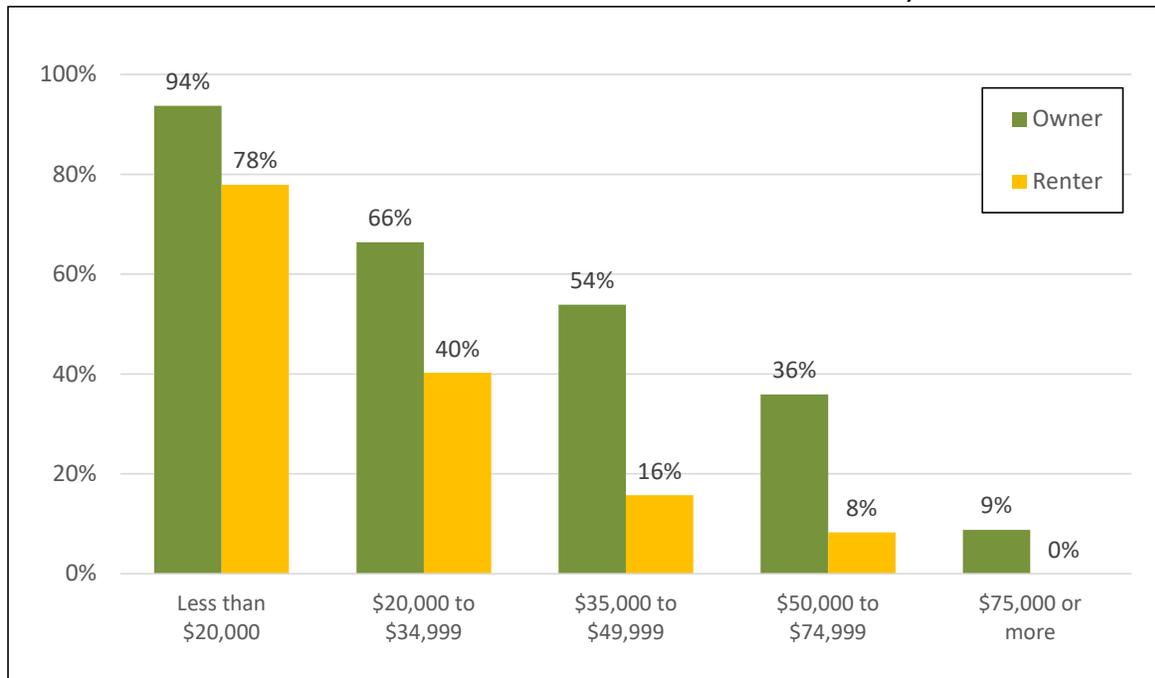
F. HOUSING COSTS VS. LOCAL INCOMES

Figure 3.6 shows the share of owner and renter households who are paying more than 30% of their household income towards housing costs, by income segment. (Spending 30% or less on housing costs is a common measure of “affordability” used by HUD and others, and in the analysis presented in this report.)

As one would expect, households with lower incomes tend to spend more than 30% of their income on housing, while incrementally fewer of those in higher income groups spend more than 30% of their incomes on housing costs. Of those earning less than \$20,000, an estimated 94% of owner households spend more than 30% of income on housing costs and 78% of renters. Because West Linn has an income distribution skewed towards higher income levels, there are relatively few households in these lower income segments, compared to most other cities.

In total, the US Census estimates that over 24% of West Linn households pay more than 30% of income towards housing costs (2018 American Community Survey, B25106)

FIGURE 3.6: SHARE OF HOUSEHOLDS SPENDING MORE THAN 30% ON HOUSING COSTS, BY INCOME GROUP



Sources: US Census, JOHNSON ECONOMICS
Census Table: B25106 (2018 ACS 5-yr Estimates)

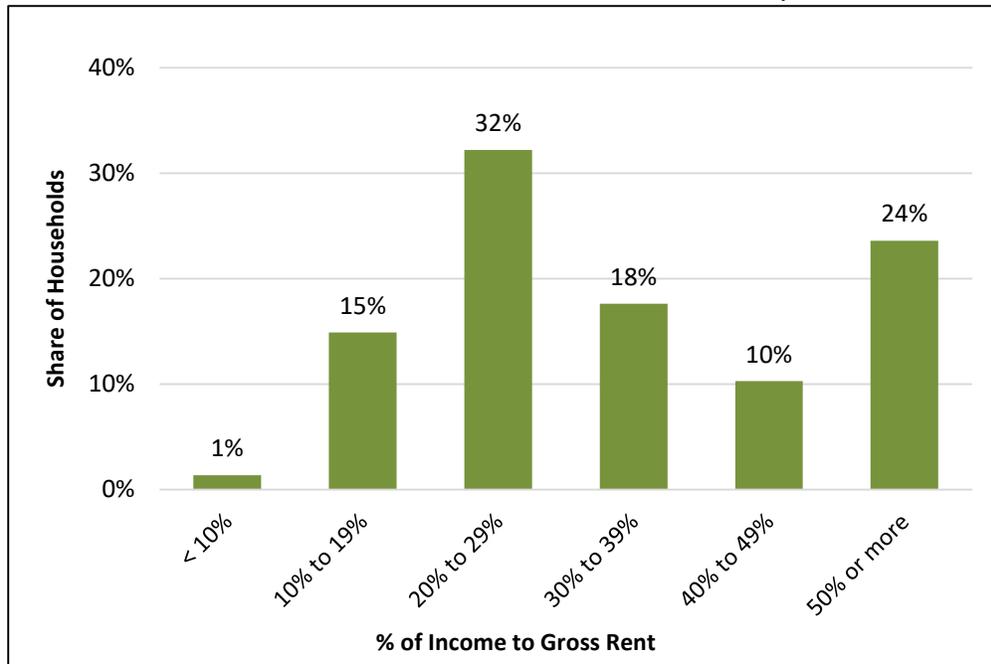
Housing is generally one of a household’s largest living costs, if not the largest. The ability to find affordable housing options, and even build wealth through ownership, is one of the biggest contributors to helping lower income

households save and build wealth. Even if renting, affordable housing costs, allow for more household income to be put to other needs, including saving.

The following figures shows the percentage of household income spent towards gross rent⁴ for local renter households only. This more fine-grained data shows that not only are 52% of renters spending more than 30% of their income on gross rent, but an estimated 24% of renters are spending 50% or more of their income on housing and are considered severely rent-burdened.

Renters are disproportionately lower income relative to homeowners. Housing cost burdens are felt more broadly for these households, and as the analysis presented in a later section shows there is a need for more affordable rental units in West Linn, as in most communities.

FIGURE 3.7: PERCENTAGE OF HOUSEHOLD INCOME SPENT ON GROSS RENT, WEST LINN RENTER HOUSEHOLDS



Sources: US Census, JOHNSON ECONOMICS
Census Table: B25070 (2018 ACS 5-yr Estimates)

G. PUBLICLY ASSISTED HOUSING

West Linn currently has very few subsidized apartment properties, according to Oregon Housing and Community Development (OHCS). These are properties that are funded through HUD programs, tax credits and other programs which guarantee subsidized rents for qualified households. There are an estimated 10 such units in West Linn, which appear to be in separate single-family homes rather than a multi-family development.

