
City of Tualatin

Housing Needs Analysis

December 2019

Prepared for:

City of Tualatin

FINAL REPORT

ECONorthwest
ECONOMICS • FINANCE • PLANNING

KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503.222.6060

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Community Advisory Committee

- Alice Galloway Neely
- Angela Handran
- Bryce Payne
- Daniel Bachhuber
- Derek Reinke
- Joe Lipscomb
- Katherine Galian
- Kellye Aprati
- Ken Johnson
- Lainie Magsarili
- Linda Moholt
- Rachael Duke
- Doug Plambeck
- Susan Noack
- Manny Trujillo
- Cyndy Hillier

Technical Advisory Committee

- Aquilla Hurd-Ravich, Community Development Director
- Karen Perl Fox, Senior Long-Range Planner
- Jonathan Taylor, Economic Development Manager
- Steve Koper, Planning Manager
- Garet Prior, Policy Analyst
- Lauren Gonzalez, Permit Coordinator
- Tanya Williams, Assistant to the City Manager
- Betsy Ruef, Community Engagement Coordinator
- Ross Hoover, Parks and Recreation Director
- Rich Mueller, Parks and Recreation Manager
- Mike McCarthy, Principal Transportation Engineer
- Sean Brady, City Attorney
- Anne Debbaut/Kirstin Greene, DLCD Representatives
- Hector Rodriguez, ODOT representative
- Stu Peterson, Macadam Forbes
- Ken Gertz, Gertz Fine Homes
- Jeff Raker, Metro
- Ezra Hammer, Home Builders Association
- Katrina Holland, Community Alliance of Tenants
- Komi Kalevor, Washington County Housing Authority
- Ken Rencher, Washington County
- Melissa Dailey, Washington County

City of Tualatin Project Management Team

- Aquilla Hurd-Ravich, Community Development Director
- Steve Koper, Planning Manager
- Karen Perl Fox, Senior Long-Range Planner (T2040 Project Manager)
- Jonathan Taylor, Economic Development Manager
- Gareth Prior, Policy Analyst

Consulting Team (ECONorthwest)

- Beth Goodman, Project Director
- Margaret Raimann, Technical Manager
- Sadie DiNatale, Associate

Interpreters

- Rosa Galvan
- Armando Gutierrez

City of Tualatin Contact:

Karen Perl Fox, Senior Planner
City of Tualatin
18880 SW Martinazzi Avenue
Tualatin, OR 97756
503-691-3027
kperlfox@tualatin.gov

ECONorthwest Contact:

Beth Goodman, Project Director
ECONorthwest
222 SW Columbia, Suite 1600
Portland, OR 97201
503-222-6060
goodman@econw.com

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Executive Summary

Planning Goal 10 and OAR 660-008. The methods used for this study generally follow the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

The primary goals of the housing needs analysis were to (1) project the amount of land needed to accommodate the future housing needs of all types within the Tualatin Planning Area, (2) evaluate the existing residential land supply within the Tualatin Planning Area to determine if it is adequate to meet that need, (3) to fulfill state planning requirements for a twenty-year supply of residential land, and (4) identify policy and programmatic options for the City to meet identified housing needs.

What are the key housing needs in Tualatin?

Following are several key issues identified in the housing needs analysis:

- **Tualatin’s housing market is strongly impacted by the regional market in the Portland Region.** Tualatin is relatively small, accounting for 4.5% of Washington County’s population and 1.5% of the Portland Region’s population. Of the more than 23,800 people who work in Tualatin, 93% of workers commute into Tualatin from other areas, most notably Portland, Tigard, Beaverton, and Hillsboro. Nearly 11,000 residents of Tualatin commute out of the city for work, many of them to Portland.
- **Household incomes in Tualatin are similar to Washington County’s, and have not kept pace with housing prices.** Tualatin’s home sales and rental costs are comparable to other communities in the region. Tualatin has a larger share of multifamily housing compared to Washington County and the Portland Region (42% the City’s housing stock), and there are very few vacant units. Given these factors, Tualatin will continue to have demand for affordable, lower-income and middle-income housing.
- **Demographic and economic trends will drive demand for relatively affordable attached single-family housing and multifamily housing in Tualatin.** The key demographic trends that will affect Tualatin’s future housing needs are: (1) the aging of the Baby Boomers, (2) aging of the Millennials, and (3) continued growth in the Latinx population.
 - As the Baby Boomers age, growth of retirees will drive demand for housing types specific to seniors, such as small and easy-to-maintain dwellings, assisted living facilities, or age-restricted developments.
 - Tualatin’s ability to retain Millennials will depend on whether the city has opportunities for housing that both appeals to and is affordable to Millennials.
 - Growth in the number of Latinx households will result in increased demand for housing of all types, both for ownership and rentals, with an emphasis on

housing that is comparatively affordable. Latinx households are more likely to be larger than average, with more children and possibly with multigenerational households.

- **Tualatin has an existing lack of affordable housing.** Tualatin’s key challenge over the next 20 years is providing opportunities for development of relatively affordable housing of all types of housing, from lower-cost single-family housing to market-rate multifamily housing.
 - About 26% of Tualatin’s households had incomes less than \$41,000 and cannot afford a two-bedroom apartment at Washington County’s Fair Market Rent (FMR) of \$1,330 without cost burdening themselves.
 - In 2018, a household needed to earn \$25.58 an hour to afford a two-bedroom rental unit in Washington County.
 - Tualatin currently has a deficit of housing units that are affordable to households earning less than \$35,000.
 - About 37% of Tualatin’s households are cost burdened, with 56% of renters and 22% of owners paying more than 30% of their income on housing.

How much growth is Tualatin planning for?

A 20-year household forecast (in this instance, 2020 to 2040) is the foundation for estimating the number of new dwelling units needed. Exhibit 1 shows a household forecast for Tualatin for the 2020 to 2040 period. It shows that Tualatin will grow by about 1,014 households over the 20-year period (with 44% of households projected to locate in Basalt Creek).

Exhibit 1. Forecast of Household Growth, Tualatin city limits, 2020 to 2040

Source: Metro 2040 Population Distributed Forecast, Exhibit A. July 12, 2016.

10,791	11,362	571	5.3% increase
Households in 2020	Households in 2040	New households 2020 to 2040	0.26% Growth Rate

Exhibit 2. Forecast of Household Growth, Basalt Creek, 2020 to 2040

Source: Metro 2040 TAZ Forecast, Population Estimates (TAZ 980 and 981). November 6, 2015.

203	646	443	218% increase
Households in 2020	Households in 2040	New households 2020 to 2040	5.96% Growth Rate

How much buildable residential land does Tualatin currently have?

Exhibit 3 shows buildable residential acres by Plan Designation, after excluding constrained and unbuildable land. The results show that Tualatin has about 244 net buildable acres in residential Plan Designations. Of the 244 net acres, about 62% are located in Basalt Creek.

Exhibit 3. Buildable acres in vacant and partially vacant tax lots by Plan Designation, Tualatin Planning Area, 2018

Source: Metro BLI, ECONorthwest Analysis. Note: The numbers in the table may not sum to the total as a result of rounding.

Generalized Plan Designation	Total buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
Residential			
Low Density Residential	79	11	68
Medium Low Density Residential	1	0	1
Medium High Density Residential	1	1	0
High Density High Rise Residential	0	0	0
High Density Residential	12	12	0
Commercial			
Mixed-Use Commercial Overlay Zone	0	0	0
Central Tualatin Overlay Zone	0	0	0
Basalt Creek Planning Area			
Low Density Residential	76	2	74
Medium Low Density Residential	69	49	20
High Density Residential	5	0	5
Neighborhood Commercial	0	0	0
Total	244	75	168

Exhibit 3 shows that Tualatin has 150 buildable acres in the Basalt Creek Planning Area. To analyze housing capacity and land sufficiency, this report uses the Basalt Creek Concept Plan’s estimate of buildable acres (which is 88 buildable acres). The analysis uses the Basalt Creek Concept Plans estimate of buildable acres (rather than the buildable lands inventory estimate) to remain consistent with this recently adopted Concept Plan and the Comprehensive Plan amendment.

How much housing will Tualatin need?

Tualatin will need to plan for about 1,014 new dwelling units to accommodate forecasted household growth between 2020 and 2040. About 406 dwelling units will be single-family detached types (40%), 152 will be single-family attached (15%), and 456 will be multifamily (45%).

This mix represents a shift from the existing mix of housing, in which about 53% of the housing stock in the 2013-2017 period was single-family detached housing. The shift in mix is in response to the need for a broader range of housing types with a wider range of price points

than are currently available in Tualatin’s housing stock, including housing types such as duplexes, townhouses, triplexes, and quadplexes, and apartments / condominiums.

How much land will be required for housing?

Exhibit 4 shows that Tualatin’s 96 acres of buildable land in its city limits and 88 acres in Basalt Creek (per the Basalt Creek Concept Plan) has the capacity to accommodate 1,207 new dwelling units. While Tualatin’s forecast for demand is for 1,014 new dwelling units, Tualatin has a deficit of capacity for 109 dwelling units in the Median High Density Plan Designation and 101 dwelling units in the High Density High-Rise Plan Designation (over the 2020 to 2040 period). The following summarizes Tualatin’s land sufficiency results by Plan Designations:

- **Low Density:** Tualatin has a surplus of capacity for about 57 dwelling units, or 10 gross acres of land to accommodate growth.
- **Medium Low Density:** Tualatin has a surplus of capacity for about 315 dwelling units, or 27 gross acres of land to accommodate growth.
- **Medium High Density:** Tualatin has a deficit of capacity for about 109 dwelling units, or seven gross acres of land to accommodate growth.
- **High Density:** Tualatin has a surplus of capacity for about 31 dwelling units, or two gross acres of land to accommodate growth.
- **High Density High-Rise:** Tualatin has a deficit of capacity for about 101 dwelling units, or four gross acres of land to accommodate growth.

Exhibit 4. Comparison of capacity of existing residential land with demand for new dwelling units and land surplus or deficit, Tualatin City Limits and Basalt Creek, 2020 to 2040

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Residential Plan Designations	Capacity (Dwelling Units)	Demand for New Housing	Remaining Capacity (Supply minus Demand)	Land Surplus or (Deficit) Gross Acres
Low Density	523	466	57	10
Medium Low Density	386	71	315	27
Medium High Density	13	122	(109)	(7)
High Density	285	254	31	2
High Density High-Rise	-	101	(101)	(4)

What are the Key Findings of the Housing Needs Analysis?

The key findings of the Tualatin's Housing Needs Analysis are that:

- **Tualatin is planning for 1,014 new dwelling units.** The growth of 1,014 households will result in demand for 1,014 new dwelling units over the 20-year planning period, averaging 51 new dwelling units annually.
- **Tualatin will plan for more single-family attached and multifamily dwelling units in the future to meet the City's housing needs.** Historically, about 53% of Tualatin's housing was single-family detached. While 40% of new housing in Tualatin is forecast to be single-family detached, the City will need to provide opportunities for development of new single-family attached (15% of new housing) and multifamily units (45% of new housing).
 - The factors driving the shift in types of housing needed in Tualatin include changes in demographics and decreases in housing affordability. The aging of the Baby Boomers and the household formation of the Millennials will drive demand for renter- and owner-occupied housing, such as single-family detached housing, townhouses, duplexes, triplexes, quadplexes, and apartments. Both groups may prefer housing in walkable neighborhoods, with access to services.
 - Tualatin's existing deficit of housing affordable for low- and high-income households indicates a need for a wider range of housing types, for renters and homeowners. About 37% of Tualatin's households are cost burdened (paying more than 30% of their income on housing), including a cost burden rate of 56% for renter households.
 - Without diversification of housing types, lack of affordability will continue to be a problem, possibly growing in the future if incomes continue to grow at a slower rate than housing costs. Under the current conditions, 307 of the forecasted new households will have incomes of \$40,700 (in 2018 dollars) or less. These households often cannot afford market-rate housing without government subsidy. More than 300 new households will have incomes between \$40,700 and \$97,680. These households will all need access to affordable housing, such as the housing types described above.
- **Tualatin has a small deficit of land for higher density single-family and multifamily housing.** Tualatin has a deficit of land for 109 dwelling units in the Medium High Density Plan Designation (about seven gross acres) and 101 units in the High Density High-Rise Plan Designation (about four gross acres).
- **Tualatin will need to meet the requirements of House Bill 2001.** The Legislature passed House Bill 2001 in the 2019 Legislative session. The bill requires cities within the Metro UGB to allow "middle" housing types in low-density residential zones. The bill defines middle housing types as: duplexes, triplexes, quadplexes, cottage clusters, and townhouses. To comply with House Bill 2001, Tualatin will need to:

- Allow cottage cluster as a housing type in the Residential Low Density zone. Tualatin may want to allow cottage cluster housing in the Medium-Low Density and Medium-High Density zones. Tualatin will also need to include development standards in the Tualatin Development Code.
- Allow duplexes, townhouses, and multifamily housing as a permitted use in the Residential Low Density zone.

Following is a summary of ECONorthwest’s recommendations to Tualatin based on the analysis and conclusions in this report. The *Tualatin Housing Strategy* memorandum presents the full list of recommendations for Tualatin.

- **Ensure an adequate supply of land that is available and serviceable.** Tualatin should evaluate opportunities to increase residential development densities by modifying the Development Code, such as increasing densities and height limits in higher density zones. Tualatin should identify opportunities to re-zone land, from lower density usage to higher density usage, to provide additional opportunities for multifamily housing development. Tualatin should plan for long-term development of housing in Tualatin through 2040 and beyond by working with Metro on upcoming Growth Management reports.
- **Encourage development of a wider variety of housing types.** Tualatin should allow duplexes, triplexes, quadplexes, cottage clusters, and townhouses in the Residential Low Density zone and allow cottage cluster housing in the Medium-Low Density and Medium-High Density zones (which already allow for the other housing types mentioned). These changes should be made in a way that makes the City’s zoning code compliant with House Bill 2001.
- **Support development and preservation of housing that is affordable for all households.** The City should develop policies to support development of housing affordable to people who live and work in Tualatin. The City should identify opportunities to leverage resources (including funding) from the Metro Bond to support development of housing affordable to households earning less than 60% of Median Family Income in Washington County (\$48,900 for a household size of four people). The City should develop policies to prevent and address homelessness, as well as to prevent and mitigate residential displacement resulting from redevelopment and increases in housing costs. These actions will require Tualatin to evaluate the adoption of a wide variety of housing policies such as creative financing opportunities for systems development charges, evaluating tax exemption programs, participating in a land bank, and other approaches to supporting development of housing affordable at all income levels.
- **Identify funding tools to support residential development.** The City should evaluate tools such as establishing a new Urban Renewal District and evaluate establishing a construction excise tax.
- **Identify redevelopment opportunities.** The City should identify districts within Tualatin with opportunities for redevelopment for both housing and employment

uses, as well as supporting redevelopment of underutilized commercial buildings for housing.

- **Ensure there are connections between planning for housing and other community planning.** Throughout the project, stakeholders emphasized the need to coordinate housing planning with economic development planning, transportation planning, and other community planning. Updates to the Tualatin Transportation System Plan should be coordinated with planning for housing growth. A key approach to accommodating new residential development is redevelopment that results in mixed-use districts, providing opportunities for more housing affordable to people working at businesses in Tualatin and living closer to work (thus reducing transportation issues). In addition, stakeholders would like to see the incorporation of services needed to meet daily needs of residents of neighborhoods without driving.

The *Tualatin Housing Strategy* memorandum presents more details about each of these topics and recommendations for specific actions to implement these recommendations.

1. Introduction

This report presents Tualatin's Housing Needs Analysis for the 2020 to 2040 period. It is intended to comply with statewide planning policies that govern planning for housing and residential development, including Goal 10 (Housing) and OAR 660 Division 8. The methods used for this study generally follow the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

Tualatin has changed considerably in the last two decades. Tualatin grew from 22,791 people in 2000 to 27,135 people in the 2013-2017 period. This is an addition of 4,344 people, or 19% growth. In this time, rates of housing cost burden increased from 26% to 37%, with renter cost burdened rates increasing from 30% to 56%. Median gross rents increased by \$386 (from \$768 in 2000 to \$1,154 in 2013-2017) and median home values increased by \$83,168 (from \$282,532 in 2000 to \$365,700 in 2013-2017).

This report provides Tualatin with a factual basis to update the Housing Element of the City's Comprehensive Plan and Development Code, and to support future planning efforts related to housing and options for addressing unmet housing needs in Tualatin. This report provides information that informs future planning efforts, including development and redevelopment. It provides the City with information about the housing market in Tualatin and describes the factors that will affect future housing demand in Tualatin, such as changing demographics. This analysis will help decision makers understand whether Tualatin has enough land to accommodate growth over the next 20 years.

Framework for a Housing Needs Analysis

Economists view housing as a bundle of services for which people are willing to pay: shelter certainly, but also proximity to other attractions (job, shopping, parks and recreation), amenities (type and quality of fixtures and appliances, landscaping, views), prestige, and access to a range of services (i.e. medical, transportation) including public services (i.e. quality of schools). Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make tradeoffs. What they can get for their money is influenced both by economic forces and government policy. Moreover, different households will value what they can get differently. They will have different preferences, which in turn are a function of many factors like income, age of head of household, number of people and children in the household, number of workers and job locations, number of transportation vehicles, and so on.

Thus, housing choices of individual households are influenced in complex ways by dozens of factors. The housing market in Washington County and Tualatin are the result of the individual decisions of thousands of households. These points help to underscore the complexity of projecting what types of housing will be built in Tualatin between 2020 and 2040.

The complex nature of the housing market, demonstrated by the unprecedented boom and bust during the past decade, does not eliminate the need for some type of forecast of future housing

demand and need. This includes resulting implications for land demand and consumption. Such forecasts are inherently uncertain. Their usefulness for public policy often derives more from the explanation of their underlying assumptions about the dynamics of markets and policies than from the specific estimates of future demand and need. Thus, we start our housing analysis with a framework for thinking about housing and residential markets, and how public policy affects those markets.

Statewide Planning Goal 10

The passage of the Oregon Land Use Planning Act of 1974 (ORS Chapter 197) established the Land Conservation and Development Commission (LCDC) and the Department of Land Conservation and Development (DLCD). The Act required the Commission to develop and adopt a set of statewide planning goals. Goal 10 addresses housing in Oregon and provides guidelines for local governments to follow in developing their local comprehensive land use plans and implementing policies.

At a minimum, local housing policies must meet the requirements of Goal 10 and the statutes and administrative rules that implement it (ORS 197.295 to 197.314, ORS 197.475 to 197.490, and OAR 600-008).¹ Goal 10 requires incorporated cities to complete an inventory of buildable residential lands. Goal 10 also requires cities to encourage the numbers of housing units in price and rent ranges commensurate with the financial capabilities of its households. Jurisdictions located in the Metro UGB are also required to comply with Metropolitan Housing in OAR 660-007 and Title 7 of Metro’s Urban Growth Management Functional Plan in the Metro Code (3.07 Title 7).

Goal 10 defines needed housing types as “all housing on land zoned for residential use or mixed residential and commercial use that is determined to meet the need shown for housing within an urban growth boundary at price ranges and rent levels that are affordable to households within the city with a variety of incomes, including but not limited to households with low incomes, very low incomes and extremely low incomes.” ORS 197.303 defines needed housing types:

- (a) Housing that includes, but is not limited to, attached and detached single-family housing and multiple family housing for both owner and renter occupancy.
- (b) Government assisted housing.²
- (c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490.
- (d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions.
- (e) Housing for farmworkers.

¹ ORS 197.296 only applies to cities with populations over 25,000.

² Government assisted housing can be any housing type listed in ORS 197.303 (a), (c), or (d).

DLCD provides guidance on conducting a housing needs analysis in the document *Planning for Residential Growth: A Workbook for Oregon's Urban Areas*, referred to as the Workbook.

Tualatin must identify needs for all of the housing types listed above as well as adopt policies that increase the likelihood that needed housing types will be developed. This housing needs analysis was developed to meet the requirements of Goal 10 and its implementing administrative rules and statutes.

The Metropolitan Housing Rule

OAR 660-007 (the Metropolitan Housing rule) is designed to “assure opportunity for the provision of adequate numbers of needed housing units and the efficient use of land within the Metropolitan Portland (Metro) urban growth boundary.” OAR 660-0070-005(12) provides a Metro-specific definition of needed housing:

"Needed Housing" defined. Until the beginning of the first periodic review of a local government's acknowledged comprehensive plan, "needed housing" means housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels.

The Metropolitan Housing Rule also requires cities to develop residential plan designations:

(1) Plan designations that allow or require residential uses shall be assigned to all buildable land. Such designations may allow nonresidential uses as well as residential uses. Such designations may be considered to be "residential plan designations" for the purposes of this division. The plan designations assigned to buildable land shall be specific so as to accommodate the varying housing types and densities identified in OAR 660-007-0030 through 660-007-0037.

OAR 660-007 also specifies the mix and density of new residential construction for cities within the Metro Urban Growth Boundary (UGB):

“Provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances” (OAR 660-007-0030 (1)).

OAR 660-007-0035 sets specific density targets for cities in the Metro UGB. Tualatin’s average density target is eight dwelling units per net buildable acre.³

Metro Urban Growth Management Functional Plan

The Metro Urban Growth Management Functional Plan describes the policies that guide development for cities within the Metro UGB to implement the goals in the Metro 2040 Plan.