The high share of renters paying over 30% of their income towards housing costs indicates that there is an ongoing need for rental units at the lowest price points.

Agricultural Worker Housing: West Linn is not currently home to properties dedicated to agricultural workers. This population may also be served by other available affordable units.

Homelessness:

A Point-in-Time count of homeless individuals in Clackamas County conducted in January of 2019 found 1,166 homeless individuals on the streets, in shelters, or other temporary and/or precarious housing. This number was

⁴ The Census defines Gross Rent as “the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else).” Housing costs for homeowners include mortgage, property taxes, insurance, utilities and condo or HOA dues.

2,196 individuals in the 2015 count, indicating that the rate of homelessness has fallen significantly as the economy has recovered since 2010. *These figures are for the entire county.*⁵ In 2019, this included:

- 50% of those counted were in emergency shelter, warming shelter, or transitional housing programs.
 - 18% people living in doubled-up or unstable housing.
 - 32% people unsheltered.
 - 454 were chronically homeless.
-
- An estimated 63% of those counted were male, 37% female, and 2% transgender or non-binary.
 - Children under the age of 18 made up 8% of those counted, at 98 individual children.

While the Point-in-Time count is one of the few systematized efforts to count homelessness across the country in a regular, systematized way, it is widely thought to undercount the population of homeless and precarious households. In addition, to the impossibility of finding all homeless people on the streets, the count is conducted in late January, when homeless counts are likely near their lowest of the year due to the inclement weather. A 2017 study conducted by Portland State University estimated over 38,000 homeless individuals in the tri-county metro area at that time. Given that Clackamas County is one of only three counties in the estimate, it most certainly had well more than 2,000 homeless individuals by that estimate.

A recent analysis prepared for OHCS to test a potential approach for preparing Housing Needs Analyses on a regional basis, included estimates of homeless population in Oregon communities, including West Linn. The approach utilizes a combination of data from the bi-annual Point-in-Time count and from tracking of homeless school-aged children in keeping with the McKinney-Vento Act. The analysis estimates 111 homeless households in West Linn as of mid-2020. These include household who are unsheltered, in temporary shelter, or staying with friends or relatives. These households are a component of current and future housing need.

An analysis of the ability of current and projected housing supply to meet the needs of low-income people, and the potential shortfall is included in the following sections of this report.

⁵ Figures via Clackamas County Health, Housing, and Human Services, and North Clackamas School District

IV. CURRENT HOUSING NEEDS (CITY OF WEST LINN)

The profile of current housing conditions in the study area is based on Census 2010, which the Portland State University Population Research Center (PRC) uses to develop yearly estimates through 2019. The 2019 estimate is forecasted to 2020 using the estimated growth rate realized since 2010.

FIGURE 4.1: CURRENT HOUSING PROFILE (2020)

CURRENT HOUSING CONDITIONS (2020)		SOURCE
Total 2020 Population:	25,995	PSU Pop. Research Center
- Estimated group housing population:	131 (0.5% of Total)	US Census
Estimated Non-Group 2020 Population:	25,864 (Total - Group)	
Avg. HH Size:	2.60	US Census
Estimated Non-Group 2020 Households:	9,948 (Pop/HH Size)	
Total Housing Units:	10,476 (Occupied + Vacant)	Census 2010 + permits
Occupied Housing Units:	9,948 (= # of HH)	
Vacant Housing Units:	528 (Total HH - Occupied)	
Current Vacancy Rate:	5.0% (Vacant units/ Total units)	

Sources: Johnson Economics, City of West Linn, PSU Population Research Center, U.S. Census

*This table reflects population, household and housing unit projections shown in Figure 2.1.

We estimate a current population of roughly 26,000 residents, living in 9,948 households (excluding group living situations). Average household size is 2.6 persons.

There are an estimated 10,476 housing units in the city, indicating an estimated vacancy rate of 5%. This includes units vacant for any reason, not just those which are currently for sale or rent.

ESTIMATE OF CURRENT HOUSING DEMAND

Following the establishment of the current housing profile, the current housing demand was determined based upon the age and income characteristics of current households.

The analysis considered the propensity of households in specific age and income levels to either rent or own their home (tenure), in order to derive the current demand for ownership and rental housing units and the appropriate housing cost level of each. This is done by combining data on tenure by age and tenure by income from the Census American Community Survey (tables: B25007 and B25118, 2018 ACS 5-yr Estimates).

The analysis takes into account the average amount that owners and renters tend to spend on housing costs. For instance, lower income households tend to spend more of their total income on housing, while upper income households spend less on a percentage basis. In this case, it was assumed that households in lower income bands would *prefer* housing costs at no more than 30% of gross income (a common measure of affordability). Higher income households pay a decreasing share down to 20% for the highest income households.

While the Census estimates that most low-income households pay more than 30% of their income for housing, this is an estimate of current *preferred* demand. It assumes that low-income households prefer (or demand) units affordable to them at no more than 30% of income, rather than more expensive units.

Figure 4.2 presents a snapshot of current housing demand (i.e., preferences) equal to the number of households in the study area (9,948). The breakdown of tenure (owners vs. renters) reflects data from the 2018 ACS.

FIGURE 4.2: ESTIMATE OF CURRENT HOUSING DEMAND (2020)

Ownership				
Price Range	# of Households	Income Range	% of Total	Cumulative
\$0k - \$80k	201	Less than \$15,000	2.6%	2.6%
\$80k - \$130k	113	\$15,000 - \$24,999	1.5%	4.0%
\$130k - \$190k	163	\$25,000 - \$34,999	2.1%	6.1%
\$190k - \$250k	388	\$35,000 - \$49,999	5.0%	11.1%
\$250k - \$330k	807	\$50,000 - \$74,999	10.4%	21.5%
\$330k - \$390k	875	\$75,000 - \$99,999	11.2%	32.7%
\$390k - \$470k	727	\$100,000 - \$124,999	9.3%	42.0%
\$470k - \$540k	716	\$125,000 - \$149,999	9.2%	51.2%
\$540k - \$710k	1,211	\$150,000 - \$199,999	15.5%	66.7%
\$710k +	2,591	\$200,000+	33.3%	100.0%
Totals:	7,792		% of All:	78.3%

Rental				
Rent Level	# of Households	Income Range	% of Total	Cumulative
\$0 - \$400	178	Less than \$15,000	8.3%	8.3%
\$400 - \$700	257	\$15,000 - \$24,999	11.9%	20.2%
\$700 - \$900	209	\$25,000 - \$34,999	9.7%	29.9%
\$900 - \$1200	219	\$35,000 - \$49,999	10.1%	40.0%
\$1200 - \$1600	472	\$50,000 - \$74,999	21.9%	62.0%
\$1600 - \$1900	159	\$75,000 - \$99,999	7.4%	69.3%
\$1900 - \$2200	214	\$100,000 - \$124,999	9.9%	79.3%
\$2200 - \$2500	156	\$125,000 - \$149,999	7.2%	86.5%
\$2500 - \$3400	92	\$150,000 - \$199,999	4.3%	90.8%
\$3400 +	199	\$200,000+	9.2%	100.0%
Totals:	2,156		% of All:	21.7%

All Households	9,948
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Sources: PSU Population Research Center, EnviroNics Analytics., Census, JOHNSON ECONOMICS
 Census Tables: B25007, B25106, B25118 (2018 ACS 5-yr Estimates)
 EnviroNics Analytics: Estimates of income by age of householder

The estimated home price and rent ranges are irregular because they are mapped to the affordability levels of the Census income level categories. For instance, an affordable home for those in the lowest income category (less than \$15,000) would have to cost \$80,000 or less. Affordable rent for someone in this category would be \$400 or less.

The affordable price level for ownership housing assumes 30-year amortization, at an interest rate of 5% (significantly more than the current rate, but in line with historic norms), with 15% down payment. These assumptions are designed to represent prudent lending and borrowing levels for ownership households. The 30-

year mortgage commonly serves as the standard. In the 2000's, down payment requirements fell significantly, but standards have tightened somewhat since the 2008/9 credit crisis. While 20% is often cited as the standard for most buyers, it is common for homebuyers, particularly first-time buyers, to pay significantly less than this using available programs.

Interest rates are subject to disruption from national and global economic forces, and therefore impossible to forecast beyond the short term. The 5% used here is roughly the average 30-year rate over the last 20 years. The general trend has been falling interest rates since the early 1980's, but coming out of the recent recession, many economists believe that rates cannot fall farther and must begin to climb as the Federal Reserve raises its rate over the coming years.

During the 2020 Covid-19 emergency, the Federal Reserve has again cut their benchmark funds rate to near zero, which has reduced mortgage rates moderately, but not dramatically. The economic uncertainty has the effect of making lenders more cautious, and this can balance the effect of a lower federal rate.

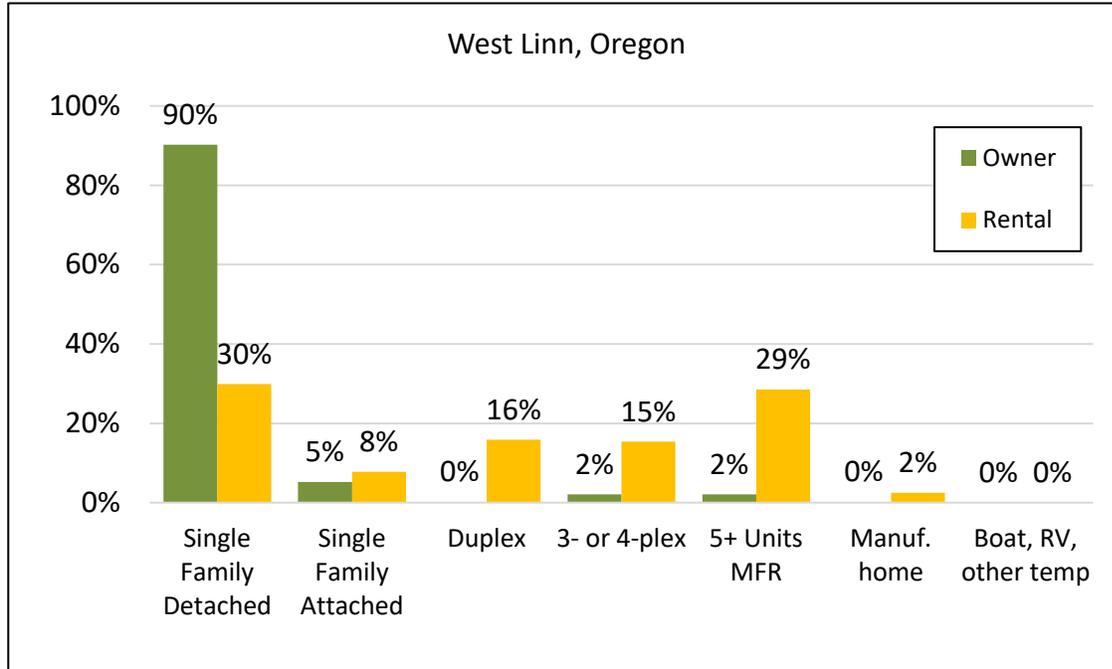
CURRENT HOUSING INVENTORY

The profile of current housing demand (Figure 4.2) represents the preference and affordability levels of households. In reality, the current housing supply (Figures 4.3 and 4.4 below) differs from this profile, meaning that some households may find themselves in housing units which are not optimal, either not meeting the household's own/rent preference, or being unaffordable (requiring more than 30% of gross income).

A profile of current housing supply in West Linn was estimated based on permit data from the City of West Linn and Census data from the most recently available 2018 ACS, which provides a profile of housing types (single family, attached, manufactured home, etc.), tenure, housing values, and rent levels. The 5-year estimates from the ACS were used because 3-year and 1-year estimates are not yet available for West Linn geography.

- An estimated 79% of housing units are ownership units, while an estimated 20% of housing units are rental units. This is similar to the estimated demand profile shown in Figure 4.2, which estimated a somewhat higher demand for rental units over time. The inventory includes vacant units, and in the case of West Linn many vacant units are estimated to be second homes or seasonal homes, which are counted as ownership units. The available rental units are estimated to have a much lower vacancy rate.
- 90% of ownership units are detached homes, and very few are manufactured homes. Thirty-two percent of rental units are either single family homes or manufactured homes, while 29% are in structures of 5 units or more.
- Of total housing units, an estimated 78% are detached homes or manufactured homes. Twenty-two percent are some sort of attached unit type.
- The affordability of different unit types is an approximation based on Census data on the distribution of housing units by value (ownership) or gross rent (rentals).
- Most subsidized affordable housing units found in the city are represented by the inventory at the lowest end of the rental spectrum.
- Ownership housing found at the lower end of the value spectrum generally reflect older, smaller homes, or homes in poor condition on small or irregular lots. **It is important to note that these represent estimates of current property value or current housing cost to the owner, not the current market pricing of homes for sale in the city.** These properties may be candidates for redevelopment when next they sell but are currently estimated to have low value.