³ OAR 660-024-0010(6) defines Net Buildable Acres as follows: “Net Buildable Acre” consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads.

Title 1: Housing Capacity

Title 1 of Metro's Urban Growth Management Functional Plan is intended to promote efficient land use within the Metro UGB by increasing the capacity to accommodate housing capacity. Each city is required to determine its housing capacity based on the minimum number of dwelling units allowed in each zoning district that allows residential development and maintain this capacity.

Title 1 requires that a city adopt minimum residential development density standards by March 2011. If the jurisdiction did not adopt a minimum density by March 2011, the jurisdiction must adopt a minimum density that is at least 80% of the maximum density.

Title 1 provides measures to decrease development capacity in selected areas by transferring the capacity to other areas of the community. This may be approved as long as the community's overall capacity is not reduced.

Metro's 2017 Compliance Report concludes that Tualatin is in compliance for the City's Title 1 responsibilities.

Title 7: Housing Choice

Title 7 of Metro's Urban Growth Management Functional Plan is designed to ensure the production of affordable housing in the Metro UGB. Each city and county within the Metro region is encouraged to voluntarily adopt an affordable housing production goal.

Each jurisdiction within the Metro region is required to ensure that their comprehensive plans and implementing ordinances include strategies to:

- Ensure the production of a diverse range of housing types,
- Maintain the existing supply of affordable housing, increase opportunities for new affordable housing dispersed throughout their boundaries, and
- Increase opportunities for households of all income levels to live in affordable housing (3.07.730)

Metro's 2017 Compliance Report concludes that Tualatin is in compliance for the City's Title 7 responsibilities.

Title 11: Planning for New Urban Areas

Title 11 of Metro's Urban Growth Management Functional Plan provides guidance on the conversion of land from rural to urban uses. Land brought into the Metro UGB is subject to the provisions of section 3.07.1130 of the Metro Code, which requires lands to be maintained at rural densities until the completion of a concept plan and annexation into the municipal boundary.

The concept plan requirements directly related to residential development are to prepare a plan that includes:

- (1) A mix and intensity of uses that make efficient use of public systems and facilities,
- (2) A range of housing for different types, tenure, and prices that addresses the housing needs of the governing city, and
- (3) Identify goals and strategies to meet the housing needs for the governing city in the expansion area.

Organization of this Report

The rest of this document is organized as follows:

- **Chapter 2. Residential Buildable Lands Inventory** presents the methodology and results of Tualatin's inventory of residential land.
- **Chapter 3. Historical and Recent Development Trends** summarizes the state, regional, and local housing market trends affecting Tualatin's housing market.
- **Chapter 4. Demographic and Other Factors Affecting Residential Development in Tualatin** presents factors that affect housing need in Tualatin, focusing on the key determinants of housing need: age, income, and household composition. This chapter also describes housing affordability in Tualatin relative to the larger region.
- **Chapter 5. Housing Need in Tualatin** presents the forecast for housing growth in Tualatin, describing housing need by density ranges and income levels.
- **Chapter 6. Residential Land Sufficiency within Tualatin** estimates Tualatin's residential land sufficiency needed to accommodate expected growth over the planning period.

2. Residential Buildable Lands Inventory

This chapter provides a summary of the residential buildable lands inventory (BLI) for the Tualatin Planning Area. This buildable lands inventory analysis complies with statewide planning Goal 10 policies that govern planning for residential uses. The detailed methodology used to complete the buildable lands inventory is presented in Appendix A.

First, the analysis established the residential land base (parcels or portion of parcels with appropriate zoning), classified parcels by buildable status, identified/deducted environmental constraints, and lastly summarized total buildable area by Plan Designation.

Definitions

ECONorthwest developed the buildable lands inventory with a tax lot database from Metro Regional Land Information Systems (RLIS). Maps produced for the buildable lands inventory used a combination of GIS data based on the Metro BLI for the 2018 Urban Growth Report, adopted maps, and visual verification to verify the accuracy of Metro data. The tax lot database is current as of 2016, accounting for changes and development updates through April 2019. The inventory builds from the database to estimate buildable land per plan designations that allow residential uses. The following definitions were used to identify buildable land for inclusion in the inventory:

- *Vacant land.* Tax lots designated as vacant by Metro based on the following criteria: (1) fully vacant based on Metro aerial photo; (2) tax lots with less than 2,000 square feet developed and developed area is less than 10% of lot; (3) lots 95% or more vacant from GIS vacant land inventory.
- *Partially vacant land.* Single-family tax lots that are 2.5 times larger than the minimum lot size with a building value less than \$300,000, or lots that are 5 times larger than the minimum lots size (no threshold for building value). These lots are considered to still have residential capacity. For this analysis, we classified these lots as Partially Vacant, and we assumed that 0.25 acres of the lot was developed, and the remaining land is available for development, less constraints.
- *Public or exempt land.* Lands in public or semi-public ownership are considered unavailable for residential development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches and other semi-public organizations and properties with conservation easements. These lands are identified using the Metro's definitions and categories.
- *Developed land.* Lands not classified as vacant, partially vacant, or public/exempt are considered developed. Developed land includes lots with redevelopment capacity, which are also included in the BLI. The unit capacity of developed but redevelopable lots is based on Metro's estimates.

Development Constraints

Consistent with state guidance on buildable lands inventories, ECONorthwest deducted the following constraints from the buildable lands inventory and classified those portions of tax lots that fall within the following areas as constrained, unbuildable land:

- *Lands within floodplains.* Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA) were used to identify lands in floodways and 100-year floodplains, as well as lands identified in Metro’s Title 3 Stream and Floodplain Protection Plan.
- *Land within natural resource protection areas.* The Locally Significant Wetlands shapefile was used to identify areas within wetlands. Riparian corridors and other natural resource areas identified in Tualatin’s Natural Resource Protection Overlay District were all considered undevelopable. These areas are consistent with the City’s Development Code Chapter 72.
- *Land with slopes over 25%.* Lands with slopes over 25% are considered unsuitable for residential development.

Buildable Lands Inventory Results

Land Base

Exhibit 5 shows residential land in Tualatin by classification (development status). The results show that the Tualatin Planning Area has 2,556 total acres in residential Plan Designations. (This includes the areas of the Mixed-Use Commercial Overlay Zone and Central Tualatin Overlay Zone that allow residential uses). Of these 2,556 acres, about 2,193 acres (86%) are classified as Developed or Public (or Exempt) and do not have development capacity, and the remaining 364 acres (14%) are Vacant or Partially Vacant and have development capacity (not including development constraints).⁴

⁴ The buildable lands inventory results in Exhibit 5 does not account for development constraints (yet). Land with development constraints are not classified as buildable; we remove development constraints in Exhibit 6 and we present final buildable land results in Exhibit 7.

Exhibit 5. Residential acres by classification and Plan Designation, Tualatin Planning Area, 2019

Source: Metro BLI, ECONorthwest Analysis. *Note: The numbers in the table may not sum to the total as a result of rounding.*

Generalized Plan Designation	Vacant	Partially Vacant	Developed	Public or Exempt	Total Acres	Percent of Total
Residential						
Low Density Residential	26	138	1,063	510	1,737	68%
Medium Low Density Residential	-	2	168	68	238	9%
Medium High Density Residential	1	-	125	31	158	6%
High Density High Rise Residential	-	-	6	9	15	1%
High Density Residential	15	-	117	21	153	6%
Commercial						
Mixed-Use Commercial Overlay Zone	-	-	25	-	25	1%
Central Tualatin Overlay Zone	3	-	29	6	37	1%
Basalt Creek Planning Area						
Low Density Residential	2	99	11	-	113	4%
Medium Low Density Residential	49	23	-	-	72	3%
High Density Residential	-	5	-	-	5	0%
Neighborhood Commercial	-	1	4	-	4	0%
Total	95	268	1,548	645	2,556	100%

Exhibit 6 shows land in all residential Plan Designations by development and constraint status. After development constraints have been applied, about 68% of Tualatin’s total residential land (1,747 acres) has no development capacity (i.e., committed), 22% (566 acres) is constrained, and 10% (244 acres) are unconstrained and buildable.

Exhibit 6. Residential land by comprehensive Plan Designation and constraint status, Tualatin Planning Area, 2019

Source: Metro BLI, ECONorthwest Analysis. *Note: The numbers in the table may not sum to the total as a result of rounding.*

Generalized Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
Residential				
Low Density Residential	1,737	1,292	365	79
Medium Low Density Residential	238	190	47	1
Medium High Density Residential	158	128	29	1
High Density High Rise Residential	15	4	11	0
High Density Residential	153	77	64	12
Commercial				
Mixed-Use Commercial Overlay Zone	25	20	5	0
Central Tualatin Overlay Zone	37	16	21	0
Basalt Creek Planning Area				
Low Density Residential	113	13	23	76
Medium Low Density Residential	72	2	1	69
High Density Residential	5	0	0	5
Neighborhood Commercial	4	4	0	0
Total	2,556	1,747	566	244

Vacant Buildable Land

Exhibit 7 shows buildable acres (e.g., acres in tax lots after constraints are deducted) for vacant and partially vacant land by Plan Designation. Of Tualatin’s 244 unconstrained buildable residential acres, about 31% are in tax lots classified as vacant, and 69% are in tax lots classified as partially vacant. About 32% of Tualatin’s buildable residential land is in the Low Density Residential Plan Designation and about 62% of Tualatin’s buildable residential land is located in the Basalt Creek Planning Area.

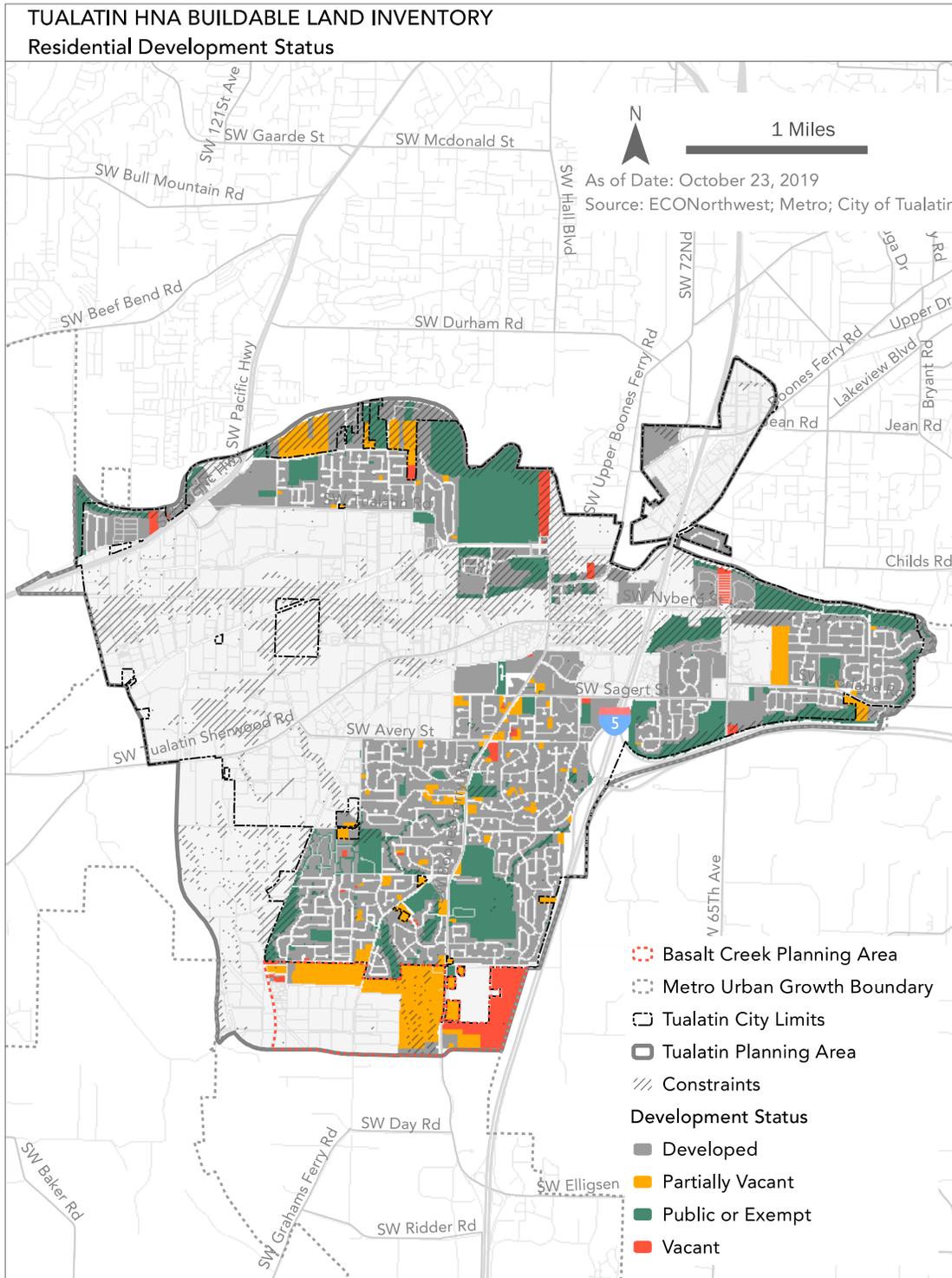
Exhibit 7. Buildable acres in vacant and partially vacant tax lots by Plan Designation and zoning, Tualatin Planning Area, 2019

Source: Metro BLI, ECONorthwest Analysis. Note: The numbers in the table may not sum to the total as a result of rounding.

Generalized Plan Designation	Total buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
Residential			
Low Density Residential	79	11	68
Medium Low Density Residential	1	0	1
Medium High Density Residential	1	1	0
High Density High Rise Residential	0	0	0
High Density Residential	12	12	0
Commercial			
Mixed-Use Commercial Overlay Zone	0	0	0
Central Tualatin Overlay Zone	0	0	0
Basalt Creek Planning Area			
Low Density Residential	76	2	74
Medium Low Density Residential	69	49	20
High Density Residential	5	0	5
Neighborhood Commercial	0	0	0
Total	244	75	168

Exhibit 8 and 5 (upcoming pages) show the results of Tualatin’s residential BLI.

Exhibit 8. Residential Land by Development Status with Constraints, Tualatin Planning Area, 2019



3. Historical and Recent Development Trends

Analysis of historical development trends in Tualatin provides insight into the functioning of the local housing market. The mix of housing types and densities, in particular, are key variables in forecasting the capacity of residential land to accommodate new housing and to forecast future land need. The specific steps are described in Task 2 of the *DLCD Planning for Residential Lands Workbook* as:

1. Determine the time period for which the data will be analyzed.
2. Identify types of housing to address (all needed housing types).
3. Evaluate permit/subdivision data to calculate the actual mix, average actual gross density, and average actual net density of all housing types.

This Housing Needs Analysis examines changes in Tualatin's housing market from 2000 to 2017, as well as residential development from 2002 to 2017. We selected this time period because (1) the period provides information about Tualatin's housing market before and after the national housing market bubble's growth, deflation, and the more recent increase in housing costs and (2) data about Tualatin's housing market during this period is readily available from sources such as the Census and RLIS.

The Housing Needs Analysis presents information about residential development by housing type. There are multiple ways that housing types can be grouped. For example, they can be grouped by:

1. Structure type (e.g., single-family detached, apartments, etc.).
2. Tenure (e.g., distinguishing unit type by owner or renter units).
3. Housing affordability (e.g., subsidized housing or units affordable at given income levels).
4. Some combination of these categories.

For the purposes of this study, we grouped housing types based on: (1) whether the structure is stand-alone or attached to another structure and (2) the number of dwelling units in each structure. The housing types used in this analysis are consistent with needed housing types as defined in ORS 197.303:

- **Single-family detached** includes single-family detached units, manufactured homes on lots and in mobile home parks, and accessory dwelling units.
- **Single-family attached** is all structures with a common wall where each dwelling unit occupies a separate lot, such as row houses or townhouses.
- **Multifamily** is all attached structures (e.g., duplexes, triplexes, quadplexes, and structures with five or more units) other than single-family detached units, manufactured units, or single-family attached units.

In Tualatin, government-assisted housing (ORS 197.303(b)) and housing for farmworkers (ORS 197.303(e)) can be any of the housing types listed above.

Data Used in this Analysis

Throughout this analysis (including the subsequent Chapter 4), we used data from multiple sources, choosing data from well-recognized and reliable data sources. One of the key sources for housing and household data is the U.S. Census. This report primarily uses data from two Census sources, the Decennial and the American Community Survey:

- The **Decennial Census**, which is completed every ten years and is a survey of *all* households in the U.S. The Decennial Census is considered the best available data for information such as demographics (e.g., number of people, age distribution, or ethnic or racial composition), household characteristics (e.g., household size and composition), and housing occupancy characteristics. As of 2010, the Decennial Census does not collect more detailed household information, such as income, housing costs, housing characteristics, and other important household information. Decennial Census data is available for 2000 and 2010.
- The **American Community Survey (ACS)**, which is completed every year and is a *sample* of households in the U.S. From 2013 to 2017, the ACS sampled an average of 3.5 million households per year, or about 2.9% of the households in the nation. The ACS collects detailed information about households, including demographics (e.g., number of people, age distribution, ethnic or racial composition, country of origin, language spoken at home, and educational attainment), household characteristics (e.g., household size and composition), housing characteristics (e.g., type of housing unit, year unit built, or number of bedrooms), housing costs (e.g., rent, mortgage, utility, and insurance), housing value, income, and other characteristics.

This report uses data from the 2013-2017 ACS for Tualatin. Where information is available and relevant, we report information from the 2000 and 2010 Decennial Census. Among other data points, this report includes population, income, and housing price data from Redfin, the Bureau of Labor Services, and the United States Department of Housing and Urban Development. It uses the Oregon Department of Housing and Community Services affordable housing inventory and Oregon's Manufactured Dwelling Park inventory. It uses Metro's Regional Land Information System (RLIS) database, which provides tax lot data for jurisdictions within the three-county Metro Area (Clackamas County, Multnomah County, and Washington County).⁵

The foundation of the housing needs analysis is the population forecast for Tualatin from Metro's *2040 Household Distributed Forecast*.

⁵ We use RLIS tax lot data as a proxy for building permit data for Tualatin. The analysis period is 2000-2017, unless otherwise noted.

It is worth commenting on the methods used for the American Community Survey.⁶ The American Community Survey (ACS) is a national survey that uses continuous measurement methods. It uses a sample of about 3.54 million households to produce annually updated estimates for the same small areas (census tracts and block groups) formerly surveyed via the decennial census long-form sample. It is also important to keep in mind that all ACS data are estimates that are subject to sample variability. This variability is referred to as “sampling error” and is expressed as a band or “margin of error” (MOE) around the estimate.

This report uses Census and ACS data because, despite the inherent methodological limits, they represent the most thorough and accurate data available to assess housing needs. We consider these limitations in making interpretations of the data and have strived not to draw conclusions beyond the quality of the data.

Trends in Housing Mix

This section provides an overview of changes in the mix of housing types in Tualatin and compares Tualatin to Washington County and to Oregon. These trends demonstrate the types of housing developed in Tualatin historically. Unless otherwise noted, this chapter and the next chapter uses data from the 2000 and 2010 Decennial Census and the 2013-2017 American Community Survey 5-Year Estimates.

This section shows the following trends in housing mix in Tualatin:

- **About half (53%) of Tualatin’s housing stock is single-family detached housing units.** Forty-one percent of Tualatin’s housing stock is multifamily and 6% is single-family attached (e.g., townhouses, rowhouses, duplexes).
- **Since 2000, Tualatin’s housing mix has remained relatively static.** Tualatin’s housing stock grew by about 23% (about 2,112 new units) between 2000 and the 2013-2017 period.
- **Single-family housing accounted for the majority of new housing growth in Tualatin between 2000 and 2017.** Sixty percent of new housing built between 2000 and 2017 was single-family housing (detached and attached).

⁶ A thorough description of the ACS can be found in the Census Bureau’s publication “What Local Governments Need to Know.” <https://www.census.gov/library/publications/2009/acs/state-and-local.html>

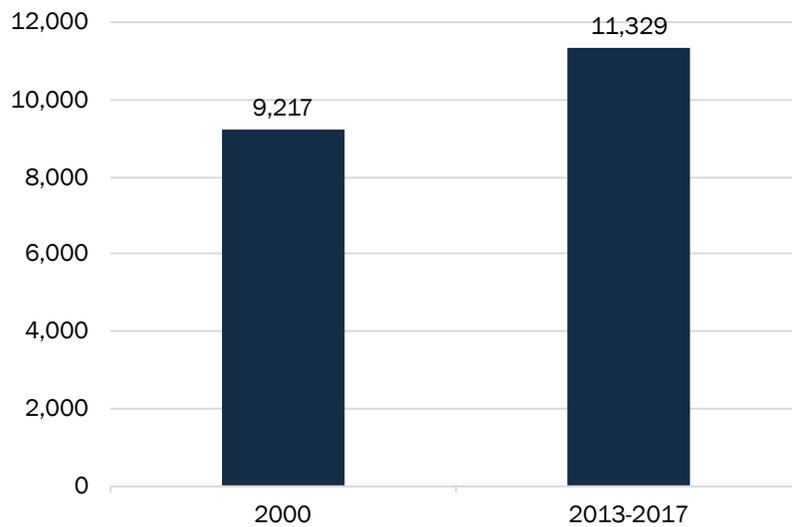
Housing Mix

The total number of dwelling units in Tualatin increased by 23% from 2000 to 2013-2017.