FIGURE 4.3: PROFILE OF CURRENT HOUSING SUPPLY BY TYPE (2020)



Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
 Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

FIGURE 4.4: PROFILE OF CURRENT HOUSING SUPPLY, ESTIMATED AFFORDABILITY (2020)

Income Range	Ownership Housing		Rental Housing		Share of Total Units
	Affordable Price Level	Estimated Units	Affordable Rent Level	Estimated Units	
Less than \$15,000	\$0k - \$80k	89	\$0 - \$400	0	1%
\$15,000 - \$24,999	\$80k - \$130k	143	\$400 - \$700	87	2%
\$25,000 - \$34,999	\$130k - \$190k	155	\$700 - \$900	234	4%
\$35,000 - \$49,999	\$190k - \$250k	425	\$900 - \$1200	469	9%
\$50,000 - \$74,999	\$250k - \$330k	838	\$1200 - \$1600	438	12%
\$75,000 - \$99,999	\$330k - \$390k	1,139	\$1600 - \$1900	305	14%
\$100,000 - \$124,999	\$390k - \$470k	1,371	\$1900 - \$2200	244	15%
\$125,000 - \$149,999	\$470k - \$540k	948	\$2200 - \$2500	214	11%
\$150,000 - \$199,999	\$540k - \$710k	1,783	\$2500 - \$3400	159	19%
\$200,000+	\$710k +	1,374	\$3400 +	62	14%
	79%	8,264	21%	2,212	

Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
 Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

- Most housing in West Linn is found in price and rent levels affordable to those earning at least \$50,000 per year. There is very little housing available to those in lower income segments.

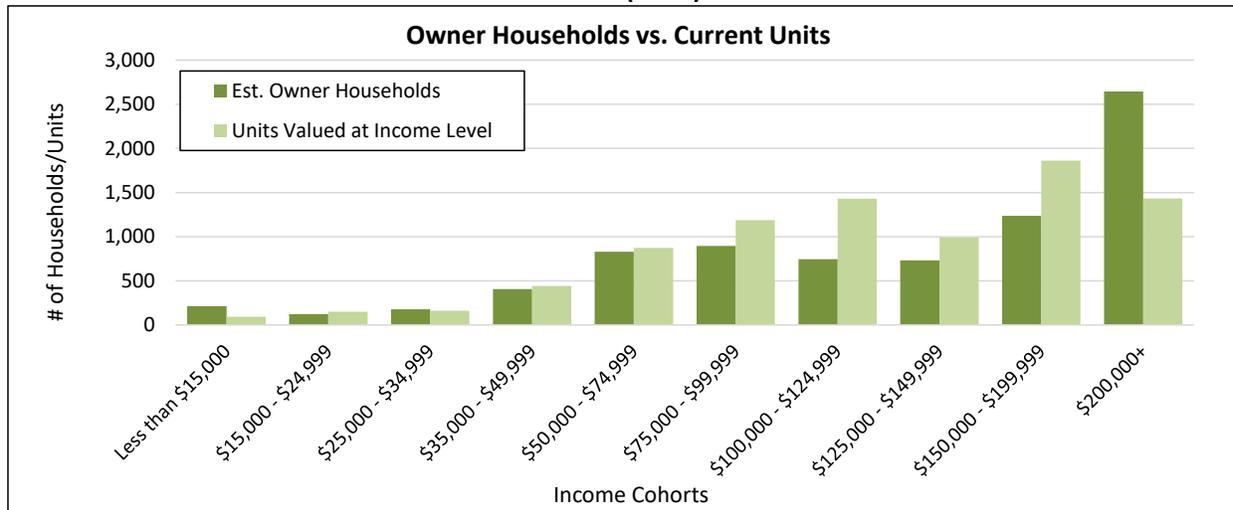
COMPARISON OF CURRENT HOUSING DEMAND WITH CURRENT SUPPLY

A comparison of estimated current housing *demand* with the existing *supply* identifies the existing discrepancies between needs and the housing which is currently available. The estimated number of units outnumbers the number of households by roughly 530 units, indicating an average vacancy rate of 5%.

In general, this identifies that there is currently support for more ownership housing at lower price points and at the upper end of the market. This is because most housing in West Linn is clustered at upper-middle property values, which matches the community’s high average household incomes but leaves some households underserved.

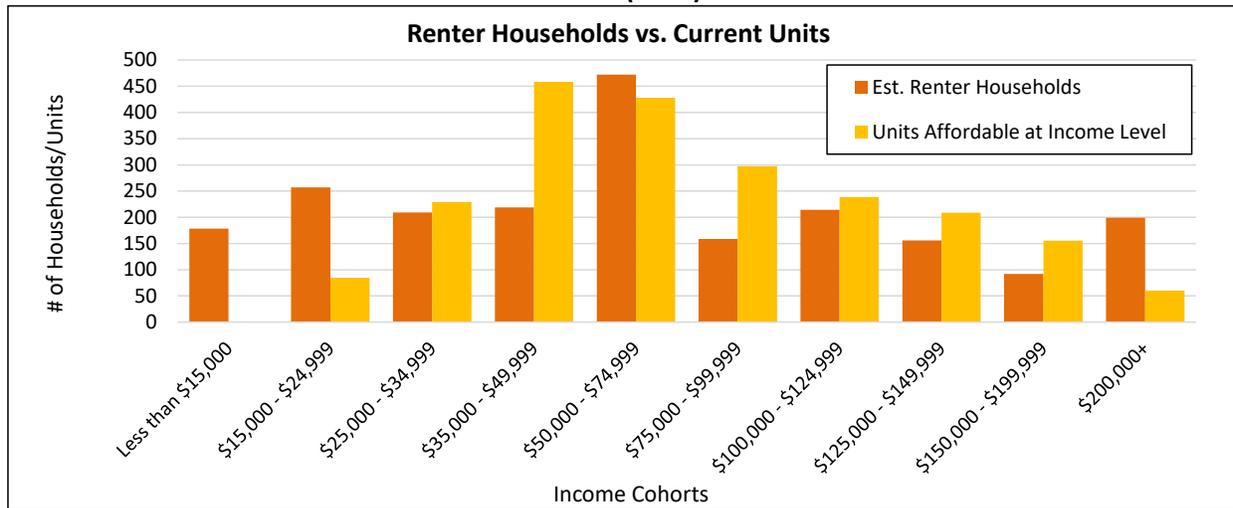
Figures 4.5 and 4.6 present this information in chart form, comparing the estimated number of households in given income ranges, and the supply of units currently valued (ownership) or priced (rentals) within those income ranges. The data is presented for owner and renter households.

FIGURE 4.5: COMPARISON OF OWNER HOUSEHOLD INCOME GROUPS TO ESTIMATED SUPPLY AFFORDABLE AT THOSE INCOME LEVELS (2020)



Sources: PSU Population Research Center, City of West Linn, Census, JOHNSON ECONOMICS

FIGURE 4.6: COMPARISON OF RENTER HOUSEHOLD INCOME GROUPS TO ESTIMATED SUPPLY AFFORDABLE AT THOSE INCOME LEVELS (2020)



Sources: PSU Population Research Center, City of West Linn, Census, JOHNSON ECONOMICS

The analysis finds that the current market rates for most rental units are in the \$900 to \$2,000/month range. Therefore, this is where most of the rental unit supply is currently clustered. However, the greatest unmet need is found at the lowest end of the income scale, where many current renters pay more than 30% of their income in housing costs. Rentals at the most expensive levels generally represent single family homes for rent.

The home value and rent segments which show a “surplus” in Figures 4.5 and 4.6 illustrate where current property values and market rent levels are in West Linn. Housing prices and rent levels will tend to congregate around those levels. These levels will be too costly for some (i.e., require more than 30% in gross income) or “too affordable” for others (i.e., they have income levels that indicate they could afford more expensive housing if it were available).