Tualatin added 2,112 units since 2000.

Exhibit 10. Total Dwelling Units, Tualatin, 2000 and 2013-2017

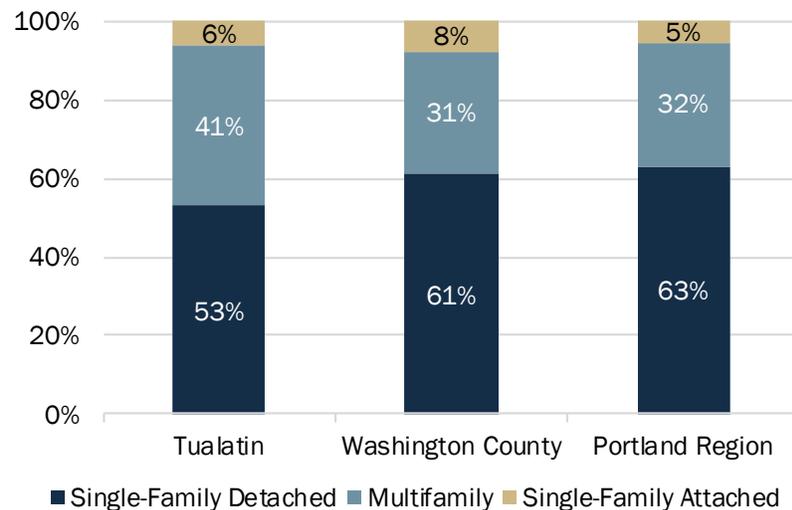
Source: U.S. Census Bureau, 2000 Decennial Census, SF3 Table H030, and 2013-2017 ACS Table B25024.



Tualatin had a smaller share of single-family detached housing and a larger share of multifamily housing than Washington County and the Portland Region.

Exhibit 11. Housing Mix, Tualatin, Washington County, Portland Region, 2013-2017

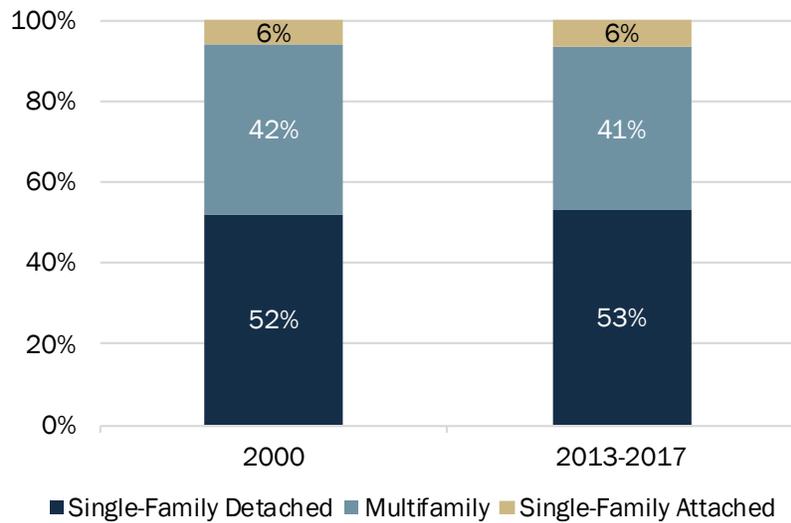
Source: U.S. Census Bureau, 2013-2017 ACS Table B25024.



From 2000 to 2013-2017, Tualatin's housing mix stayed about the same.

Exhibit 12. Change in Housing Mix, Tualatin, 2000 and 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census, SF3 Table H030, and 2013-2017 ACS Table B25024.



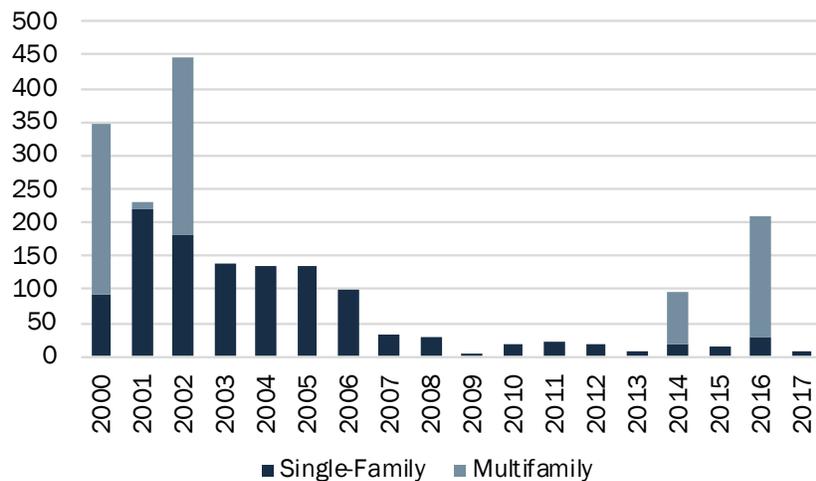
Dwelling Units Built

Over the 2000 to 2017 period, Tualatin added 1,996 dwelling units, with an annual average of 111 dwelling units.

Of these 1,996 units, about 60% were single-family units and 40% were multifamily units.

Exhibit 13. Units Built by Year and Type of Unit, Tualatin, 2000 through 2017

Source: RLIS.



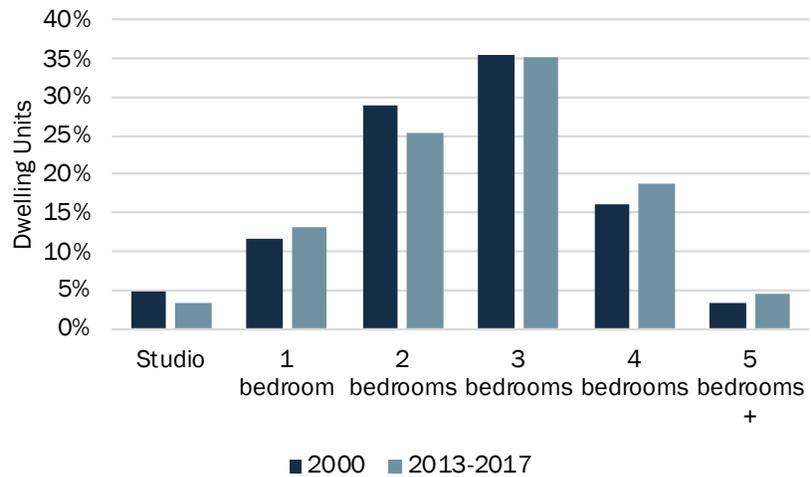
Size of Units

This section provides an overview of dwelling unit size in Tualatin.

In 2000, a larger share of dwelling units in Tualatin were three-bedroom units. As of the 2013-2017 period, this trend continues to persist.

Exhibit 14. Share of Units by Number of Bedrooms, Tualatin, 2000 and 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census, SF3 Table H041, and 2013-2017 ACS Table B25041. Note: The total number of units in 2000 is 9,217; the total number of units in the 2013-17 period is 11,329.

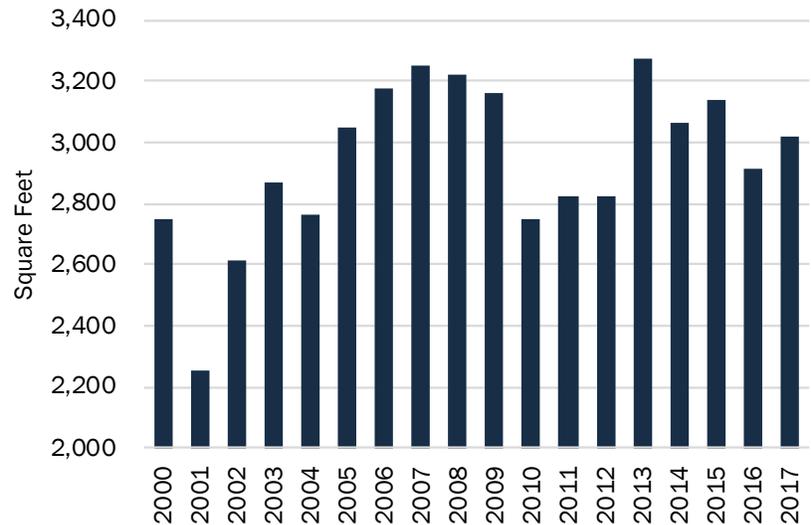


Single-family units built in Tualatin since 2000, averaged 2,773 sq. ft. per unit.

Single-family units built in Tualatin since 2014, averaged 3,015 sq. ft. per unit.

Exhibit 15. Average Size of Single-Family Units Built by Year, Tualatin, 2010 through 2017

Source: RLIS. Note: Single-family units include single-family detached and attached units.



Based on historical trends, condominiums in Tualatin were slightly smaller than single-family dwellings (Exhibit 15) and slightly larger than apartments.

Exhibit 16. Average Size of Multifamily Units Built by Year (including housing description), Tualatin, 2000, 2001, 2002, 2014, and 2016

Source: RLIS, Costar, and Washington County Assessor.

2000:	1,172 Sq. Ft. Condominium
2001:	1,562 Sq. Ft. Condominium
2002:	892 Sq. Ft. Apartment
2014:	1,322 Sq. Ft. Retirement Facility
2016:	977 Sq. Ft. Apartment

On average, a 2-bedroom multifamily unit in Tualatin is about 928 sq. ft.

Exhibit 17. Average Square Feet of Multifamily Units, Tualatin, 2019

Source: Costar. Note: "All Beds" represent the aggregate of multifamily units in Tualatin (recognizing that bedroom counts are unknown for some units).

Multifamily Unit by Bedroom Count	Average Sq. Ft. (2019)	Inventory (Units)
All Beds	856	3,905
Studio	445	249
1-Bedroom	649	1,206
2-Bedrooms	928	1,739
3-Bedrooms	1,144	608
4+ Bedrooms	1,255	4

Trends in Housing Density

Housing density is the density of housing by structure type, expressed in dwelling units per net or gross acre. The U.S. Census does not track residential development density thus, this study analyzes housing density based on Metro’s RLIS database for development between 2000 and 2017.

Between 2000 and 2017, Tualatin permitted 1,996 new dwelling units. Of the 1,996 new units, 1,207 units were single-family (60%) and 789 units were multifamily (40%). During this time, housing in Tualatin developed at an average net density of 8.7 dwelling units per net acre. Exhibit 18 shows average net residential development by structure type for the historical analysis period. Single-family housing (detached and attached) developed at 6.4 units per net acre and multifamily housing developed at 19.9 units per net acre.

Exhibit 18. Net Density by Unit Type and Zone, Tualatin, 2000 through 2017

Source: RLIS.

Note: Single-family includes single-family detached and single-family attached units because RLIS data does not distinguish between the type of single-family unit.

	Single-family (Detached and Attached)			Multifamily			Total, combined		
	Units	Acres	Net Density	Units	Acres	Net Density	Units	Acres	Net Density
Low Density Residential	976	172	5.7				976	172	5.7
Medium Low Density Residential	79	10	8.0	90	5	19.5	169	14	11.7
High Density Residential	152	6	23.4	699	35	19.9	851	42	20.5
Total	1,207	189	6.4	789	40	19.9	1,996	228	8.7

Trends in Tenure

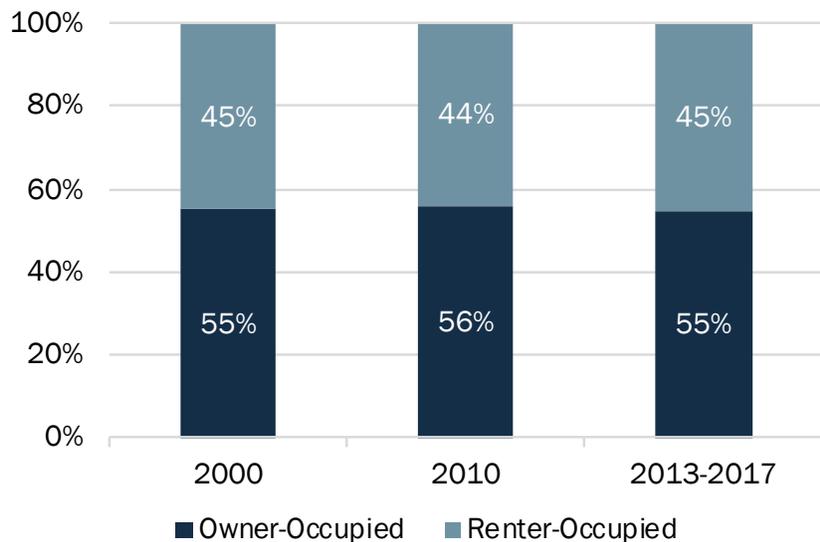
Housing tenure describes whether a dwelling unit is owner- or renter-occupied. This section shows:

- **Homeownership in Tualatin is lower than Washington County's and Oregon's rate.** About 55% of Tualatin's households own their own home. In comparison, 61% of Washington County households and 60% of Oregon households are homeowners.
- **Homeownership in Tualatin stayed about the same between 2000 and 2013-2017.** Homeownership hovered around 55% in 2000, 2010, and the 2013-2017 period.
- **Most of Tualatin homeowners (88%) live in single-family detached housing, while most of Tualatin's renters (82%) live in multifamily housing.**

The homeownership rate in Tualatin stayed about the same since 2000.

Exhibit 19. Tenure, Occupied Units, Tualatin, 2000, 2010, and 2013-2017

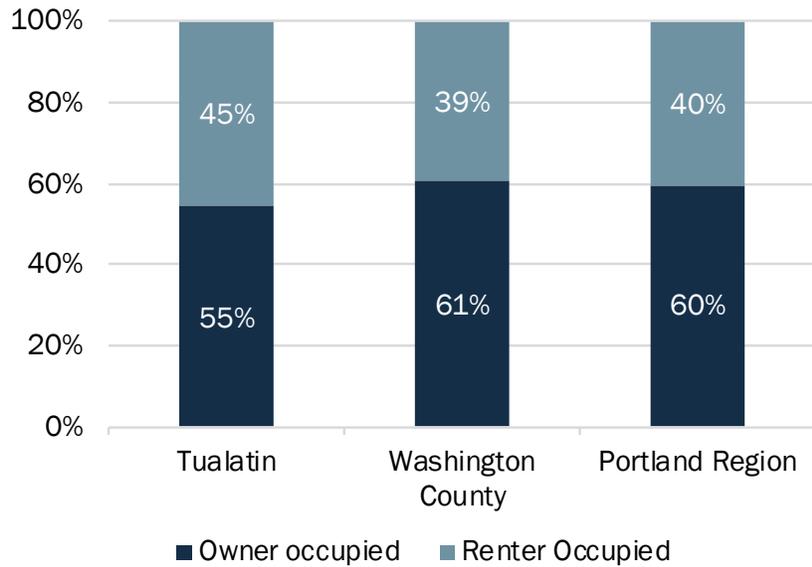
Source: U.S. Census Bureau, 2000 Decennial Census SF1 Table H004, 2010 Decennial Census SF1 Table H4, 2013-2017 ACS Table B24003.



Tualatin had a lower homeownership rate than Washington County and the Portland Region.

Exhibit 20. Tenure, Occupied Units, Tualatin, Washington County, and Portland Region, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-Year Estimates, Table B24003.

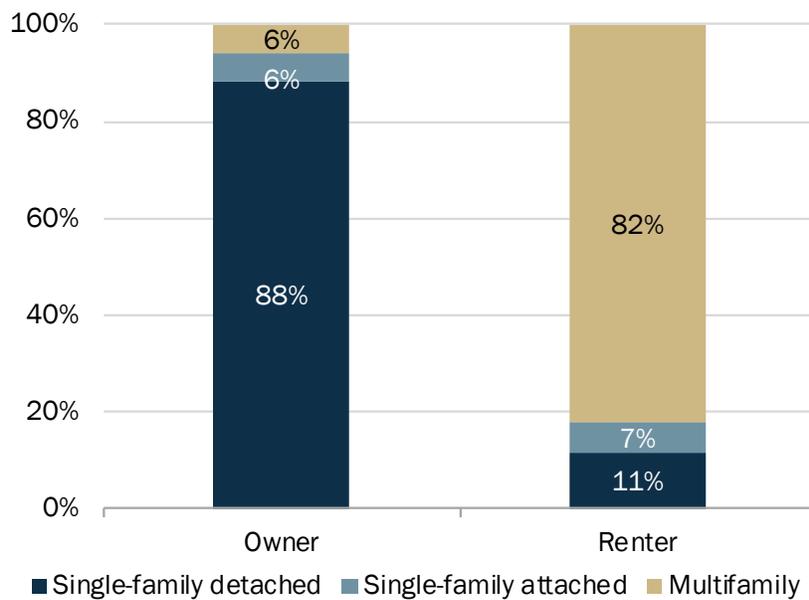


Most of Tualatin homeowners (88%) lived in single-family detached housing.

In comparison, most of Tualatin renters lived in multifamily housing.

Exhibit 21. Housing Units by Type and Tenure, Tualatin, 2013-2017

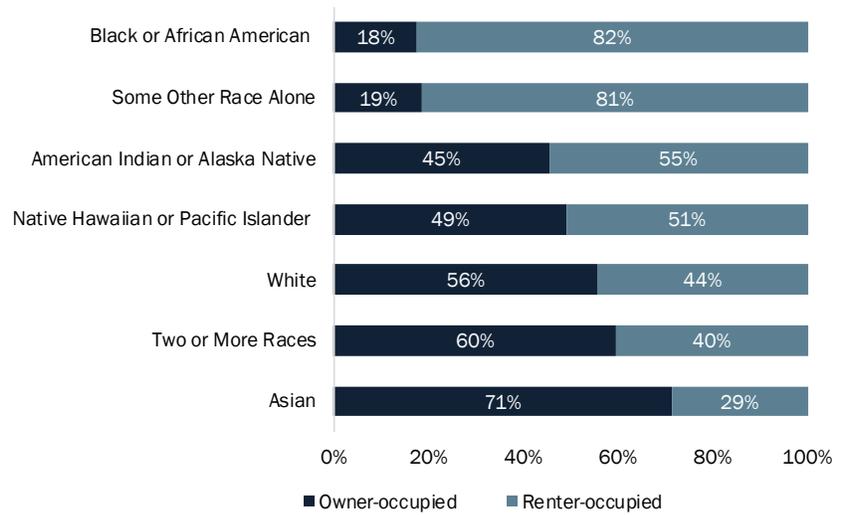
Source: U.S. Census Bureau, 2013-2017 ACS Table B25032.



A proportionately smaller share of households with an African American head of household were homeowners.

Exhibit 22. Tenure by Race of the Head of Household, Tualatin, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS Table B25003A-G.



Most households with a Latinx head of household were renters.

Exhibit 23. Tenure by Latinx Head of Household, Tualatin, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS Table B250031.



Vacancy Rates

Housing vacancy is a measure of housing that is available to prospective renters and buyers. It is also a measure of unutilized housing stock. The Census defines vacancy as: "Unoccupied housing units...determined by the terms under which the unit may be occupied, e.g., for rent, for sale, or for seasonal use only." The 2010 Census identified vacancy through an enumeration, separate from (but related to) the survey of households. Enumerators are obtained using information from property owners and managers, neighbors, rental agents, and others.

According to the 2013-2017 Census, the vacancy rate in Tualatin was 4.3%, compared to 4.8% for Washington County and 5.5% for the Portland Region.

Tualatin's vacancy rate declined from 2000 to the 2013-2017 period.

Exhibit 24. Vacancy Rate, Tualatin, 2000 and 2013-2017

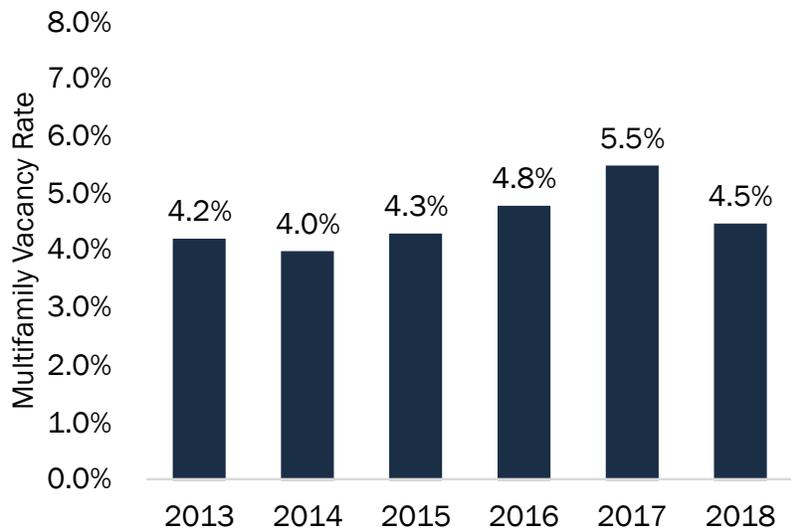
Source: U.S. Census Bureau, 2000 Decennial Census SF1 Table H005, 2013-2017 ACS Table B25004.

2000	6.2% Of Total Dwelling Units
2013-2017	4.3% Of Total Dwelling Units

Tualatin's average multifamily vacancy rate dipped to a low of 4% in 2014. In 2018, Tualatin's multifamily vacancy rate was 4.5%.

Exhibit 25. Average Multifamily Vacancy Rate, Tualatin, 2013 through 2018

Source: CoStar.



As of 2013-2017, less than half a percent of Tualatin's dwelling units were vacant for seasonal, recreational, or occasional use (e.g. short-term rentals or vacation homes).

Exhibit 26. Vacancy for Seasonal, Recreational, or Occasional Use, Tualatin, 2000 and 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census SF1 Table H005, 2013-2017 ACS Table B25004.

2000	43 Units	0.5%
		Share of Total Dwelling Units
2013-2017	44 Units	0.4%
		Share of Total Dwelling Units

Rent-Restricted Housing

Governmental agencies offer subsidies to support housing development for low- and moderate-income households. Tualatin has three rent-restricted housing developments, with 604 subsidized units.

Exhibit 27. Government-Assisted Housing, Tualatin, December 2019

Source: Oregon Housing and Community Services, Affordable Housing Inventory in Oregon (data pulled December 2019).

Housing Developments	Total Units	Affordable Units	Population Served	Government Subsidy Type	Affordability Contract Expiration
Terrace View	100	100	Family	LIHTC 4%	January 2028
Tualatin Meadows	240	240	Family	LIHTC 4%	January 2031
Woodridge	264	264	Family	OHCS Grants	March 2049
Total	604	604			

In addition to these rent-restricted units, and as of August 5, 2019, households in Tualatin utilized 113 of Washington County Housing Authority's Housing Choice Vouchers.⁷

⁷ More information about Housing Choice Vouchers: https://www.hud.gov/program_offices/public_indian_housing/programs/hcv/about/fact_sheet

Manufactured Homes

Manufactured homes provide a source of affordable housing in Tualatin. They provide a form of homeownership that can be made available to low- and moderate-income households. Cities are required to plan for manufactured homes—both on lots and in parks (ORS 197.475-492).

Generally, manufactured homes in parks are owned by the occupants who pay rent for the space. Monthly housing costs are typically lower for a homeowner in a manufactured home park for several reasons, including the fact that property taxes levied on the value of the land are paid by the property owner, rather than the manufactured homeowner. The value of the manufactured home generally does not appreciate in the way a conventional home would, however. Manufactured homeowners in parks are also subject to the mercy of the property owner in terms of rent rates and increases. It is generally not within the means of a manufactured homeowner to relocate to another manufactured home to escape rent increases. Homeowners living in a park is desirable to some because it can provide a more secure community with on-site managers and amenities, such as laundry and recreation facilities.

OAR 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial, or high-density residential development.⁸ Exhibit 28 presents the inventory of mobile and manufactured home parks within Tualatin as of early 2019.

Tualatin has two manufactured housing parks, with a total of 178 spaces within its city limits.

Exhibit 28. Inventory of Mobile/Manufactured Home Parks, Tualatin City Limits, March 2019

Source: Oregon Manufactured Dwelling Park Directory.

Name	Location	Type	Total Spaces	Vacant Spaces	Plan Designation
Angel Haven	18485 SW Pacific Dr	Senior	129	2	RML
Willow Glen	9700 SW Tualatin Rd	Family	49	1	RML
Total			178	3	

⁸ ORS 90.645 regulates rules about closure of manufactured dwelling parks. It requires that the landlord do the following for manufactured dwelling park tenants before closure of the park: give at least one year's notice of park closure, pay the tenant between \$5,000 to \$9,000 for each manufactured dwelling park space, and refrain from charging tenants demolition costs of abandoned manufactured homes.

4. Demographic and Other Factors Affecting Residential Development in Tualatin

Demographic trends are important for a thorough understanding of the dynamics of the Tualatin housing market. Tualatin exists in a regional economy; trends in the region impact the local housing market. This chapter documents demographic, socioeconomic, and other trends relevant to Tualatin at the national, state, and regional levels.

Demographic trends provide a context for growth in a region; factors such as age, income, migration, and other trends show how communities have grown and how they will shape future growth. To provide context, we compare Tualatin to Washington County and Oregon. We also compare Tualatin to nearby cities where appropriate. Characteristics such as age and ethnicity are indicators of how the population has grown in the past and provide insight into factors that may affect future growth.

A recommended approach to conducting a housing needs analysis is described in *Planning for Residential Growth: A Workbook for Oregon's Urban Areas*, the Department of Land Conservation and Development's guidebook on local housing needs studies. As described in the workbook, the specific steps in the housing needs analysis are:

1. Project the number of new housing units needed in the next 20 years.
2. Identify relevant national, state, and local demographic and economic trends and factors that may affect the 20-year projection of structure type mix.
3. Describe the demographic characteristics of the population and, if possible, the housing trends that relate to demand for different types of housing.
4. Determine the types of housing that are likely to be affordable to the projected households based on household income.
5. Determine the needed housing mix and density ranges for each Plan Designation and the average needed net density for all structure types.
6. Estimate the number of additional needed units by structure type.

This chapter presents data to address steps 2, 3, and 4 in this list. Chapter 5 presents data to address steps 1, 5, and 6 in this list.

Demographic and Socioeconomic Factors Affecting Housing Choice⁹

Analysts typically describe housing demand as the *preferences* for different types of housing (e.g., single-family detached or apartment), and *the ability to pay* for that housing (the ability to exercise those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

Many demographic and socioeconomic variables affect housing choice. However, the literature about housing markets finds that age of the householder, size of the household, and income are most strongly correlated with housing choice.

- **Age of householder** is the age of the person identified (in the Census) as the head of household. Households make different housing choices at different stages of life. This chapter discusses generational trends, such as housing preferences of Baby Boomers, people born from about 1946 to 1964, and Millennials, people born from about 1980 to 2000.
- **Size of household** is the number of people living in the household. Younger and older people are more likely to live in single-person households. People in their middle years are more likely to live in multiple person households (often with children).
- **Household income** is the household income. Income is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family detached, duplex, triplex, quadplex, or a building with more than five units) and to household tenure (e.g., rent or own).

⁹ The research in this chapter is based on numerous articles and sources of information about housing, including:

Davis, Hibbits, & Midghal Research, "Metro Residential Preference Survey," May 2014.

D. Myers and S. Ryu, *Aging Baby Boomers and the Generational Housing Bubble*, Journal of the American Planning Association, Winter 2008.

George Galster. *People Versus Place, People and Place, or More? New Directions for Housing Policy*, Housing Policy Debate, 2017.

Herbert, Christopher and Hrabchak Molinsky. "Meeting the Housing Needs of an Aging Population," 2015.

J. McIlwain, *Housing in America: The New Decade*, Urban Land Institute, 2010.

L. Lachman and D. Brett, *Generation Y: America's New Housing Wave*, Urban Land Institute, 2010.

Schuetz, Jenny. *Who is the new face of American homeownership?* Brookings, 2017.

The American Planning Association, "Investing in Place; Two generations' view on the future of communities," 2014.

Transportation for America, "Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows," 2014.

This chapter focuses on these factors, presenting data that suggests how changes to these factors may affect housing need in Tualatin over the next 20 years.

National Trends¹⁰

This brief summary on national housing trends builds on previous work by ECONorthwest, the Urban Land Institute (ULI) reports, and conclusions from *The State of the Nation's Housing, 2018* report from the Joint Center for Housing Studies of Harvard University. The Harvard report summarizes the national housing outlook as follows:

“By many metrics, the housing market is on sound footing. With the economy near full employment, household incomes are increasing and boosting housing demand. On the supply side, a decade of historically low single-family construction has left room for expansion of this important sector of the economy. Although multifamily construction appears to be slowing, vacancy rates are still low enough to support additional rentals. In fact, to the extent that growth in supply outpaces demand, a slowdown in rent growth should help to ease affordability concerns.”

However, challenges to a strong domestic housing market remain. High housing costs make housing unaffordable for many Americans, especially younger Americans. In addition to rising housing costs, wages have also failed to keep pace, worsening affordability pressures. Single-family and multifamily housing supplies remain tight, which compound affordability issues. *The State of the Nation's Housing* report emphasizes the importance of government assistance and intervention to keep housing affordable moving forward. Several challenges and trends shaping the housing market are summarized below:

- **Moderate new construction and tight housing supply, particularly for affordable housing.** New construction experienced its eighth year of gains in 2017 with 1.2 million units added to the national stock. Estimates for multifamily starts range between 350,000 to 400,000 (2017). The supply of for sale homes in 2017 averaged 3.9 months, below what is considered balanced (six months) and lower-cost homes are considered especially scarce. The State of the Nation's Housing report cites lack of skilled labor, higher building costs, scarce developable land, and the cost of local zoning and regulation as impediments to new construction.
- **Demand shift from renting to owning.** After years of decline, the national homeownership rate increased from a 50-year low of 62.9% in 2016 (Q2) to 63.7% in 2017 (Q2). Trends suggest homeownership among householders aged 65 and older have remained strong and homeownership rates among young adults have begun stabilizing after years of decline.
- **Housing affordability.** In 2016, almost one-third of American households spent more than 30% of their income on housing. This figure is down from the prior year,

¹⁰ These trends are based on information from: (1) The Joint Center for Housing Studies of Harvard University's publication "The State of the Nation's Housing 2018," (2) Urban Land Institute, "2018 Emerging Trends in Real Estate," and (3) the U.S. Census.

bolstered by a considerable drop in the owner share of cost-burdened households. Low-income households face an especially dire hurdle to afford housing. With such a large share of households exceeding the traditional standards for affordability, policymakers are focusing efforts on the severely cost-burdened. Among those earning less than \$15,000, more than 70% of households paid more than half of their income on housing.

- **Long-term growth and housing demand.** The Joint Center for Housing Studies forecasts that nationally, demand for new homes could total as many as 12 million units between 2017 and 2027. Much of the demand will come from Baby Boomers, Millennials,¹¹ and immigrants. The Urban Land Institute cites the trouble of overbuilding in the luxury sector while demand is in mid-priced single-family houses affordable to a larger buyer pool.
- **Growth in rehabilitation market.**¹² Aging housing stock and poor housing conditions are growing concerns for jurisdictions across the United States. With almost 80% of the nation's housing stock at least 20 years old (40% at least 50 years old), Americans are spending in excess of \$400 billion per year on residential renovations and repairs. As housing rehabilitation becomes the go-to solution to address housing conditions, the home remodeling market has grown more than 50% since the recession ended — generating 2.2% of national economic activity (in 2017).

Despite trends suggesting growth in the rehabilitation market, rising construction costs and complex regulatory requirements pose barriers to rehabilitation. Lower-income households or households on fixed-incomes may defer maintenance for years due to limited financial means, escalating rehabilitation costs. At a certain point, the cost of improvements may outweigh the value of the structure, which may necessitate new responses such as demolition or redevelopment.

- **Changes in housing preference.** Housing preference will be affected by changes in demographics; most notably, the aging of the Baby Boomers, housing demand from Millennials, and growth of immigrants.
 - *Baby Boomers.* The housing market will be affected by continued aging of the Baby Boomers, the oldest of whom were in their seventies in 2018 and the youngest of whom were in their fifties in 2018. Baby Boomers' housing choices will affect housing preference and homeownership. Addressing housing needs for those moving through their 60s, 70s, and 80s (and beyond) will require a

¹¹ According to the Pew Research Center, Millennials were born between the years of 1981 to 1996 (inclusive). Read more about generations and their definitions here: <http://www.pewresearch.org/fact-tank/2018/03/01/defining-generations-where-millennials-end-and-post-millennials-begin/>.

To generalize, and because there is no official generation of millennial, we define this cohort as individuals born between 1980 and 2000.

¹² These findings are copied from: Joint Center for Housing Studies. (2019). Improving America's Housing, Harvard University. https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Improving_Americas_Housing_2019.pdf

range of housing opportunities. For example, “the 82-to-86-year-old cohort dominates the assisted living and more intensive care sector” while new or near-retirees may prefer aging in place or active, age-targeted communities.¹³ Characteristics like immigration and ethnicity play a role too as “older Asians and Hispanics are more likely than whites or blacks to live in multigenerational households.”¹⁴ Senior households earning different incomes may make distinctive housing choices. For instance, low-income seniors may not have the financial resources to live out their years in a nursing home and may instead choose to downsize to smaller, more affordable units. Seniors living in close proximity to relatives may also choose to live in multigenerational households. Research shows that “older people in western countries prefer to live in their own familiar environment as long as possible,” but aging in place does not only mean growing old in their own homes.¹⁵ A broader definition exists which explains that aging in place also means “remaining in the current community and living in the residence of one’s choice.”¹⁶ Therefore, some Boomers are likely to stay in their home as long as they are able, and some will prefer to move into other housing products, such as multifamily housing or age-restricted housing developments, before they move into to a dependent living facility or into a familial home. Moreover, “the aging of the U.S. population, [including] the continued growth in the percentage of single-person households, and the demand for a wider range of housing choices in communities across the country is fueling interest in new forms of residential development, including tiny houses.”¹⁷

- *Millennials*. Over the last several decades, young adults increasingly lived in multi-generational housing – and increasingly more so than older demographics.¹⁸ Despite this trend, as Millennials age over the next 20 years, they will be forming households and families. In 2018, the oldest Millennials were in their late-30s and the youngest were in their late-teens. By 2040, Millennials will be between 40 and 60 years old.

At the beginning of the 2007-2009 recession, Millennials only started forming their own households. Today, Millennials are driving much of the growth in new households, albeit at slower rates than previous generations. From 2012 to 2017,

¹³ Urban Land Institute. Emerging Trends in Real Estate, United States and Canada. 2018.

¹⁴ Herbert, Christopher and Hrabchak Molinsky (2015). Meeting the Housing Needs of an Aging Population. https://shelterforce.org/2015/05/30/meeting_the_housing_needs_of_an_aging_population/

¹⁵ Vanleerberghe, Patricia, et al. The quality of life of older people aging in place: a literature review. 2017.

¹⁶ Ibid.

¹⁷ American Planning Association. Making Space for Tiny Houses, Quick Notes.

¹⁸ According to the Pew Research Center, in 1980, just 11% of adults aged 25 to 34 lived in a multi-generational family household and by 2008, 20% did (82% change). Comparatively, 17% of adults aged 65 and older lived in a multi-generational family household and by 2008, 20% did (18% change).

millennials formed an average of 2.1 million net new households each year. Twenty-six percent of Millennials aged 25 to 34 lived with their parents (or other relatives) in 2017.

Millennials' average wealth may remain far below Boomers and Gen Xers and student loan debt will continue to hinder consumer behavior and affect retirement savings. As of 2015, Millennial's comprised 28% of active home buyers, while Gen Xers comprised 32% and Boomers 31%.¹⁹ That said, "over the next 15 years, nearly \$24 trillion will be transferred in bequests," presenting new opportunities for Millennials (as well as Gen Xers).

- *Immigrants.* Research on foreign-born populations find that immigrants, more than native-born populations, prefer to live in multi-generational housing. Still, immigration and increased homeownership among minorities could also play a key role in accelerating household growth over the next 10 years. Current Population Survey estimates indicate that the number of foreign-born households rose by nearly 400,000 annually between 2001 and 2007, and they accounted for nearly 30% of overall household growth. Beginning in 2008, the influx of immigrants was stunted by the effects of the Great Recession. After a period of declines, however, the foreign born are again contributing to household growth. The Census Bureau's estimates of net immigration in 2017–2018 indicate that 1.2 million immigrants moved to the U.S. from abroad, down from 1.3 million immigrants in 2016-2017 but higher than the average annual pace of 850,000 during the period of 2009–2011. However, if recent Federal policies about immigration are successful, growth in undocumented and documented immigration could slow and cause a drag on household growth in the coming years.
- *Diversity.* The growing diversity of American households will have a large impact on the domestic housing markets. Over the coming decade, minorities will make up a larger share of young households and constitute an important source of demand for both rental housing and small homes. The growing gap in homeownership rates between whites and blacks, as well as the larger share of minority households that are cost burdened warrants consideration. Since 1994, the difference in homeownership rates between whites and blacks rose by 1.9 percentage points to 29.2% in 2017. Alternatively, the gap between white and Latinx homeownership rates and white and Asian homeownership rates both decreased during this period but remained sizable at 26.1 and 16.5 percentage points, respectively. Although homeownership rates are increasing for some minorities, large shares of minority households are more likely to live in high-cost metro areas. This, combined with lower incomes than white households,

¹⁹ Srinivas, Val and Goradia, Urval (2015). The future of wealth in the United States, Deloitte Insights. <https://www2.deloitte.com/insights/us/en/industry/investment-management/us-generational-wealth-trends.html>

leads to higher rates of cost burden for minorities—47% for blacks, 44% for Latinx, 37% for Asians/others, and 28% for whites in 2015.

- **Changes in housing characteristics.** The U.S. Census Bureau’s Characteristics of New Housing Report (2017) presents data that show trends in the characteristics of new housing for the nation, state, and local areas. Several long-term trends in the characteristics of housing are evident from the New Housing Report:²⁰
 - *Larger single-family units on smaller lots.* Between 1999 and 2017, the median size of new single-family dwellings increased by 20% nationally, from 2,028 sq. ft. to 2,426 sq. ft., and 20% in the western region from 2,001 sq. ft. in 1999 to 2,398 sq. ft. in 2017. Moreover, the percentage of new units smaller than 1,400 sq. ft. nationally, decreased by more than half, from 15% in 1999 to 6% in 2017. The percentage of units greater than 3,000 sq. ft. increased from 17% in 1999 to 25% of new one-family homes completed in 2017. In addition to larger homes, a move towards smaller lot sizes is seen nationally. Between 2009 and 2017, the percentage of lots less than 7,000 sq. ft. increased from 25% to 31% of lots.
 - *Larger multifamily units.* Between 1999 and 2017, the median size of new multiple family dwelling units increased by 5.3% nationally and 2.4% in the Western region. Nationally, the percentage of new multifamily units with more than 1,200 sq. ft. increased from 28% in 1999 to 33% in 2017 and increased from 25% to 28% in the Western region.
 - *Household amenities.* Across the U.S. and since 2013, an increasing number of new units had air-conditioning (fluctuating year by year at over 90% for both new single-family and multifamily units). In 2000, 93% of new single-family houses had two or more bathrooms, compared to 97% in 2017. The share of new multifamily units with two or more bathrooms decreased from 55% of new multifamily units to 45%. As of 2017, 65% of new single-family houses in the U.S. had one or more garages (from 69% in 2000).
 - *Shared amenities.* Housing with shared amenities are growing in popularity as it may improve space efficiencies and reduce per-unit costs / maintenance costs. Single-Room Occupancies (SROs)²¹, Cottage Clusters, co-housing developments, and multifamily products are common housing types that take advantage of this trend. Shared amenities may take many forms and include shared: bathrooms; kitchens and other home appliances (e.g. laundry facilities, outdoor grills);

²⁰ U.S. Census Bureau, Highlights of Annual 2017 Characteristics of New Housing. Retrieved from: <https://www.census.gov/construction/charts/highlights.html>.

²¹ Single-room occupancies are residential properties with multiple single room dwelling units occupied by a single individual. From: U.S. Department of Housing and Urban Development. (2001). *Understanding SRO*. <https://www.hudexchange.info/resources/documents/Understanding-SRO.pdf>

security systems; outdoor areas (e.g. green space, pathways, gardens, rooftop lounges); fitness rooms, swimming pools, and tennis courts; and free parking.²²

State Trends

Oregon's 2016-2020 Consolidated Plan includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide. The plan concludes that “a growing gap between the number of Oregonians who need affordable housing and the availability of affordable homes has given rise to destabilizing rent increases, an alarming number of evictions of low- and fixed- income people, increasing homelessness, and serious housing instability throughout Oregon.”

It identified the following issues that describe housing need statewide:²³

- For housing to be considered affordable, a household should pay up to one-third of their income toward rent, leaving money left over for food, utilities, transportation, medicine, and other basic necessities. Today, one in two Oregon households pays more than one-third of their income toward rent, and one in three pays more than half of their income toward rent.
- More school children are experiencing housing instability and homelessness. The rate of K-12 homeless children increased by 12% from the 2013-2014 school year to the 2014-2015 school year.
- Oregon has 28,500 rental units that are affordable and available to renters with extremely low incomes. There are about 131,000 households that need those apartments, leaving a gap of 102,500 units.
- Housing instability is fueled by an unsteady, low-opportunity employment market. Over 400,000 Oregonians are employed in low-wage work. Low-wage work is a growing share of Oregon's economy. When wages are set far below the cost needed to raise a family, the demand for public services grows to record heights.
- Women are more likely than men to end up in low-wage jobs. Low wages, irregular hours, and part-time work compound issues.

²² Urbsworks. (n.d.). Housing Choices Guide Book: A Visual Guide to Compact Housing Types in Northwest Oregon. https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf

Saiz, Albert and Salazar, Arianna. (n.d.). Real Trends: The Future of Real Estate in the United States. Center for Real Estate, Urban Economics Lab.

²³ These conclusions are copied directly from the report: Oregon's 2016-2020 Consolidated Plan <http://www.oregon.gov/ohcs/docs/Consolidated-Plan/2016-2020-Consolidated-Plan-Amendment.pdf>.

- People of color historically constitute a disproportionate share of the low-wage work force. About 45% of Latinx, and 50% of African Americans, are employed in low-wage industries.
- The majority of low-wage workers are adults over the age of 20, many of whom have earned a college degree, or some level of higher education.
- In 2019, minimum wage in Oregon²⁴ was \$11.25, \$12.50 in the Portland Metro, and \$11.00 for non-urban counties.