In general, these findings demonstrate that there are few lower-value housing opportunities for many owner households, and potential support for some less expensive types of ownership housing. There is a need for more rental units at lower rent levels (<\$900/mo.).

HOME SALE PRICES

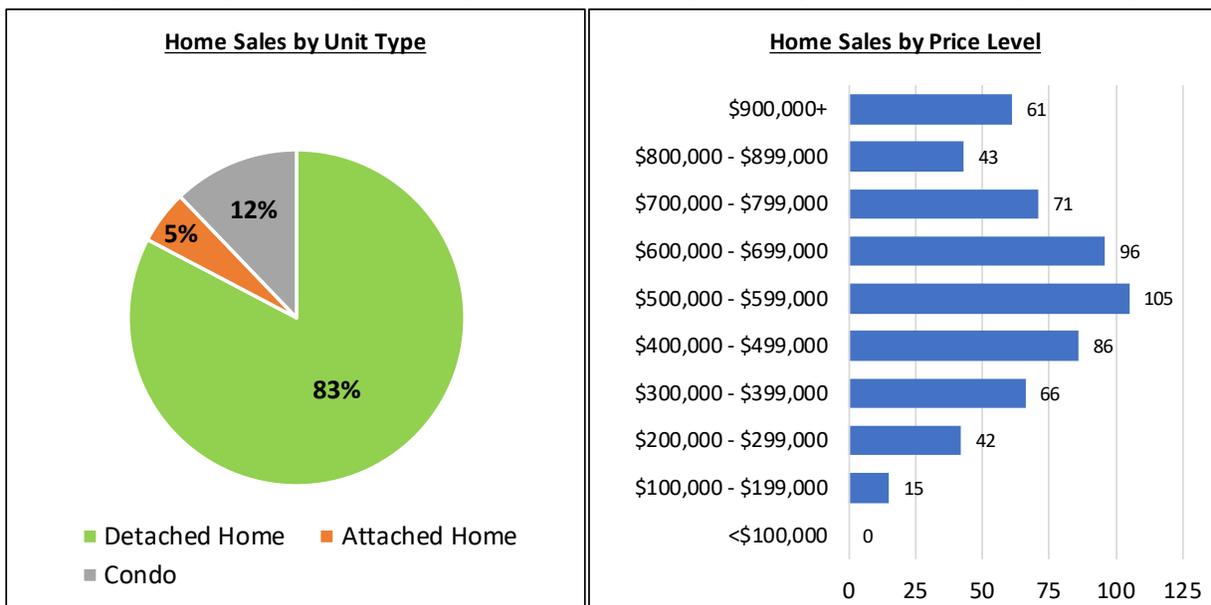
It is important to note that the figures presented in the prior section represent estimates of current *property value or current housing cost to the owner, not the current market pricing of homes for sale in the city*. For instance, a household living in a manufactured home that has been paid off over many years may have relatively low housing costs. This indicates that one owner household is living in a “lower value” unit. It does **not** indicate that units at this price point are available on the current market.

If this hypothetical household were to sell their home, it would sell at a higher price reflecting inflation and current achievable market prices. For this reason, many of the lower value or lower rent units found in the previous section will actually become higher-priced units when they are sold or become vacant.

For reference, this section presents home sales data from fall 2019 to fall 2020 to indicate housing costs for new entrants into the market (Figure 4.7).

- The median sale price was \$585,000.
- The average (mean) sale price was \$635,000.
- The average price per square foot was \$230/s.f.
- The median square footage was 2,630 s.f.

FIGURE 4.7: WEST LINN HOME SALES (12 MONTHS)



Sources: RMLS, JOHNSON ECONOMICS

- 18% of sales were priced between \$500,000 and \$599,000.
- 15% of sales were priced between \$400,000 and \$499,000.
- 46% of sales were priced at \$600,000 or more.
- 10% of sales were priced over \$900,000.
- Only 10% of sales were priced below \$300,000.

Affordability: As indicated, half of recent sales in West Linn took place within the \$400,000 to \$700,000 price range. Homes in this range should be mostly affordable to households earning at least \$100,000 per year. An estimated 60% of local households fall within these income segments.

Roughly 40% of households earn less than \$100,000 per year, meaning that the bulk of housing supply on the current for-sale market is likely too expensive for most of these households.

* * *

The findings of current need form the foundation for projected future housing need, presented in the following section.

V. FUTURE HOUSING NEEDS - 2040 (CITY OF WEST LINN)

The projected future (20-year) housing profile (Figure 5.1) in the study area is based on the current housing profile (2020), multiplied by an assumed projected future household growth rate. The projected future growth is the forecasted 2040 population for the City of West Linn included in the most recent Metro Urban Growth analysis and Regional Transportation Plan analysis (0.3%).

FIGURE 5.1: FUTURE HOUSING PROFILE (2040)

PROJECTED FUTURE HOUSING CONDITIONS (2020 - 2040)		SOURCE
2020 Population (Minus Group Pop.)	25,864	PSU
Projected Annual Growth Rate	0.3%	Metro UGR Forecast Program
2040 Population (Minus Group Pop.)	27,720	(Total 2040 Population - Group Housing Pop.)
Estimated group housing population:	141	Share of total pop. (0.5%)
Total Estimated 2040 Population:	27,861	
Estimated Non-Group 2040 Households:	10,907	(2040 Non-Group Pop./Avg. Household Size)
New Households 2020 to 2040	959	
Avg. Household Size:	2.54	Projected household size
Total Housing Units:	11,481	Occupied Units plus Vacant
Occupied Housing Units:	10,907	(= Number of Non-Group Households)
Vacant Housing Units:	574	(= Total Units - Occupied Units)
Projected Market Vacancy Rate:	5.0%	(Vacant Units/ Total Units)

Sources: PSU Population Research Center, Metro, Census, JOHNSON ECONOMICS LLC

*Projections are applied to estimates of 2020 population, household and housing units shown in Figure 2.1.

The model projects growth in the number of non-group households over 20 years of roughly 960 households, with accompanying population growth of 1,866 new residents. (The number of households differs from the number of housing units, because the total number of housing units includes a percentage of vacancy. Projected housing unit needs are discussed below.)

PROJECTION OF FUTURE HOUSING UNIT DEMAND (2040)

The profile of future housing demand was derived using the same methodology used to produce the estimate of current housing need. This estimate includes current and future households but *does not include a vacancy assumption. The vacancy assumption is added in the subsequent step.* Therefore, the need identified below is the total need for actual households in occupied units (10,907).

The analysis considered the propensity of households at specific age and income levels to either rent or own their home, in order to derive the future need for ownership and rental housing units, and the affordable cost level of each. The projected need is for *all* 2040 households and therefore includes the needs of current households.

The price levels presented here use the same assumptions regarding the amount of gross income applied to housing costs, from 30% for low-income households down to 20% for the highest income households.