Oregon’s 2018 *Statewide Housing Plan* identified six housing priorities to address in communities across the State over 2019 to 2023, summarized below. It includes relevant data to help illustrate the rationale for each priority. The 2018 *Statewide Housing Plan* describes the Oregon Housing and Community Services’ (OHCS) goals and implementation strategies for achieving the goals.²⁵

- **Equity and Racial Justice.** *Advance equity and racial justice by identifying and addressing institutional and systemic barriers that have created and perpetuated patterns of disparity in housing and economic prosperity.*
 - Summary of the issue: In Oregon, 26% of people of color live below the poverty line in Oregon, compared to 15% of the White population.
 - 2019-2023 Goal: Communities of color will experience increased access to OHCS resources and achieve greater parity in housing stability, self-sufficiency and homeownership. OHCS will collaborate with its partners and stakeholders to create a shared understanding of racial equity and overcome systemic injustices faced by communities of color in housing discrimination, access to housing and economic prosperity.
- **Homelessness.** *Build a coordinated and concerted statewide effort to prevent and end homelessness, with a focus on ending unsheltered homelessness of Oregon’s children and veterans.*
 - Summary of the issue: According to the Point-in-Time count, approximately 14,000 Oregonians experienced homelessness in 2017, an increase of nearly 6% since 2015. Oregon’s unsheltered population increased faster than the sheltered population, and the state’s rate of unsheltered homelessness is the third highest in the nation, at 57%. The state’s rate of unsheltered homelessness among people in families with children is the second highest in the nation, at 52%.

²⁴ The 2016 Oregon Legislature, Senate Bill 1532, established a series of annual minimum wage rate increases beginning July 1, 2016 through July 1, 2022. <https://www.oregon.gov/boli/whd/omw/pages/minimum-wage-rate-summary.aspx>

²⁵ Priorities and factoids are copied directly from the report: Oregon Housing and Community Services (November 2018). *Breaking New Ground, Oregon’s Statewide Housing Plan, Draft*. <https://www.oregon.gov/ohcs/DO/shp/OregonStatewideHousingPlan-PublicReviewDraft-Web.pdf>

- 2019-2023 Goal: OHCS will drive toward impactful homelessness interventions by increasing the percentage of people who are able to retain permanent housing for at least six months after receiving homeless services to at least 85 percent. We will also collaborate with partners to end veterans' homelessness in Oregon and build a system in which every child has a safe and stable place to call home.
- **Permanent Supportive Housing.** *Invest in permanent supportive housing, a proven strategy to reduce chronic homelessness and reduce barriers to housing stability.*
 - Summary of the issue: Oregon needs about 12,388 units of permanent supportive housing to serve individuals and families with a range of needs and challenges.
 - 2019-2023 Goal: OHCS will increase our commitment to permanent supportive housing by funding the creation of 1,000 or more additional permanent supportive housing units to improve the future long-term housing stability for vulnerable Oregonians.
- **Affordable Rental Housing.** *Work to close the affordable rental housing gap and reduce housing cost burden for low-income Oregonians.*
 - Summary of the issue: Statewide, over 85,000 new units are needed to house those households earning below 30% of Median Family Income (MFI) in units affordable to them. The gap is even larger when accounting for the more than 16,000 units affordable at 30% of MFI, which are occupied by households at other income levels.
 - 2019-2023 Goal: OHCS will triple the existing pipeline of affordable rental housing — up to 25,000 homes in the development pipeline by 2023. Residents of affordable rental housing funded by OHCS will have reduced cost burden and more opportunities for prosperity and self-sufficiency.
- **Homeownership.** *Provide more low- and moderate-income Oregonians with the tools to successfully achieve and maintain homeownership, particularly in communities of color.*
 - Summary of the issue: In Oregon, homeownership rates for all categories of people of color are lower than for white Oregonians. For White non-Latinx Oregonians, the home ownership rate is 63%. For Latinx and non-White Oregonians, it is 42%. For many, homeownership rates have fallen between 2005 and 2016.
 - 2019-2023 Goal: OHCS will assist at least 6,500 households in becoming successful homeowners through mortgage lending products while sustaining efforts to help existing homeowners retain their homes. OHCS will increase the number of homebuyers of color in our homeownership programs by 50% as part of a concerted effort to bridge the homeownership gap for communities of color while building pathways to prosperity.
- **Rural Communities.** *Change the way OHCS does business in small towns and rural communities to be responsive to the unique housing and service needs and unlock the opportunities for housing development.*

- **Summary of the issue:** While housing costs may be lower in rural areas, incomes are lower as well: median family income is \$42,750 for rural counties versus \$54,420 for urban counties. Additionally, the median home values in rural Oregon are 30% higher than in the rural United States and median rents are 16% higher.
- **2019-2023 Goal:** OHCS will collaborate with small towns and rural communities to increase the supply of affordable and market-rate housing. As a result of tailored services, partnerships among housing and service providers, private industry and local governments will flourish, leading to improved capacity, leveraging of resources and a doubling of the housing development pipeline.

Regional and Local Demographic Trends that may affect housing need in Tualatin.

Demographic trends that might affect the key assumptions used in the baseline analysis of housing need are: (1) the aging population, (2) changes in household size and composition, and (3) increases in diversity.

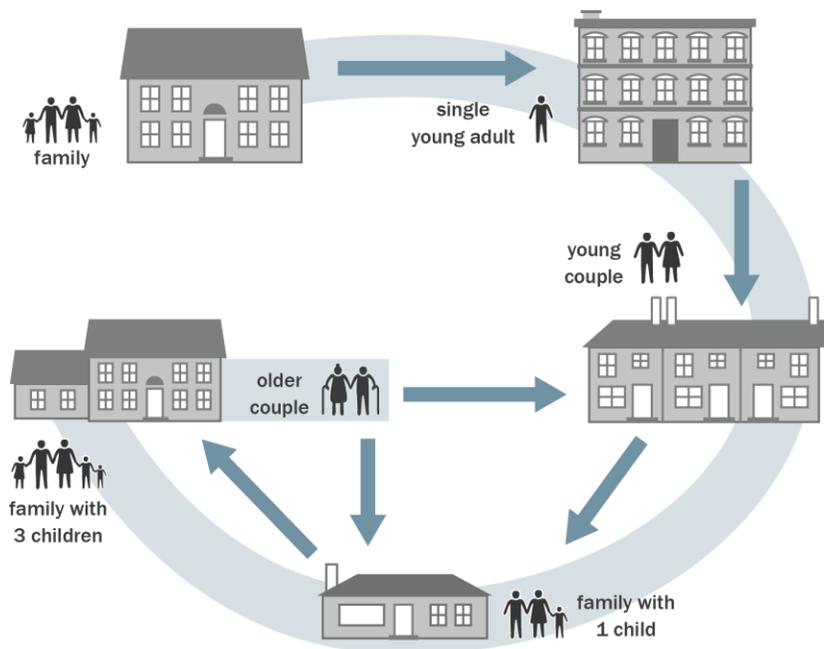
An individual’s housing needs change throughout their life, with changes in income, family composition, and age. The types of housing needed by a 20-year-old college student differ from the needs of a 40-year-old parent with children, or an 80-year-old single adult. As Tualatin’s population ages, different types of housing will be needed to accommodate older residents. The housing characteristics by age data below reveal this cycle in action in Tualatin.

Housing needs and preferences change in predictable ways over time, such as with changes in marital status and size of family.

Families of different sizes need different types of housing.

Exhibit 29. Effect of demographic changes on housing need

Source: ECONorthwest, adapted from Clark, William A.V. and Frans M. Dieleman. 1996. Households and Housing. New Brunswick, NJ: Center for Urban Policy Research.



Growing Population

Tualatin’s population growth will drive future demand for housing in the City over the planning period. The population forecast in Exhibit 31 is Tualatin’s official population forecast, from the Oregon Population Forecast Program. Tualatin must use this forecast as the basis for forecasting housing growth over the 2020 to 2040 period.

Tualatin’s population grew by 81% between 1990 and the 2013-2017 period. Tualatin added 12,122 new residents, at an average annual growth rate of 2.2%.

Exhibit 30. Population Growth and Change, Tualatin, Washington County, Portland Region, Oregon, and the United States, 1990, 2000, 2010, and 2018

Source: U.S. Decennial Census 1990, 2000, 2010, and 2018 Quick Facts. Portland State University 2018 Certified Population Estimates. Note: the Portland Region is the aggregate of Clackamas, Multnomah, and Washington Counties.

	1990	2000	2010	2018	Change 1990 to 2018		
					Number	Percent	AAGR
U.S.	248,709,873	281,421,906	308,745,538	327,167,434	78,457,561	32%	1.0%
Oregon	2,842,321	3,421,399	3,831,074	4,195,300	1,352,979	48%	1.5%
Portland Region	1,174,291	1,444,219	1,641,036	1,839,005	664,714	57%	1.7%
Washington County	311,554	445,342	529,710	606,280	294,726	95%	2.5%
Tualatin	15,013	22,791	26,054	27,055	12,042	80%	2.2%

Tualatin city limits is projected to grow by 627 people between 2020 and 2040, at an average annual growth rate of 0.12%.²⁶

Exhibit 31. Forecast of Population Growth, Tualatin city limits, 2020 to 2040

Source: Metro 2040 Population Distributed Forecast, Exhibit A. July 12, 2016.

26,745	27,372	627	2.3% increase
Residents in 2020	Residents in 2040	New residents 2020 to 2040	0.12% Growth Rate

Tualatin’s Basalt Creek is project to grow by 1,080 people between 2020 and 2040, at an average annual growth rate of 5.68%.²⁷

Exhibit 32. Forecast of Population Growth, Basalt Creek, 2020 to 2040

Source: Metro 2040 TAZ Forecast, Population Estimates (TAZ 980 and 981). November 6, 2015.

535	1,616	1,080	202% increase
Residents in 2020	Residents in 2040	New residents 2020 to 2040	5.68% Growth Rate

²⁶ This forecast of population growth is based on Tualatin’s (city limits) official population forecast from Metro 2040 Population Distributed Forecast (2016). ECONorthwest extrapolated the population forecast for 2015 (to 2020) using an average annual growth rate.

²⁷ This forecast of population growth is based on Basalt Creek’s official population forecast from Metro 2040 TAZ Population Forecast (2015). ECONorthwest extrapolated the population forecast for 2015 (to 2020) using an average annual growth rate.

Aging Population

This section shows two key characteristics of Tualatin’s population, with implications for future housing demand in Tualatin:

- **Seniors.** Tualatin currently has a smaller share of people over 60 years old than Washington County. As Tualatin’s senior population grows, it will have increasing demand for housing that is suitable for older demographics.

Demand for housing for seniors will grow over the planning period, as the Baby Boomers continue to age and retire. The Washington County forecast share of residents aged 60 years and older will account for 24% of its population in 2040, compared to around 18% in the 2013-2017 period.

The impact of growth in seniors in Tualatin will depend, in part, on whether older people already living in Tualatin continue to reside there as they retire. National surveys show that, in general, most retirees prefer to age in place by continuing to live in their current home and community as long as possible.²⁸ Tualatin may be attractive to newly retiring seniors because of its location within the Portland Metro region.

Growth in the number of seniors will result in demand for housing types specific to seniors, such as small and easy-to-maintain dwellings, assisted living facilities, or age-restricted developments. Senior households will make a variety of housing choices, including: remaining in their homes as long as they are able, downsizing to smaller single-family homes (detached and attached) or multifamily units, moving in with family, or moving into group housing (such as assisted living facilities or nursing homes), as their health declines. The challenges aging seniors face in continuing to live in their community include changes in healthcare needs, loss of mobility, the difficulty of home maintenance, financial concerns, and increases in property taxes.²⁹

- **Tualatin has a slightly larger share of younger people than the Portland Region.** About 26% of Tualatin’s population and Washington County’s population is under 20 years old, compared to 24% of the Portland Region’s population. The forecast for population growth in Washington County shows the percent of people under 20 years staying static at 24% of the population in 2013-2017 to 2040.

People currently aged 20 to 40 are referred to as the Millennial generation and account for the largest share of population in Oregon.³⁰ By 2040, they will be about 40 to 60 years of age. The forecast for Washington County shows a slight shift in Millennials from about 29% of the population in 2020 to about 25% of the population in 2040.

²⁸ A survey conducted by the AARP indicates that 90% of people 50 years and older want to stay in their current home and community as they age. See <http://www.aarp.org/research>.

²⁹ “Aging in Place: A toolkit for Local Governments” by M. Scott Ball.

³⁰ Pew Research Center. (March 2018). “Defining generations: Where Millennials end and post-Millennials begin” by Michael Dimock. Retrieved from: <http://www.pewresearch.org/fact-tank/2018/03/01/defining-generations-where-millennials-end-and-post-millennials-begin/>.

Tualatin's ability to attract people in this age group will depend, in large part, on whether the city has opportunities for housing that both appeals to and is affordable to Millennials. Again, Tualatin is attractive because of the amenities of the Portland Metro region.

The long-term housing preference of Millennials is uncertain. Research suggests that Millennials' housing preferences may be similar to the Baby Boomers, with a preference for smaller, less costly units. Recent surveys about housing preference suggest that Millennials want affordable single-family homes in areas that offer transportation alternatives to cars, such as suburbs or small cities with walkable neighborhoods.³¹

A recent survey of people living in the Portland region shows that Millennials prefer single-family detached housing. The survey finds that housing price is the most important factor in choosing housing for younger residents.³² The survey results suggest Millennials are more likely than other groups to prefer housing in an urban neighborhood or town center.

Growth in Millennials in Tualatin will result in increased demand for both affordable single-family detached housing (such as small single-family detached units like cottages), as well as increased demand for affordable townhouses and multifamily housing. Growth in this population will result in increased demand for both ownership and rental opportunities, with an emphasis on housing that is comparatively affordable.

³¹ The American Planning Association, "Investing in Place; Two generations' view on the future of communities." 2014.

"Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows," Transportation for America.

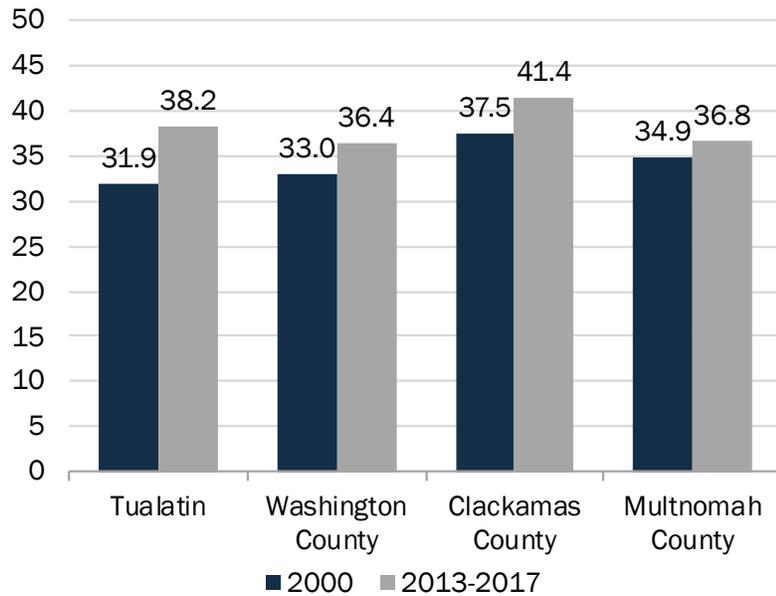
"Survey Says: Home Trends and Buyer Preferences," National Association of Home Builders International Builders

³² Davis, Hibbits, & Midghal Research, "Metro Residential Preference Survey," May 2014.

From 2000 to 2013-2017, Tualatin's population grew older on average.

Exhibit 33. Median Age, Tualatin, Washington County, Clackamas County, and Multnomah County, 2000 and 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census Table B01002, 2013-2017 ACS, Table B01002.

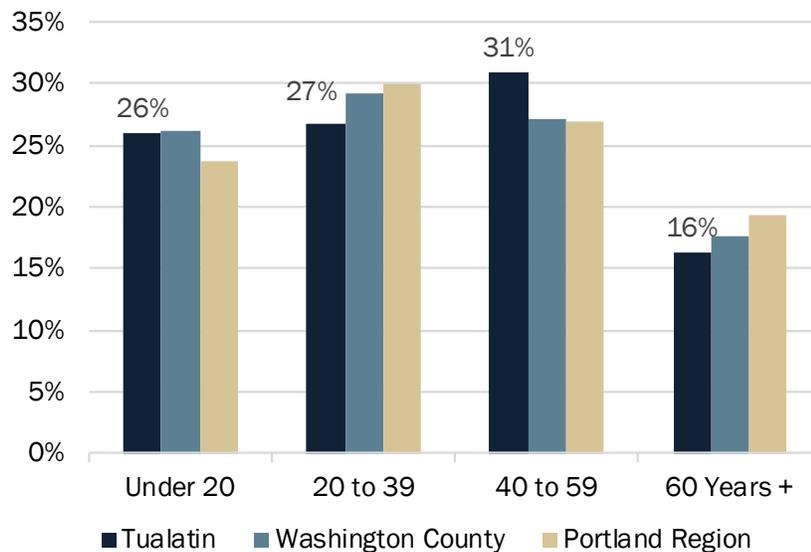


In the 2013-2017 period, about 58% of Tualatin's residents were between the ages of 20 and 59 years.

Tualatin had a slightly smaller share of people over the age of 60 than Washington County and Portland Region.

Exhibit 34. Population Distribution by Age, Tualatin, Washington County, and Portland Region, 2013-2017

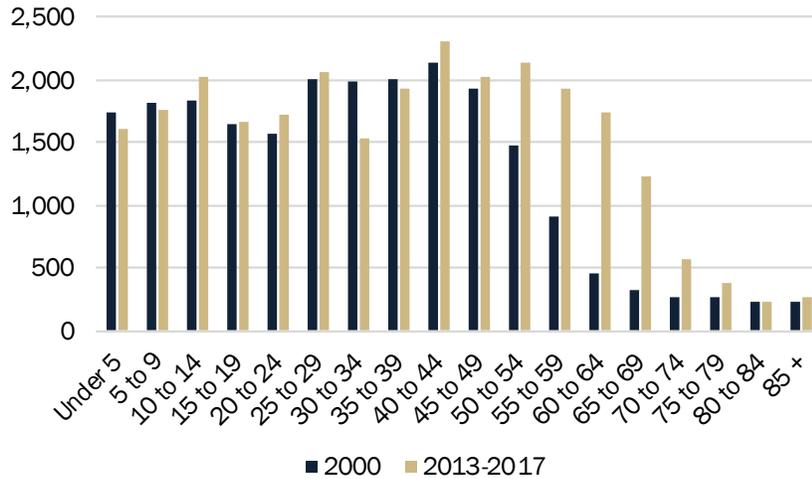
Source: U.S. Census Bureau, 2013-2017 ACS, Table B01001.



The number of senior residents in Tualatin grew between 2000 and the 2013-2017 period.

Exhibit 35. Population Distribution by Age, Tualatin, 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census Table P012 and 2013-2017 ACS, Table B01001.



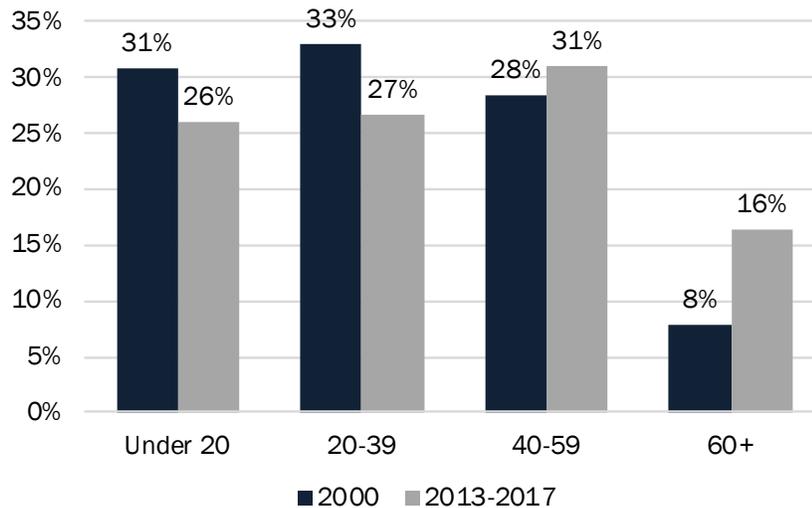
Between 2000 and 2013-2017, the share of Tualatin’s population aged 60 years and older doubled.

Tualatin’s population aged 60 years and older grew by 2,643 people between 2000 and 2013-2017.

This increase can be explained in part through aging of the Baby Boomers across the Portland Region. Development of senior housing in Tualatin likely attracted seniors to Tualatin, increasing the percentage of people over 60 years old in the city.

Exhibit 36. Population Composition by Age, Tualatin, 2000 and 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census Table P012 and 2013-2017 ACS, Table B01001.



Between 2020 and 2040, Washington County’s population over 60 years old is forecast to grow the fastest, by 62%.

Exhibit 37. Fastest-growing Age Groups, Washington County, 2020 to 2040

Source: Portland State University, Population Research Center, Washington County Forecast, June 2017.

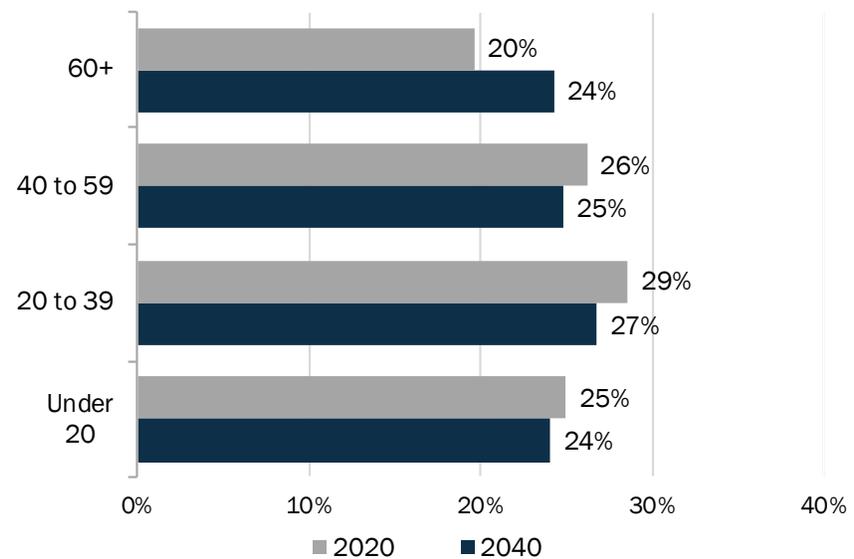
23%	23%	24%	62%
36,773	40,023	38,953	75,217
People	People	People	People
Under 20	20-39 Yrs	40-59 Yrs	60+ Yrs

Between 2020 and 2040, the share of Washington County residents over the age of 40 will make up 49% of the county's total population.

Of the age cohorts shown in Exhibit 38, the share of residents over 60 years of age will increase by 2040, while the share of all other age cohorts will decrease.

Exhibit 38. Population Growth by Age Group, Washington County, 2020 to 2040

Source: Portland State University, Population Research Center, Washington County Forecast, June 2017.



Increased Ethnic Diversity

Tualatin is becoming more ethnically diverse. The Latinx population grew from 12% of Tualatin's population in 2000 to 16% of the population in the 2013-2017 period, adding about 1,774 new Latinx residents. Tualatin is more ethnically diverse than the Portland Region.

The U.S. Census Bureau forecasts that at the national level, the Latinx population will continue growing faster than most other non-Latinx population between 2020 and 2040. The Census forecasts that the Latinx population will increase 93% from 2016 to 2060 and foreign-born Latinx population will increase by about 40% in that same time.³³

Continued growth in the Latinx population will affect Tualatin's housing needs in a variety of ways.³⁴ Growth in first and, to a lesser extent, second and third generation Latinx immigrants, will increase demand for larger dwelling units to accommodate the, on average, larger household sizes for these households. Foreign-born households, including Latinx immigrants, are more likely to include multiple generations, requiring more space than smaller household

³³ U.S. Census Bureau, *Demographic Turning Points for the United States: Population Projections for 2020 to 2060*, pg. 7, https://www.census.gov/content/dam/Census/library/publications/2018/demo/P25_1144.pdf

³⁴ Pew Research Center. *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, February 7, 2013, Appendix 8, <http://www.pewsocialtrends.org/2013/02/07/appendix-1-detailed-demographic-tables/>. National Association of Hispanic Real Estate Professionals. *2017 State of Hispanic Homeownership Report*, 2017.

sizes. As Latinx households integrate over generations, household size typically decreases, and housing needs become similar to housing needs for all households.

According to the *State of Hispanic Homeownership* report from the National Association of Hispanic Real Estate Professionals³⁵, Latinx accounted for 28.6% of the nation’s household formation in 2017. Household formations, for Latinx homeowners specifically, accounted for 15% of the nation’s net homeownership growth. The rate of homeownership for Latinx increased from 45.4% in 2014³⁶ to 46.2% in 2017. The only demographic that increased their rate of homeownership from 2016 to 2017 was for Latinx households.

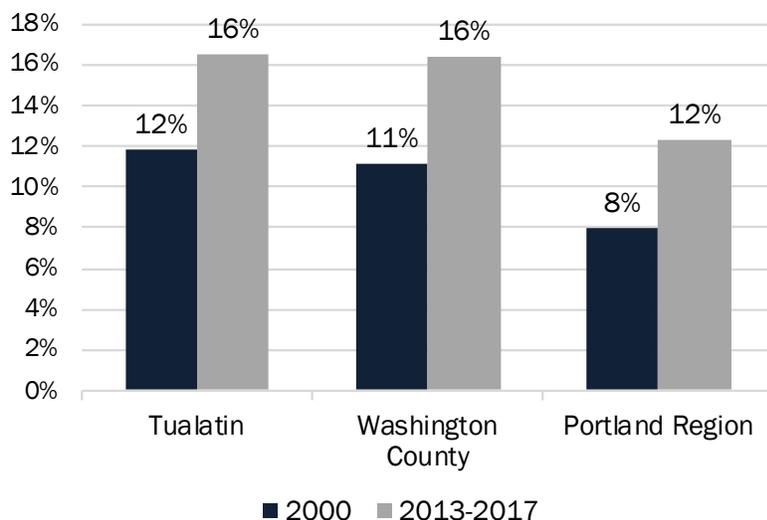
The *State of Hispanic Homeownership* report also cites the lack of affordable housing products as a substantial barrier to homeownership. The report finds that Latinx households are more likely than non-Latinx households to be nuclear households, comprised of married couples with children, and multiple-generation households in the same home, such as parents and adult children living together. These housing preferences—affordability and larger household size—will influence the housing market as the Latinx population continues to grow.³⁷ Accordingly, growth in Latinx households will result in increased demand for housing of all types, both for ownership and rentals, with an emphasis on housing that is comparatively affordable.

The share of Tualatin’s population that is Latinx increased by 4% (1,774 people) from 2000 to 2013-2017.

Tualatin was more ethnically diverse than the Portland Region.

Exhibit 39. Latinx Population as a Percent of the Total Population, Tualatin, Washington County, Portland Region, 2000, 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census Table P008, 2013-2017 ACS Table B03002.



³⁵ National Association of Hispanic Real Estate Professionals (2017). *2017 State of Hispanic Homeownership Report*.

³⁶ Ibid.

³⁷ Ibid.

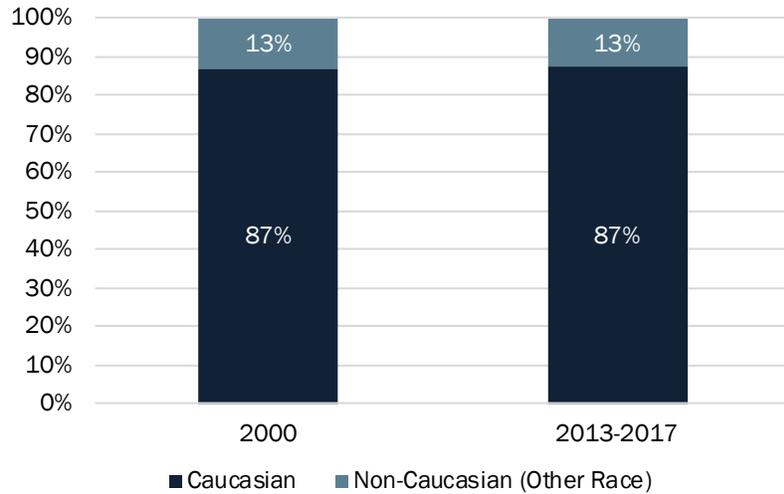
Racial Diversity³⁸

The non-Caucasian population is defined as the share of the population that identifies as a race other than “White alone” according to Census definitions. Racial diversity in Tualatin did not increase between 2000 and the 2013-2017 period and. In the 2013-2017 period, Tualatin was less racially diverse than both the county and region.

The share of the non-white population in Tualatin stayed the same from 2000 to 2013-2017.

Exhibit 40. Non-Caucasian Population as a Percent of Total Population, Tualatin, 2000 and 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census Table P008, 2013-2017 ACS Table B02001.

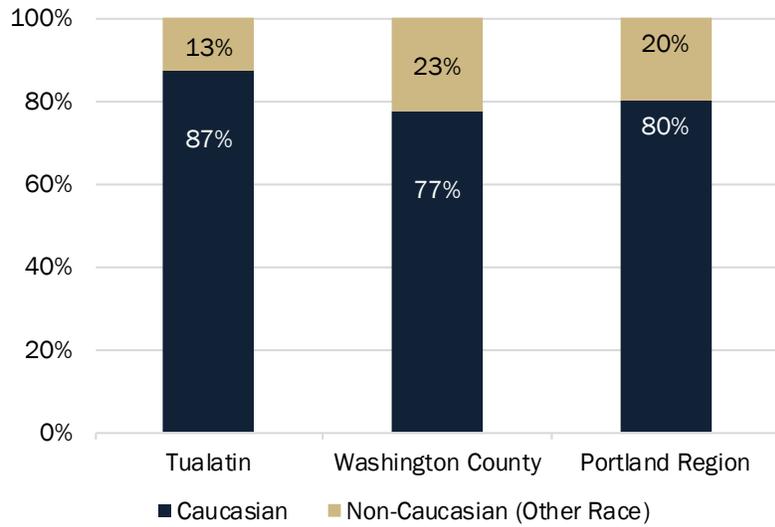


³⁸ The US Census Bureau considers race and ethnicity as two distinct concepts. The Census applies two categories for ethnicity, which are Hispanic or Latino (i.e., Latinx) and Not Hispanic or Latino (i.e., Non-Latinx). Latinx is an ethnicity and not a race, meaning individuals who identify as Latinx may be of any race. The share of the population that identifies as Latinx should not be added to percentages for racial categories.

In the 2013-2017 period, Tualatin was less racially diverse than Washington County and the Portland Region.

Exhibit 41. Non-Caucasian Population as a Percent of Total Population, Tualatin, Washington County, and the Portland Region 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS Table B02001.



Homelessness

Washington County's point-in-time homeless count decreased by about 4% (22 people) from 2017 to 2018.

Between 2015 and 2018, individuals who were homeless (and sheltered) decreased 17%. Individuals who were homeless (and unsheltered) decreased 9%.

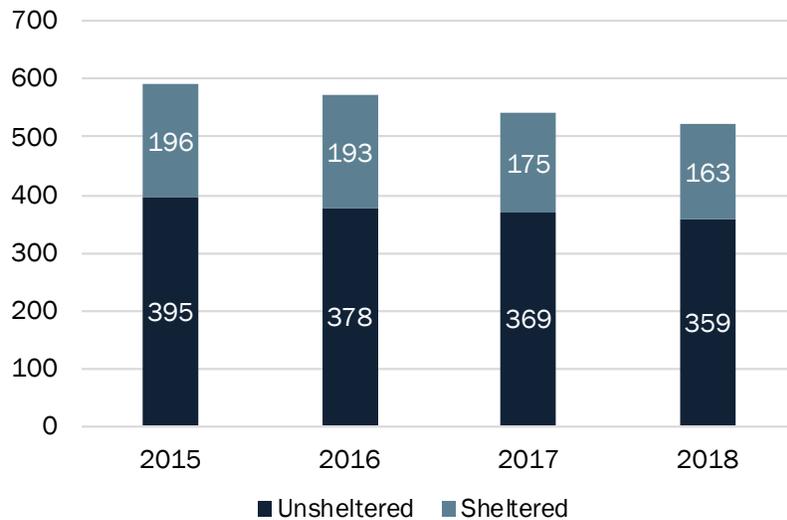
Exhibit 42. Number of Persons Homeless, Washington County, Point-in-Time Count, 2017 and 2018

Source: Washington County, Point in Time Count, January 2017, 2018

544 Persons **522 Persons**
2017 2018

Exhibit 43. Number of Persons Homeless by Living Situation, Washington County, Point-in-Time Count, 2015 through 2018

Source: Washington County, Point in Time Count, January 2015, 2016, 2017, 2018



Household Size and Composition

Tualatin’s households are smaller than Washington County’s households. Tualatin’s household composition shows that households in Tualatin are similar to Washington County and Portland Region averages.

Tualatin’s average household size was smaller than Washington County’s and Clackamas County’s, but larger than Multnomah County’s.

Exhibit 44. Average Household Size, Tualatin, Washington County, Clackamas County, Multnomah County, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B25010.



According to the two most recent Decennial Censuses, Tualatin’s average household size (for householder identifying as Latinx) decreased by 0.27 person.

Exhibit 45. Average Household Size for Latinx Householder, Tualatin, 2000 and 2010

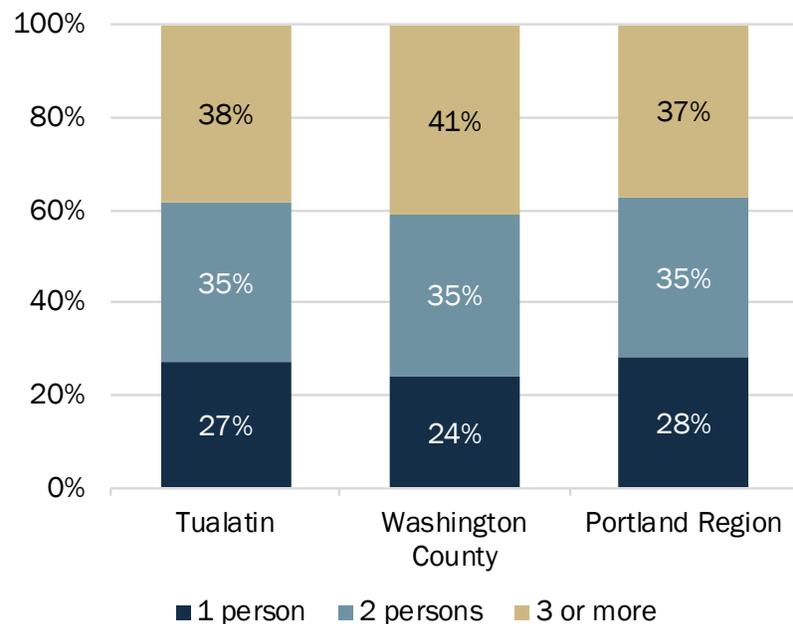
Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B25010.



About 62% of Tualatin’s households were 1- or 2-person households, compared to 59% of Washington County’s and 63% of the Portland Region’s households.

Exhibit 46. Household Size, Tualatin, Washington County, and Portland Region, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B25010.

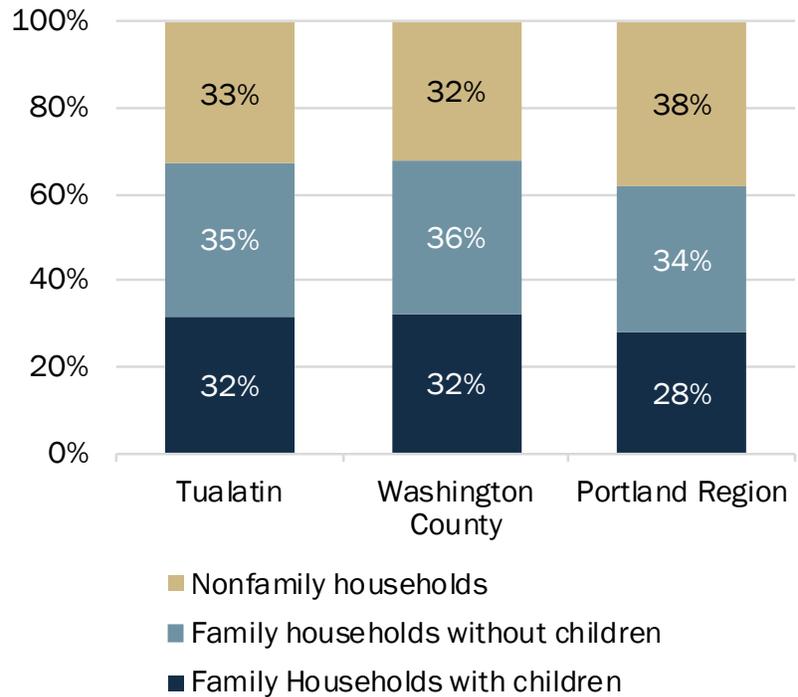


Tualatin had a similar household composition to Washington County. Compared to the Portland Region, Tualatin had a smaller share of nonfamily households and a larger share of family households with children.

About a third of Tualatin's households were non-family households (i.e. 1-person households and households composed of roommates).

Exhibit 47. Household Composition, Tualatin, Washington County, and Portland Region, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table DP02.



Households, with a Latinx head of household, were more likely to have more than one occupant per room in the 2013-2017 period, compared to all households and households with a Caucasian head of household.

Exhibit 48. Occupants per Room, Tualatin, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B25014.

2.2%

All Households

1.8%

Households, with White (alone) head of household

11.3%

Households, with Latinx head of household

Income of Tualatin Residents

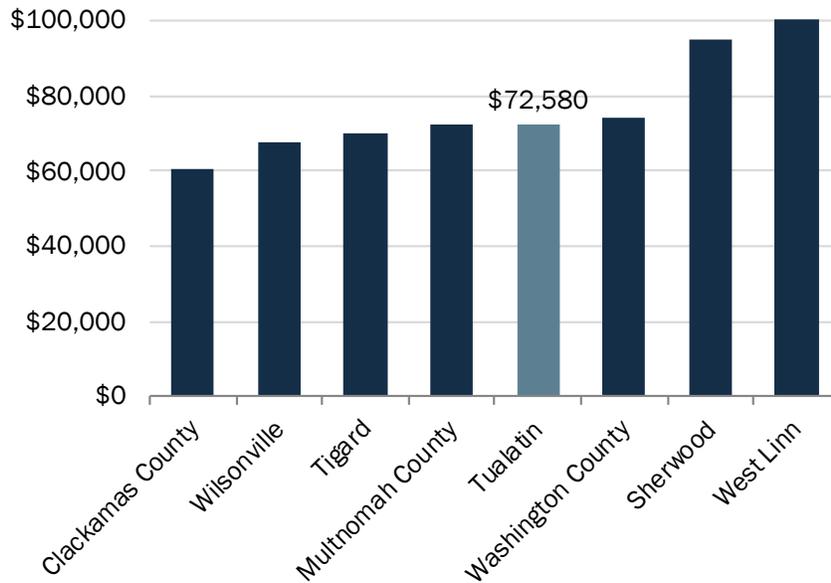
Income is one of the key determinants in housing choice and households' ability to afford housing. Income for residents living in Tualatin was lower than the Washington County median income and the state's.

Over the 2013-2017 period, Tualatin's median household income (MHI) was below that of Washington County's.

Tualatin's MHI was \$1,453 lower than Washington County's MHI (\$74,033).

Exhibit 49. Median Household Income, Tualatin, Washington County, and Comparison regions, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B25119.



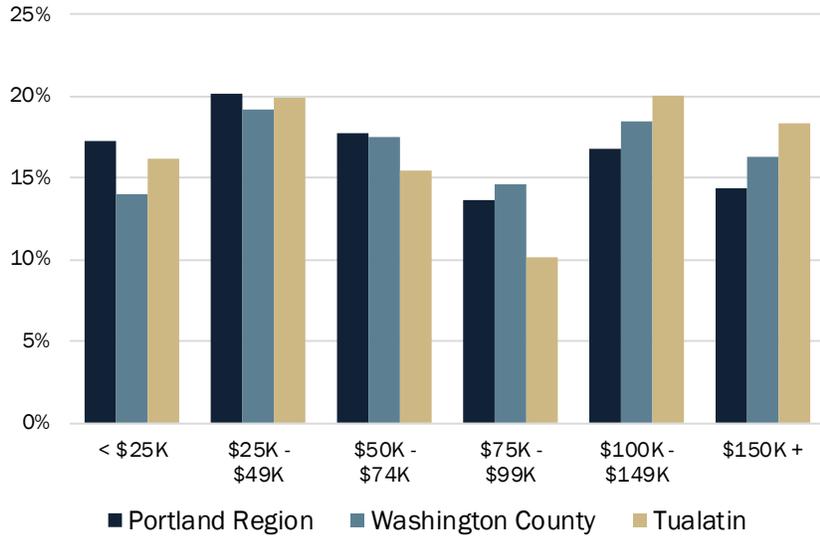
Tualatin had a larger share of higher-earning households.

About 38% of Tualatin’s households earned more than \$100,000 per year, compared to 35% of Washington County households and 31% of the Portland Region’s households.

About 36% of Tualatin’s households earned \$50,000 or less per year, compared to 33% of Washington County’s households and 37% of the Portland Region’s households.

Exhibit 50. Household Income, Tualatin, Washington County, and Portland Region, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B19001.