The affordable price level for ownership housing assumes 30-year amortization, at an interest rate of 5%, with 15% down payment. Because of the impossibility of predicting variables such as interest rates 20 years into the future,

these assumptions were kept constant from the estimation of current housing demand. Income levels and price levels are presented in 2020 dollars.

Figure 5.2 presents the projected occupied future housing demand (current and new households, without vacancy) in 2040.

FIGURE 5.2: PROJECTED OCCUPIED FUTURE HOUSING DEMAND (2040)

Ownership				
Price Range	# of Households	Income Range	% of Total	Cumulative
\$0k - \$80k	214	Less than \$15,000	2.5%	2.5%
\$80k - \$130k	119	\$15,000 - \$24,999	1.4%	3.9%
\$130k - \$190k	173	\$25,000 - \$34,999	2.0%	6.0%
\$190k - \$250k	415	\$35,000 - \$49,999	4.9%	10.9%
\$250k - \$330k	864	\$50,000 - \$74,999	10.2%	21.0%
\$330k - \$390k	959	\$75,000 - \$99,999	11.3%	32.3%
\$390k - \$470k	797	\$100,000 - \$124,999	9.4%	41.7%
\$470k - \$540k	785	\$125,000 - \$149,999	9.2%	50.9%
\$540k - \$710k	1,328	\$150,000 - \$199,999	15.6%	66.6%
\$710k +	2,841	\$200,000+	33.4%	100.0%
Totals:	8,496		% of All:	77.9%

Rental				
Rent Level	# of Households	Income Range	% of Total	Cumulative
\$0 - \$400	202	Less than \$15,000	8.4%	8.4%
\$400 - \$700	287	\$15,000 - \$24,999	11.9%	20.3%
\$700 - \$900	235	\$25,000 - \$34,999	9.8%	30.0%
\$900 - \$1200	250	\$35,000 - \$49,999	10.4%	40.4%
\$1200 - \$1600	538	\$50,000 - \$74,999	22.3%	62.7%
\$1600 - \$1900	174	\$75,000 - \$99,999	7.2%	69.9%
\$1900 - \$2200	235	\$100,000 - \$124,999	9.8%	79.7%
\$2200 - \$2500	171	\$125,000 - \$149,999	7.1%	86.8%
\$2500 - \$3400	101	\$150,000 - \$199,999	4.2%	91.0%
\$3400 +	218	\$200,000+	9.0%	100.0%
Totals:	2,411		% of All:	22.1%

All Units	10,907
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Sources: Census, Environics Analytics, JOHNSON ECONOMICS

The number of households across the income spectrum seeking a range of both ownership and rental housing is anticipated to grow. It is projected that the homeownership rate in West Linn will fall slightly over the next 20 years to 78% from 79%, which would still be significantly higher than the Clackamas County and statewide ownership rates.

COMPARISON OF FUTURE HOUSING DEMAND TO CURRENT HOUSING INVENTORY

The profile of occupied future housing demand presented above (Figure 5.2) was compared to the current housing inventory presented in the previous section to determine the total future need for *new* housing units by type and price range (Figure 5.3).

This estimate includes a vacancy assumption. As reflected by the most recent Census data, and as is common in most communities, the vacancy rate for rental units is typically higher than that for ownership units. An average vacancy rate of 5% is assumed for the purpose of this analysis.

FIGURE 5.3: PROJECTED FUTURE NEED FOR NEW HOUSING UNITS (2040), WEST LINN

OWNERSHIP HOUSING									
Unit Type:	Single Family Detached	Single Family Attached	Multi-Family			Manuf. home	Boat, RV, other temp	Total Units	% of Units
			2-unit	3- or 4-plex	5+ Units MFR				
Totals:	572	56	8	14	28	1	0	679	67.6%
Percentage:	84.3%	8.2%	1.2%	2.1%	4.1%	0.2%	0.0%	100%	

RENTAL HOUSING									
Unit Type:	Single Family Detached	Single Family Attached	Multi-Family			Manuf. home	Boat, RV, other temp	Total Units	% of Units
			2-unit	3- or 4-plex	5+ Units MFR				
Totals:	71	29	55	53	109	8	0	326	32.4%
Percentage:	21.9%	8.8%	16.9%	16.4%	33.5%	2.5%	0.0%	100%	

TOTAL HOUSING UNITS									
Unit Type:	Single Family Detached	Single Family Attached	Multi-Family			Manuf. home	Boat, RV, other temp	Total Units	% of Units
			2-unit	3- or 4-plex	5+ Units MFR				
Totals:	644	84	63	68	137	9	0	1,005	100%
Percentage:	64.1%	8.4%	6.3%	6.8%	13.6%	0.9%	0.0%	100%	

Sources: PSU, City of West Linn, Census, Environics Analytics, JOHNSON ECONOMICS

- The results show a need for 1,005 new housing units by 2040.
- Of the new units needed, roughly 68% are projected to be ownership units, while 32% are projected to be rental units. This represents more renters than the estimated tenure split, but it is projected that more rental units will need to be added to balance the disproportionate share of ownership units in the current inventory.
- Currently, the estimated vacancy rate of rental units is very low, so to serve the current need, future need, and allow for a 5% vacancy rate, a disproportionate number of rental units are needed. The current vacancy rate for ownership units, including second homes, is higher, so fewer new ownership units are projected.
- There is some need for new ownership housing at the low-end and upper end of the pricing spectrum. But income trends suggest that the greatest demand will remain in the upper-middle price ranges (\$300k to \$600k).
- The greatest need for rental units is found at the lowest and some higher price points. Market rents are currently clustered in the \$900 to \$2,000 range in current dollars. Therefore, most units are to be found in this range. There is insufficient rental housing for the lowest income households making \$35,000 or less.

FIGURE 5.4: ESTIMATED CURRENT NEED & FUTURE NEED BY INCOME BRACKET WEST LINN

Income Range	Current Need (no vacancy)	Future Need (no vacancy)	New Need (with vacancy)	Share of Units
Less than \$15,000	380	416	43	4%
\$15,000 - \$24,999	370	406	44	4%
\$25,000 - \$34,999	372	408	43	4%
\$35,000 - \$49,999	607	665	66	7%
\$50,000 - \$74,999	1,279	1,402	140	14%
\$75,000 - \$99,999	1,034	1,133	101	10%
\$100,000 - \$124,999	941	1,032	94	9%
\$125,000 - \$149,999	872	956	86	9%
\$150,000 - \$199,999	1,303	1,429	124	12%
\$200,000+	2,790	3,059	265	26%
Total:	9,948	10,907	1,005	

Sources: PSU, City of West Linn, Census, Environics Analytics, JOHNSON ECONOMICS

Needed Unit Types

The mix of needed unit types shown in Figure 5.3 reflects both past trends and anticipated future trends. Since 2000, detached single family units have continued to constitute most of the permitted units in West Linn. In keeping with development trends, and the buildable land available to West Linn, single family units are expected to continue to make up a large share of new ownership housing over the next 20 years. However, an increasing share of new units is anticipated to be attached housing types to accommodate renters and first-time home buyers.