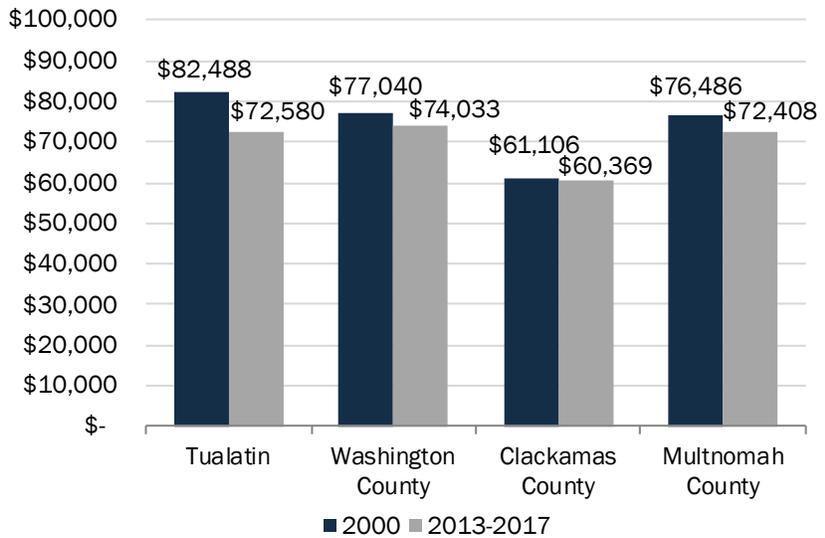


After adjusting for inflation, Tualatin’s median household income (MHI) decreased by 12%, from \$82,488 in 2000 to \$72,580 in 2013-2017.

In this same time, Washington County’s MHI decreased by 4%, Clackamas County’s MHI decreased by 1%, and Multnomah County’s MHI decreased by 5%.

Exhibit 51. Change in Median Household Income (Inflation-adjusted 2017 dollars), Tualatin, Washington County, Clackamas County, and Multnomah County, 2000 and 2013-2017

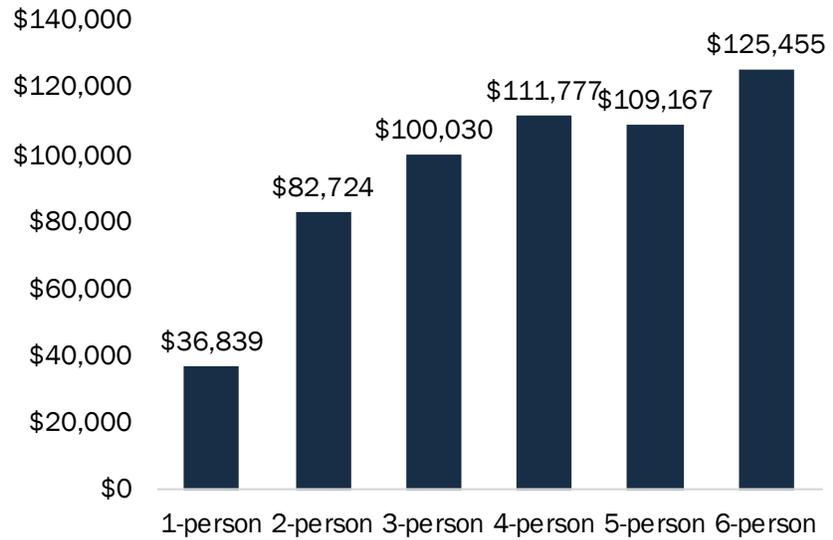
Source: U.S. Census Bureau, 2000 Decennial Census, Table HCT012; 2013-2017 ACS 5-year estimate, Table B25119; Bureau of Labor Statistics Inflation Calculator.



The median household income for a 4-person household was 3x the median household income for a 1-person household.

Exhibit 52. Median Household Income by Household Size, Tualatin, 2013-2017

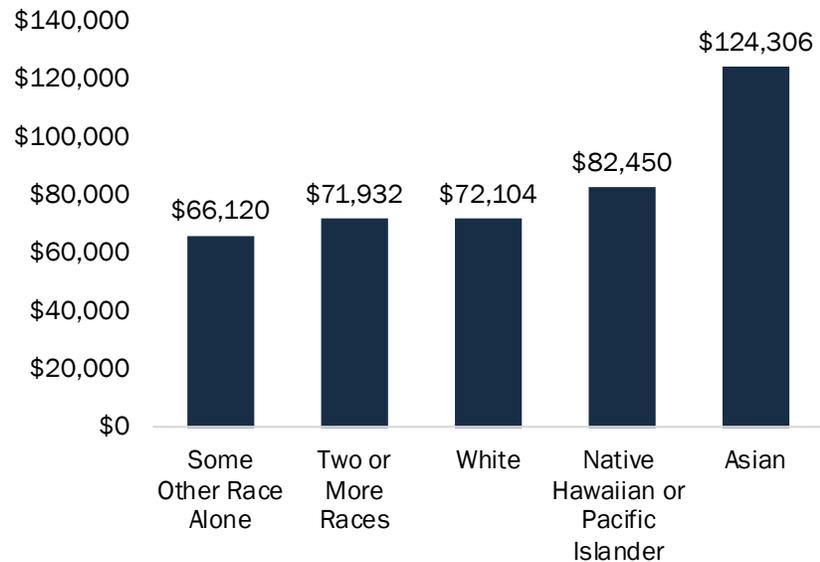
Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B25119.



Median household income, of households with an Asian head of household, were proportionately higher in Tualatin.

Exhibit 53. Median Household Income by Race of the Head of Household, Tualatin, 2013-2017

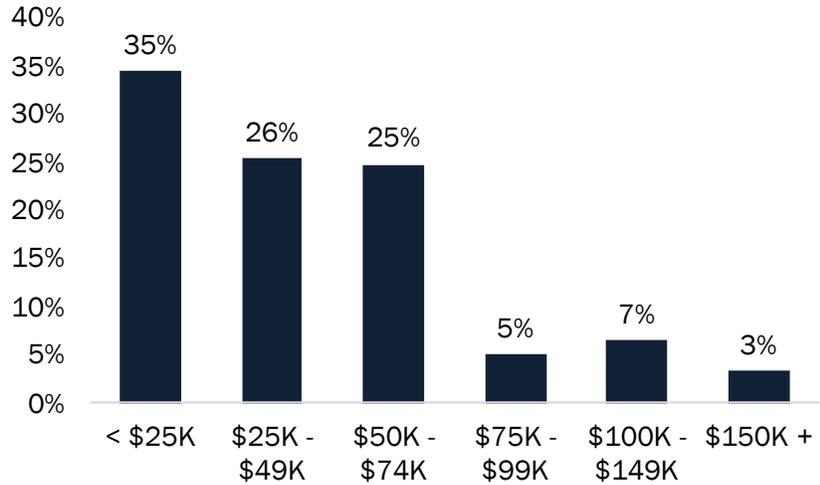
Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B19013A-G. Note: data was not available for heads of households identifying as a Black / African American or as American Indian and Alaska Native.



Most households with a Latinx head of household earned less than \$50,000 per year.

Exhibit 54. Household Income by Latinx Head of Household, Tualatin, 2013-2017

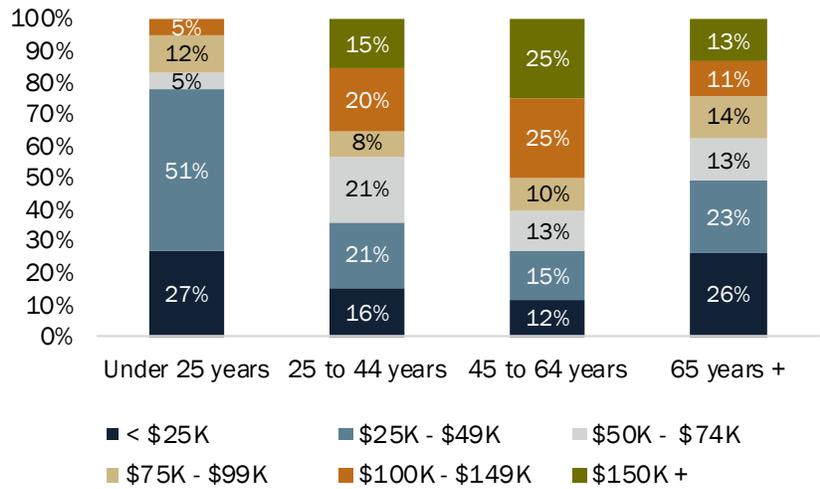
Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B19001I.



In the 2013-2017 period, 78% of households with a householder 25 and younger and 49% of households with a householder 65 years and older earned less than \$50,000 per year.

Exhibit 55. Household Income by Age of Householder, Tualatin, 2013-2017

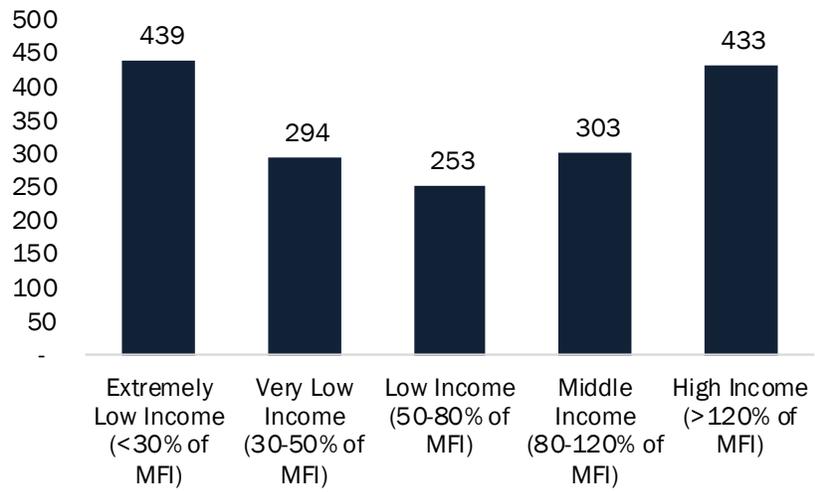
Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B19037.



About a quarter of households with a householder aged 65 years and older) were extremely low income in the 2013-2017 period. About a quarter of those households were high income.

Exhibit 56. Median Family Income (\$81,400) by Age of Householder (Aged 65 Years and Older), Tualatin, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table XXXX. Note: Median Family Income for Washington County was \$81,400 (U.S. Department of Housing and Urban Development).



Commuting Trends

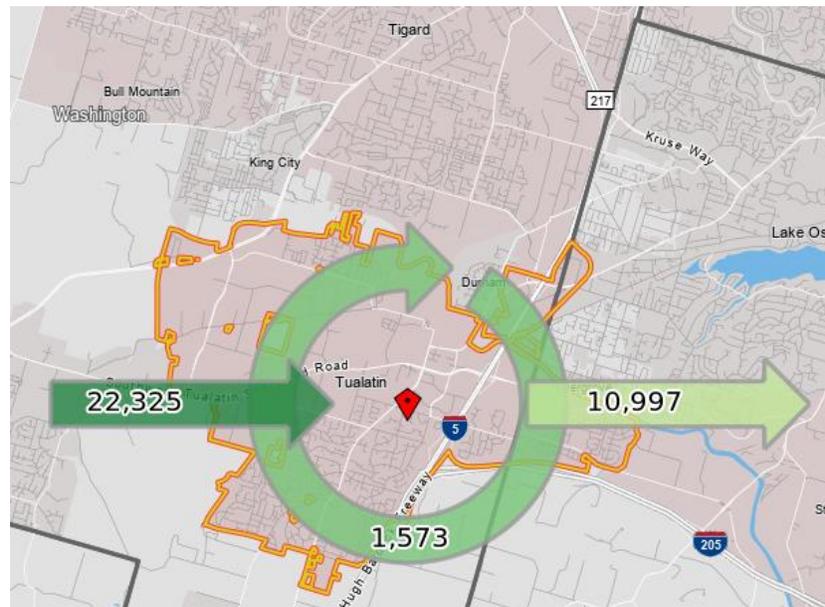
Tualatin is part of the complex, interconnected economy of the Portland Region. Of the more than 23,800 people who work in Tualatin, 93% of workers commute into Tualatin from other areas, most notably Portland, Tigard, Beaverton, and Hillsboro. Almost 11,000 residents of Tualatin commute out of the city for work, many of them to Portland.

Tualatin is part of an interconnected regional economy.

More than 22,000 people commuted into Tualatin for work, and nearly 11,000 people living in Tualatin commuted out of the city for work.

Exhibit 57. Commuting Flows, Tualatin, 2015

Source: U.S. Census Bureau, Census On the Map.



About 7% of people who worked at businesses located in Tualatin also lived in Tualatin.

The remainder commuted from Portland and other parts of the Region.

Exhibit 58. Places Where Workers at Businesses in Tualatin Live, 2015

Source: U.S. Census Bureau, Census On the Map.



About 27% of Tualatin residents worked in Portland.

A little over 12% of Tualatin residents lived and worked in Tualatin.

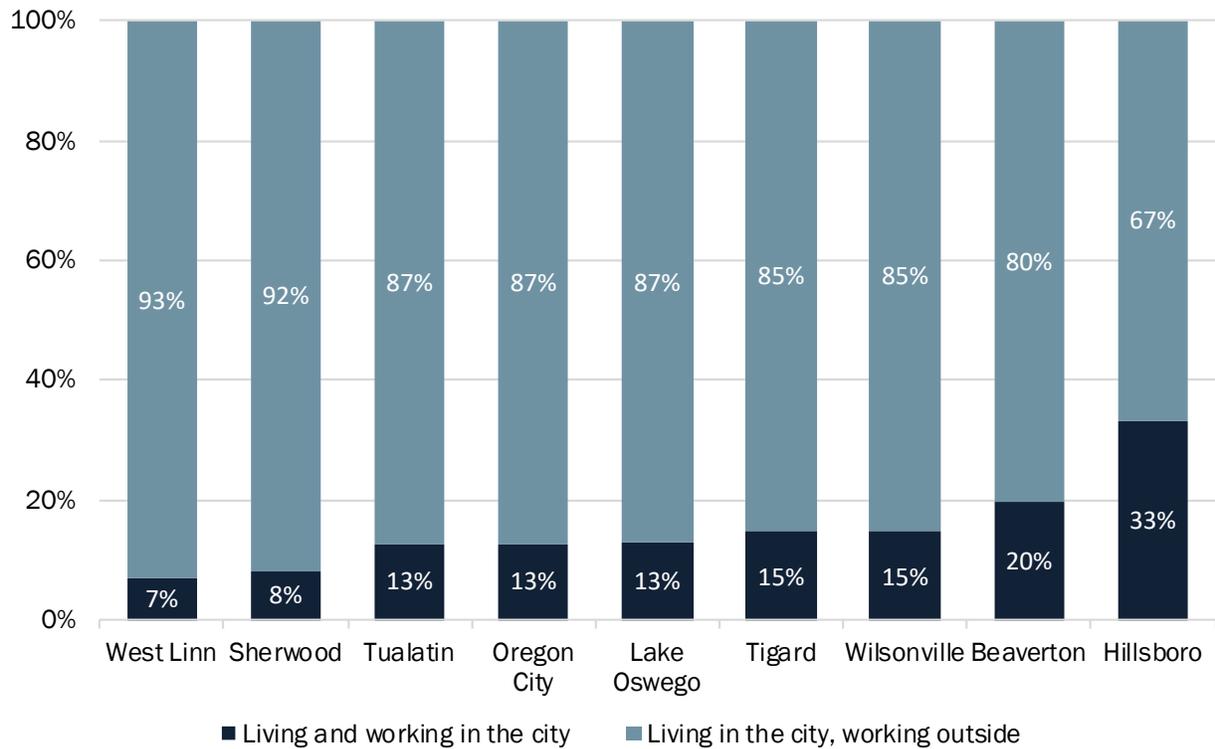
Exhibit 59. Places Where Tualatin Residents were Employed, 2015

Source: U.S. Census Bureau, Census On the Map.



Exhibit 60. Commuting Flows of Residents, Tualatin Relative to Comparison Geographies, 2015

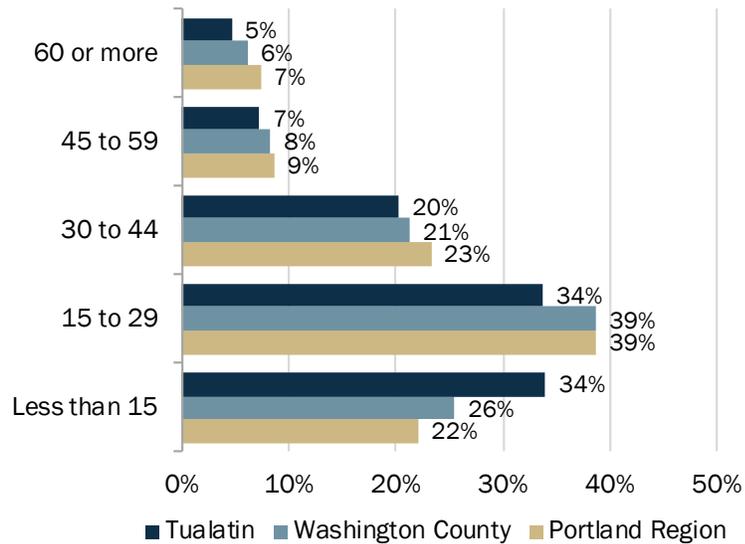
Source: U.S. Census Bureau, Census On the Map.



Most of Tualatin residents (68%) had a commute time that took less than 30 minutes.

Exhibit 61. Commute Time by Place of Residence, Tualatin, Washington County, and Portland Region, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B08303.



Regional and Local Trends Affecting Affordability in Tualatin

This section describes changes in sales prices, rents, and housing affordability in Tualatin. It uses cities in the region, as well as Washington County and Oregon, as comparisons.

Changes in Housing Costs

With a median sale price of \$480,000 in February 2019, Tualatin's housing sales were slightly higher than some comparison cities in this analysis, but below sale prices of other cities. Tualatin's housing prices grew along with comparison cities over the January 2015 to February 2019 analysis period.

Tualatin's median home sale price was within range of comparison cities.

Exhibit 62. Median Home Sale Price, Tualatin and Comparison Cities, February 2019

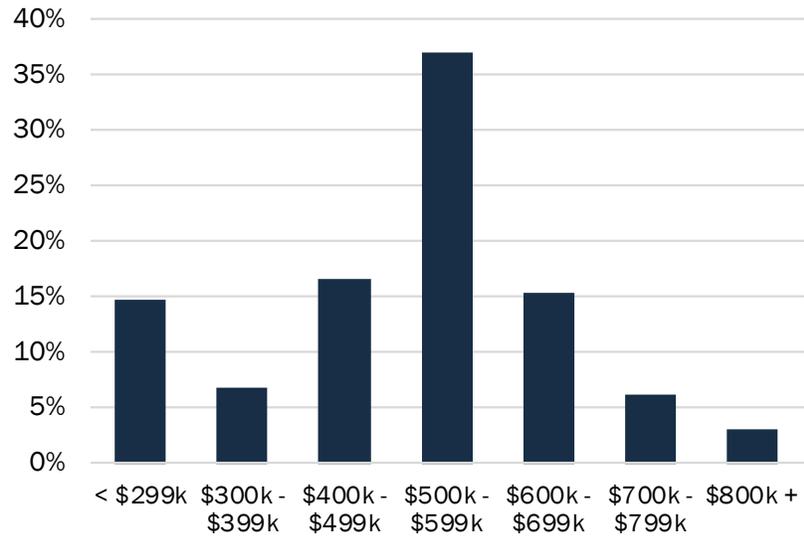
Source: Redfin.



In 2017 through 2018, more than half of the homes (62%) in Tualatin sold for more than \$500,000.

Exhibit 63. Distribution of Home Sale Prices, Tualatin, 2017–2018

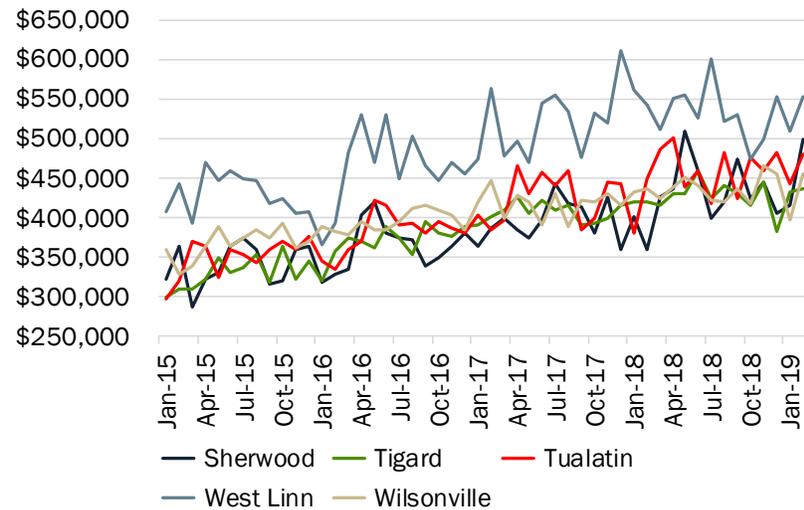
Source: RLIS.



Between January 2015 and February 2019, home sale prices in Tualatin followed similar trends to other nearby cities (with West Linn as an outlier).

Exhibit 64. Median Sale Price, Tualatin and Comparison Cities, January 2016–February 2019

Source: Redfin.