- 64% of the new units are projected to be single family detached homes, while 35% is projected to be some form of attached housing, and under 1% are projected to be new manufactured homes.
- Single family attached units (townhomes on individual lots) are projected to meet 8% of future need. These are defined as units on separate tax lots, attached by a wall but separately metered, the most common example being townhome units.
- Duplex through four-plex units are projected to represent 13% of the total need. Duplex units would include a detached single-family home with an accessory dwelling unit on the same lot, or with a separate unit in the home (for instance, a rental basement unit.) This includes attached units allowed to be built in single-family neighborhoods under new statewide rules.
- 14% of all needed units are projected to be multi-family in structures of 5+ attached units.
- Of ownership units, 84% are projected to be detached single-family homes, and 16% projected to be attached forms.
- About 76% of new rental units are projected to be found in new attached buildings, with 34% projected in rental properties of 5 or more units, and 33% in buildings of two to four units, and 9% in attached single family forms. Only 22% of new rental units are projected to be detached homes.

Needed Affordability Levels

Figure 5.5 presents the estimated need for net new housing units by major income segment, based on the projected demographics of new households to the market area. The needed affordability levels presented here are based on current 2020 dollars. Over time, incomes and housing costs will both inflate, so the general relationship projected here is expected to remain unchanged.

Figure 5.5 also discusses the housing types typically attainable by residents at these income levels.

FIGURE 5.5: PROJECTED NEED FOR NEW HOUSING AT DIFFERENT INCOME LEVELS

Household Income Segment	Income Level (Rounded)*	Afford. Rent Range	Afford. Price Range	Owner Units	Renter Units	Total	Share	Common Housing Product
Extremely Low Inc. < 30% AMI	< \$27,500	<\$800	<\$150k	21	76	97	10%	Govt-subsidized; Voucher
Very Low Income 30% - 50% AMI	\$27.5k - \$46k	\$800-\$1,100	\$150k-\$225k	27	54	80	8%	Aging/substandard rentals; Govt-subsidized; Voucher
Low Income 50% - 80% AMI	\$46k - \$73.5k	\$1,100-\$1,600	\$225k-\$330k	59	90	150	15%	Market apts; Manuf. homes; Plexes; Aging SFR
Middle Income 80% - 120% AMI	\$73.5k - \$110.5k	\$1,600-\$2,100	\$330k-\$475k	113	35	148	15%	Single-family detached; Townhomes; Small homes; New apts
Upper Income > 120% AMI	> \$110,500	\$2,100 +	\$475k +	459	70	530	53%	Single-family detached
TOTAL:				679	326	1,005	100%	

* Adjusted to 2020 dollars. The median household income level in 2020 will be will be inflated from current levels.

Sources: HUD, Census, Environics Analytics, JOHNSON ECONOMICS

- Generally, based on income levels there is a shortage of units in the lowest pricing levels for renter and owner households.
- Figure 5.3 presents the *net NEW* housing unit need over the next 20 years. However, there is also a *current* need for more affordable units. In order for all households, current and new to pay 30% or less of their income towards housing in 2040, more affordable rental units would be required. This indicates that some of the current supply, while it shows up as existing available housing, would need to become less expensive to meet the needs of current households.
- There is a finding of current and new need at the lowest end of the rental spectrum (\$900 and less).
- The projection of future ownership units finds that the supply at the lowest end of the spectrum is currently insufficient due to the prevalence of newer homes most of which are detached houses. (This reflects the estimated *value* of the total housing stock, and not necessarily the average pricing for housing currently for sale.) Ownership options and lower and middle price points are townhomes, condos, and small detached homes, often on smaller lots.
- Figure 5.6 presents estimates of need at key low-income affordability levels in 2020 and in 2040. There is existing and on-going need at these levels, based on income levels specified by Oregon Housing and Community Services for Clackamas County. An estimated 30% of households qualify as at least “low income” or lower on the income scale, while 9% of household qualify as “extremely low income”.
- Typically, only rent-subsidized properties can accommodate these lowest-income households at “affordable” housing cost levels. (The threshold income levels presented here are generated for the entire county based on the significantly lower countywide average household income in comparison to West Linn.)

FIGURE 5.6: PROJECTED NEED FOR HOUSING AFFORDABLE AT LOW INCOME LEVELS, WEST LINN

Affordability Level	Income Level*		Current Need (2020)		Future Need (2040)		NEW Need (20-Year)	
			# of HH	% of All	# of HH	% of All	# of HH	% of All
Extremely Low Inc.	30% AMI	\$27,630	848	9%	945	9%	97	10%
Very Low Income	50% AMI	\$46,050	1,569	16%	1,746	16%	178	18%
Low Income	80% AMI	\$73,680	2,940	30%	3,267	30%	327	33%

Sources: OHCS, Environics Analytics, JOHNSON ECONOMICS

* Income levels are based on OHCS guidelines for a family of four.

Agricultural Worker Housing

There is currently no housing dedicated to this population in West Linn. Based on the assumption that this type of housing will maintain its current representation in the local housing stock, this indicates that there will likely be no new need for housing dedicated specifically for agricultural workers over the planning period. However, this population may also be served by other available affordable units.

VI. RECONCILIATION OF FUTURE NEED (2040) & LAND SUPPLY

This section summarizes the results of the Buildable Lands Inventory (BLI). The BLI is presented in detail in an accompanying memo to this report. This analysis relies on the most conservative estimate of capacity from the multiple scenarios considered in the BLI memo.

The following table (Figure 6.1) presents the estimated new unit capacity of the buildable lands identified in the City of West Linn and within the UGB. The table breaks down the City's zoning into broad categories:

- Low density (<8 units/gross acre)
- Medium density (8 – 18 units/gross acre)
- High density (18+ units/gross acre)

Residential zones, as well as mixed-use zones that can accommodate some residential uses, were included in the inventory.

FIGURE 6.1: ESTIMATED BUILDABLE LANDS CAPACITY BY ACREAGE AND NO. OF UNITS (2020)

ZONING		Unconstrained Acres			Unit Capacity	
		Vacant	Infill	Total	Units	Share
RESIDENTIAL ZONE	Category					
R-40	Low-Density Res.	0.0	0.0	0.0	0	0%
R-20	Low-Density Res.	0.0	0.0	0.0	1	0%
R-15	Low-Density Res.	6.0	1.2	7.2	30	2%
R-10	Low-Density Res.	30.8	102.9	133.7	727	60%
R-7	Low-Density Res.	3.5	10.3	13.8	89	7%
R-5	Medium-Density Res.	3.0	9.2	12.2	105	9%
R-4.5	Medium-Density Res.	2.7	10.9	13.6	134	11%
R-3	High-Density Res.	0.0	0.0	0.0	0	0%
R-2.1	High-Density Res.	0.0	1.9	1.9	36	3%
LD	Low-Density Res.	6.8	10.4	17.2	83	7%
<i>TOTALS:</i>		<i>52.8</i>	<i>146.8</i>	<i>199.6</i>	<i>1,205</i>	<i>100%</i>
ZONE CATEGORIES	Typical Housing Type					
Low-Density Res.	Single-family detached; Some SF attached & plex	47.1	124.8	171.9	930	77%
Medium-Density Res.	SF attached; Manufact. home; 2-4 plexes	5.7	20.1	25.8	239	20%
High-Density Res.	Multi-family apartments	0.0	1.9	1.9	36	3%
<i>TOTALS:</i>		<i>52.8</i>	<i>146.8</i>	<i>199.6</i>	<i>1,205</i>	<i>100%</i>

Source: Angelo Planning Group

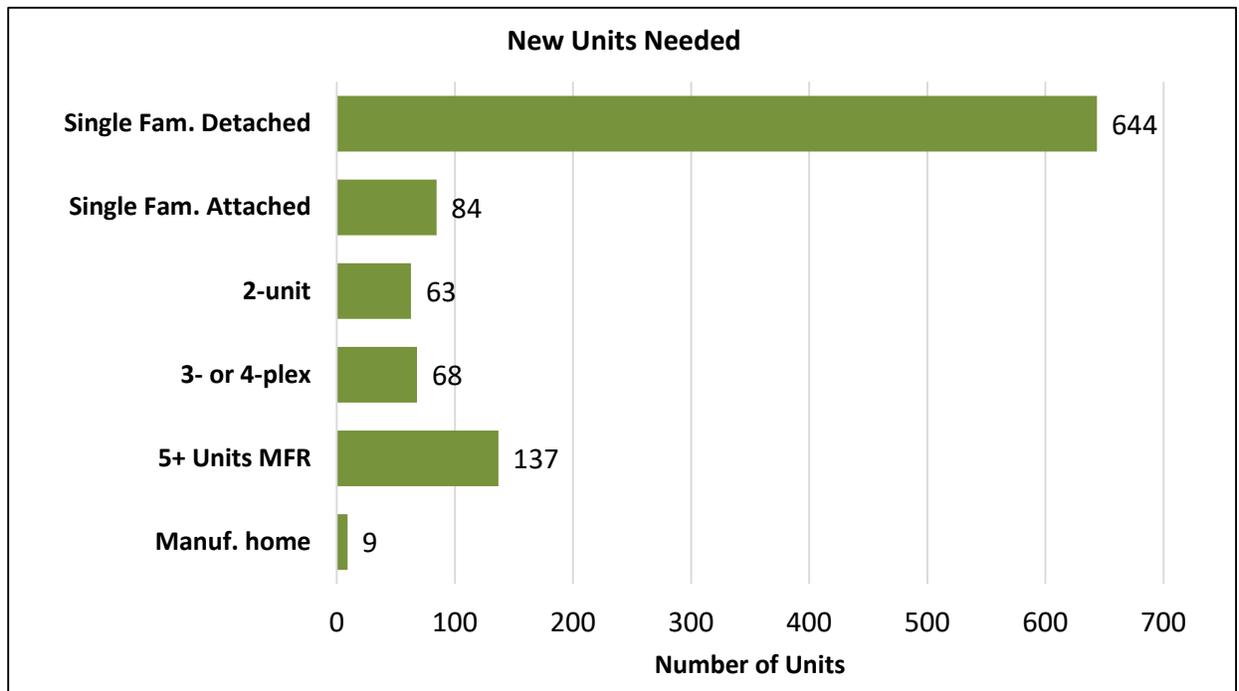
- There is a total estimated remaining capacity of 1,205 units of different types within the study area.
- Most of the remaining buildable acreage is in the low-density residential zones. At a total capacity 930 housing units, these zones represent roughly 77% of the total unit capacity.

- There are sufficient buildable medium-density acres to accommodate nearly 239 new units. This is 20% of the total unit capacity.
- There are very few available buildable acres in the high-density zone. In total, the capacity of these zones represents just 3% of the total unit capacity.

The following table summarizes the forecasted future unit need for West Linn. These are the summarized results from Section V of this report, presented here for reference.

FIGURE 6.2: SUMMARY OF FORECASTED FUTURE UNIT NEED (2040)

TOTAL HOUSING UNITS									
Unit Type:	Single Family Detached	Single Family Attached	Multi-Family			Manuf. home	Boat, RV, other temp	Total Units	% of Units
			2-unit	3- or 4-plex	5+ Units MFR				
Totals:	644	84	63	68	137	9	0	1,005	100%
Percentage:	64.1%	8.4%	6.3%	6.8%	13.6%	0.9%	0.0%	100%	



Sources: PSU Population Research Center, Census, Johnson Economics

Comparison of Housing Need and Capacity

There is a total forecasted need for just over 1,000 units over the next 20 years based on the forecasted growth rate. This is less than the estimated total capacity of 1,205 units. Figure 6.3 below presents a comparison of the BLI capacity for new housing units, compared to the estimate for new unit need by 2040. It breaks down need by general zoning category (LDR, MDR, HDR).

- The results find ample capacity for low-density housing, and medium-density housing.
- The amount of land zoned for “high-density housing” is insufficient for the projected demand for high-density housing types. There is a projected deficit of 5 acres of land in this zone to accommodate the forecasted number of multi-family apartment units.

- Under recently adopted state rules (HB2001, 2019), West Linn as a Metro-area city will be required in the future to allow for additional housing types in low-density residential zones. This includes attached single-family homes (townhomes), duplex-to-fourplex, and compact small-unit “cottage cluster” developments.
- In the case of West Linn, given the shortage of HDR-zoned land presented below, it becomes more likely that available land in lower-density zones may be developed with attached forms of housing, as other lands to accommodate these units is scarce. At the same time, there is capacity in the MDR zones to accommodate demand for most of the attached types listed above.
- These findings assume that under newly adopted state rules, 2% of available buildable parcels in the LDR zone will be used for the various types of attached units (single-family attached townhomes, duplex – fourplex). This amounts to a total of 28 attached units, plus 644 detached units in the LDR zone.

FIGURE 6.3: COMPARISON OF FORECASTED FUTURE LAND NEED (2040) WITH AVAILABLE CAPACITY

WITHIN CITY LIMITS		SUPPLY			DEMAND		
Zone & Plan Category	Typical Housing Type	Buildable Land Inventory (Total)			Growth Rate (1.8%)		
		Developable Acres	Unit Capacity	Avg. Density (units/ac)	New Unit Need (2040)	Surplus or (Deficit)	
						Units	Acres
Low-Density	Single-family detached; Some SF attached & plex	171.9	930	5.4	672	258	48
Med-Density	SF attached; Manufact. home; 2-4 plexes	25.8	239	9.3	196	43	5
High-Density	Multi-family apartments	1.9	36	18.9	137	(101)	(5)
<i>TOTALS:</i>		<i>199.6</i>	<i>1,205</i>	<i>6.0</i>	<i>1,005</i>	<i>200</i>	<i>47</i>

Sources: Angelo Planning Group, Johnson Economics