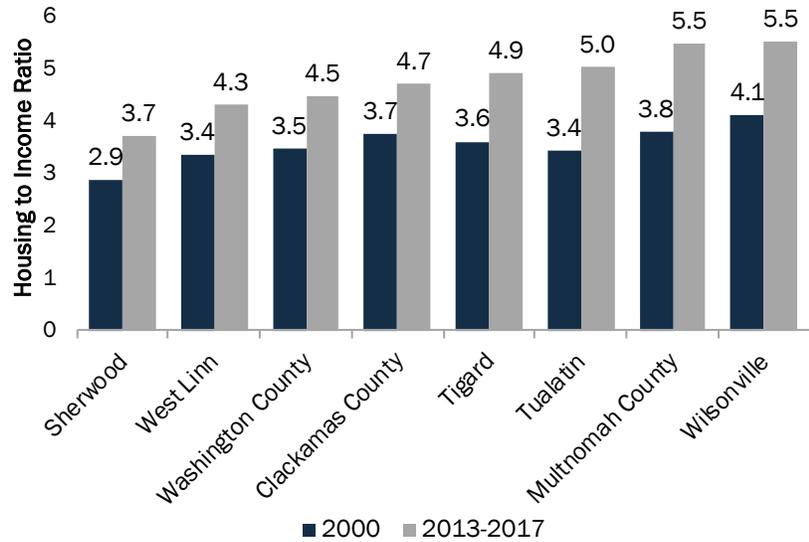
Since 2000, housing costs in Tualatin increased faster than incomes.

The household reported median value of a house in Tualatin was 3.4 times the median household income (MHI) in 2000 and 5.0 times MHI in 2016.

The decline of housing affordability was more extreme than in Washington County overall.

Exhibit 65. Ratio of Median Housing Value to Median Household Income, Tualatin, Washington County, and Comparison Jurisdictions, 2000 to 2013–2017³⁹

Source: U.S. Census Bureau, 2000 Decennial Census, Tables HCT012 and H085, and 2012–2016 ACS, Tables B19013 and B25077.



³⁹ This ratio compares the median value of housing in Tualatin (and other places) to the median household income. Inflation-adjusted median owner values in Tualatin increased from \$282,532 in 2000 to \$365,700 in 2013–2017. Over the same period, inflation-adjusted median income decreased from \$82,488 to \$72,580.

Rental Costs

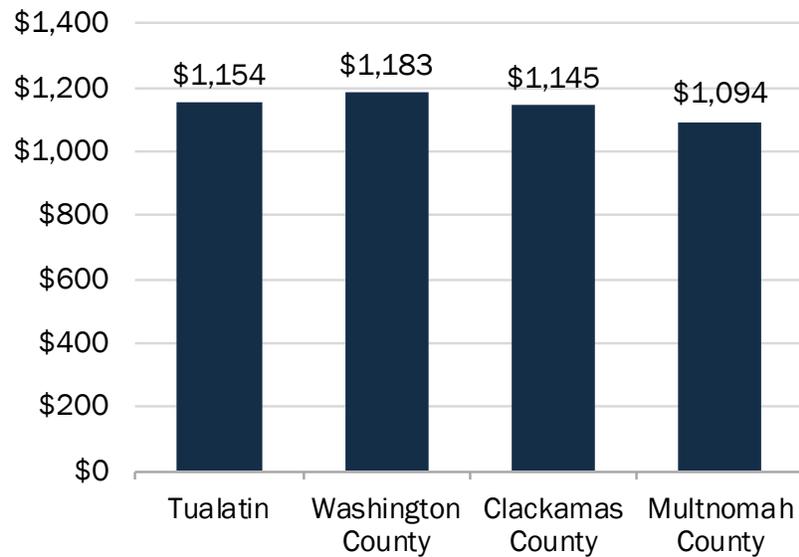
Median multifamily rents in Tualatin and Washington County are about \$1,200. The following charts show gross rent (which includes the cost of rent plus utilities) for Tualatin in comparison to Washington County and the Portland Region.

The median gross rent in Tualatin was \$1,154 in the 2013-2017 period.

Rent in Tualatin was comparable to that of comparison regions.

Exhibit 66. Median Gross Rent, Tualatin, Washington County, Clackamas County, and Multnomah County, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS 5-year estimate, Table B25064.

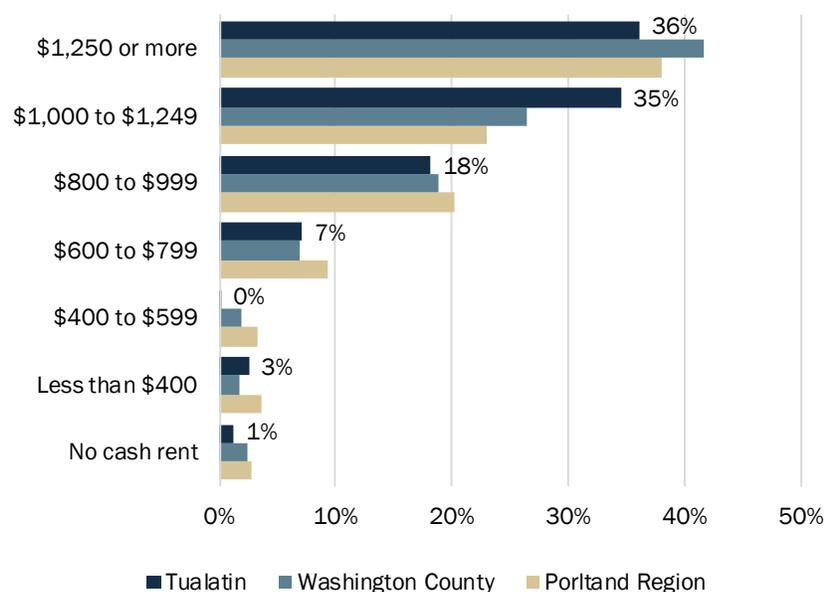


Most renters in Tualatin paid more than \$1,000 per month in rent.

About 36% of Tualatin's renters paid \$1,250 or more in gross rent per month, a smaller share than renters across Washington County (42%) and the Portland Region (38%).

Exhibit 67. Gross Rent, Tualatin, Washington County, and Portland Region, 2013-2017

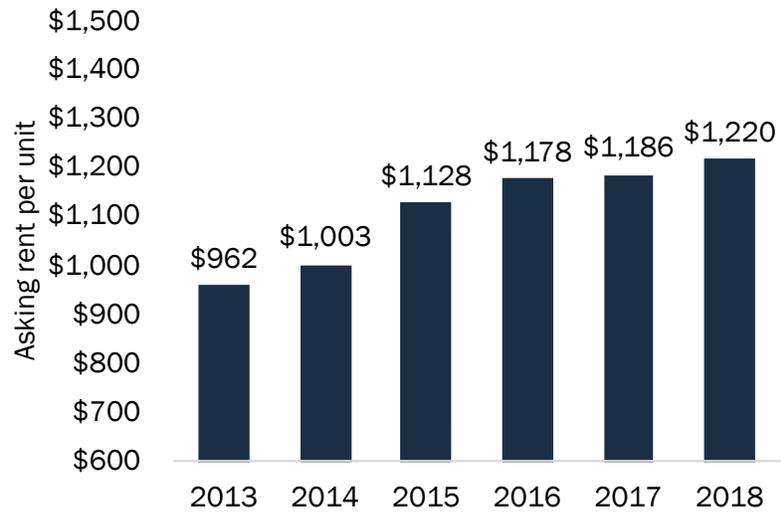
Source: U.S. Census Bureau, 2013-2017 ACS Table B25063.



Tualatin's average asking multifamily rent per unit increased by \$372, from \$848 in 2010 to \$1,220 in 2018.

Exhibit 68. Average Asking Multifamily Rent Per Unit, Tualatin, 2013 through 2018

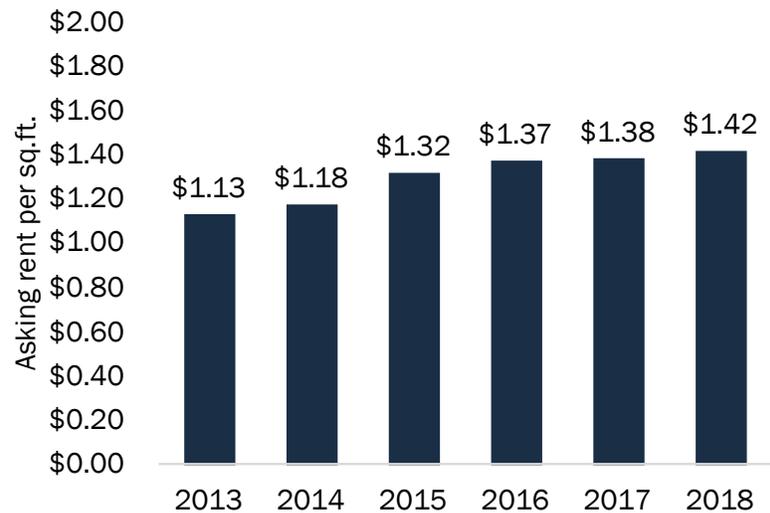
Source: CoStar.



Tualatin's average asking multifamily rent per square foot had increased since 2013.

Exhibit 69. Average Asking Multifamily Rent per Square Foot, Tualatin, 2013 through 2018

Source: CoStar.



Housing Affordability

A typical standard used to determine housing affordability is that a household should pay no more than a certain percentage of household income for housing, including payments and interest or rent, utilities, and insurance. The Department of Housing and Urban Development’s guidelines indicate that households paying more than 30% of their income on housing experience “cost burden,” and households paying more than 50% of their income on housing experience “severe cost burden.” Using cost burden as an indicator is one method of determining how well a city is meeting the Goal 10 requirement to provide housing that is affordable to all households in a community.

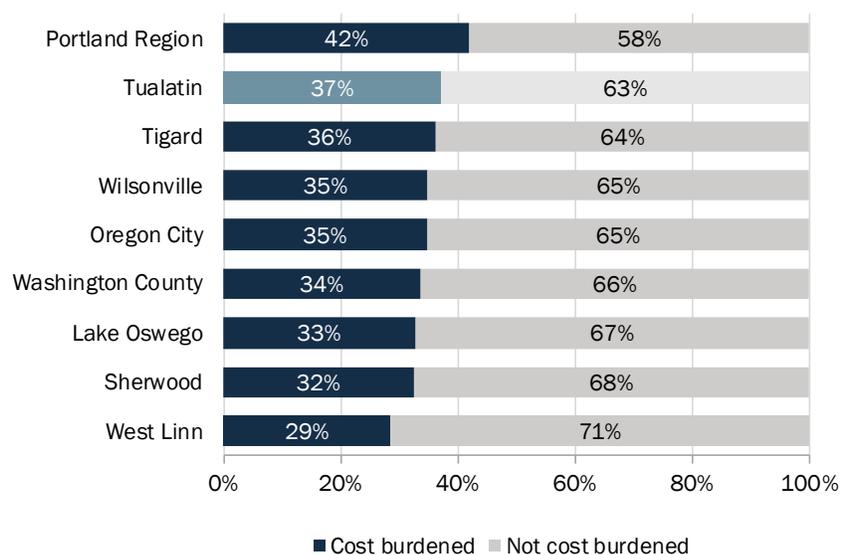
About 37% of Tualatin’s households (renters and homeowners) are cost burdened, of which 16% are severely cost burdened. About 56% of renter households (households who rent) are cost burdened, compared with 22% of homeowners (households who own their own home). Twenty-five percent of households in Tualatin are rent burdened households.⁴⁰ Overall, Tualatin has a slightly larger share of cost-burdened households than Washington County but a lower share of cost-burdened households than the Portland Region.

Overall, about 37% of all households in Tualatin were cost burdened.

In the 2013-2017 period, Tualatin had one of the highest rates of cost burdened households relative to other comparison areas.

Exhibit 70. Housing Cost Burden, Tualatin, Washington County, and Comparison Areas, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS Tables B25091 and B25070.

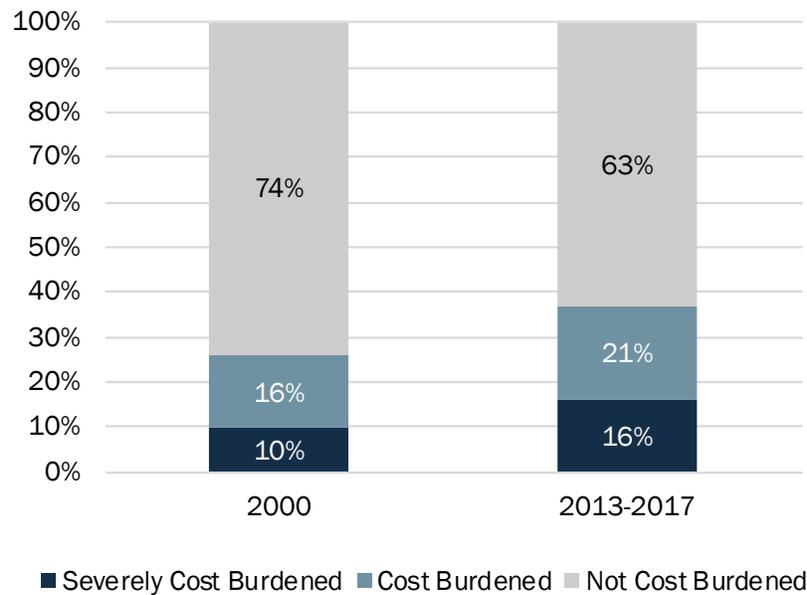


⁴⁰ Cities with populations >10,000 are required, per HB 4006, to assess “rent burden” if more than 50% of renters are cost burdened. In Tualatin as of the 2013-2017 period, 56% of total renter households were cost burdened. Upon further assessment, we find that a quarter (25%) of Tualatin’s households (renters and homeowners) were cost burdened renters (households that rent housing and pay more than 30% of their income on housing).

From 2000 to the 2013-2017 period, the share of cost burdened and severely cost burdened households in Tualatin grew by 11%.

Exhibit 71. Change in Housing Cost Burden, Tualatin, 2000 to 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census, Tables H069 and H094 and 2013-2017 ACS Tables B25091 and B25070.

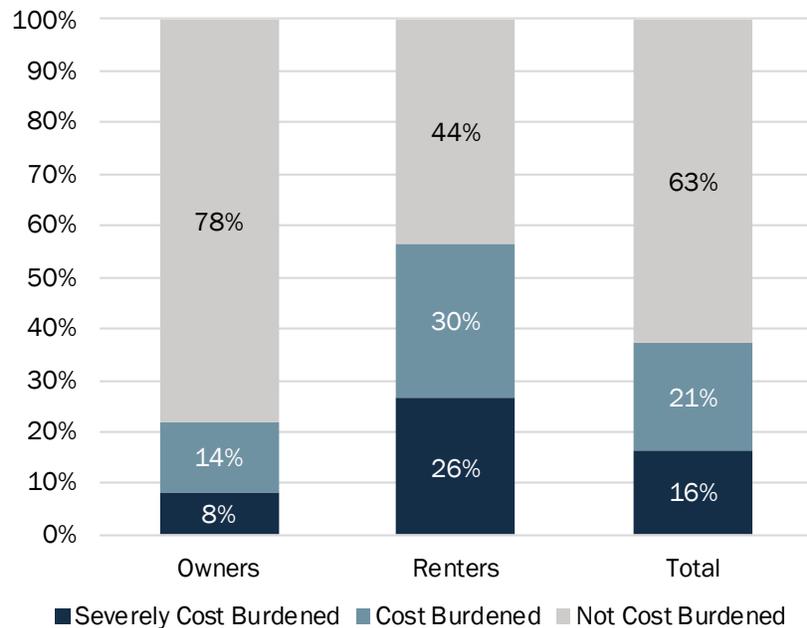


Renters were more likely to be cost burdened than homeowners.

In the 2013-2017 period, about 56% of Tualatin’s renters were cost burdened or severely cost burdened, compared to 22% of homeowners.

Exhibit 72. Housing Cost Burden by Tenure, Tualatin, 2013-2017

Source: U.S. Census Bureau, 2013-2017 ACS Tables B25091 and B25070.

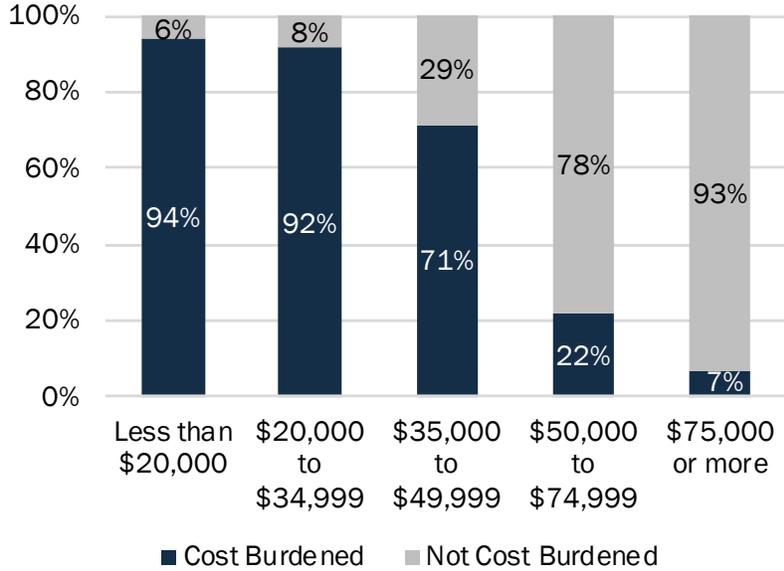


Nearly all renter households earning less than \$35,000 per year were cost burdened.

Most households earning between \$35,000 and \$50,000 per year were cost burdened.

Exhibit 73. Cost Burdened Renter Households, by Household Income, Tualatin, 2013-2017

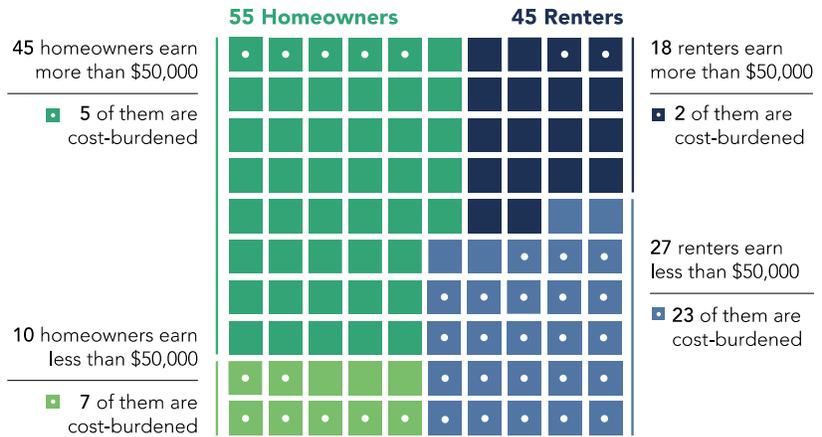
Source: U.S. Census Bureau, 2013-2017 ACS Table B25074.



If all of Tualatin's households were 100 residents, 27 households would be renters earning \$50,000 or less per year; 23 of these households (85%) would be cost burdened.

Exhibit 74. Illustration of Cost Burden: If all of Tualatin's Households were 100 Residents

Source: U.S. Census Bureau, 2013-2017 ACS Table S2503.



Another measure of cost burden is considering housing costs plus transportation costs. When examining housing and transportation cost burden, a household is considered cost burdened if they spend more than 45% of gross income on housing and transportation costs combined. Metro's 2014 *Metro Urban Growth Report* contains extensive documentation of housing and transportation cost burden.

Tualatin residents spend between 34% and 40% of their income on housing plus transportation costs.

Compared to the Metro Region, Tualatin residents spend a similar percentage of their income on housing and transportation costs.

Exhibit 75. Average Cost of Transportation and Housing as a Percent of Income, Tualatin and the Metro Region, 2010 and 2035⁴¹

Source: 2014 Metro Urban Growth Report, Appendix 12.

2010	40% \$2,541 per month Tualatin	39% \$2,300 per month Metro UGB
	2035	34% \$2,723 per month Tualatin

Using Metro's definition for cost burdened, about 15% of households in Tualatin are forecast to be cost burdened by 2035, comparable with the region.

Exhibit 76. Percent of Households with Housing and Transportation Cost Burden, Tualatin and the Metro Region, 2010 and 2035

Source: 2015 Metro Urban Growth Report, Appendix 12.

2010	20% 2,046 households Tualatin	17% 104,100 households Metro UGB
	2035	15% 1,838 households Tualatin

⁴¹ 2035 estimates use Metro's Medium Growth forecast.

While cost burden is a common measure of housing affordability, it does have some limitations. Two important limitations are:

- A household is defined as cost burdened if the housing costs exceed 30% of their income, regardless of actual income. The remaining 70% of income is expected to be spent on non-discretionary expenses, such as food or medical care, and on discretionary expenses. Households with higher incomes may be able to pay more than 30% of their income on housing without impacting the household’s ability to pay for necessary non-discretionary expenses.
- Cost burden compares income to housing costs and does not account for accumulated wealth. As a result, the estimate of how much a household can afford to pay for housing does not include the impact of a household’s accumulated wealth. For example, a household of retired people may have relatively low income but may have accumulated assets (such as profits from selling another house) that allow them to purchase a house that would be considered unaffordable to them based on the cost burden indicator.

Another way of exploring the issue of financial need is to review housing affordability at varying levels of household income.

Fair Market Rent for a 2-bedroom apartment in Washington County was \$1,330 in 2018.

Exhibit 77. HUD Fair Market Rent (FMR) by Unit Type, Washington County, 2018

Source: U.S. Department of Housing and Urban Development.

\$1,026	\$1,132	\$1,330	\$1,935	\$2,343
Studio	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom

A household must earn at least \$25.58 per hour to afford a two-bedroom unit at Fair Market Rent (\$1,330) in Washington County.

Exhibit 78. Affordable Housing Wage, Washington County, 2018

Source: U.S. Department of Housing and Urban Development; Oregon Bureau of Labor and Industries.

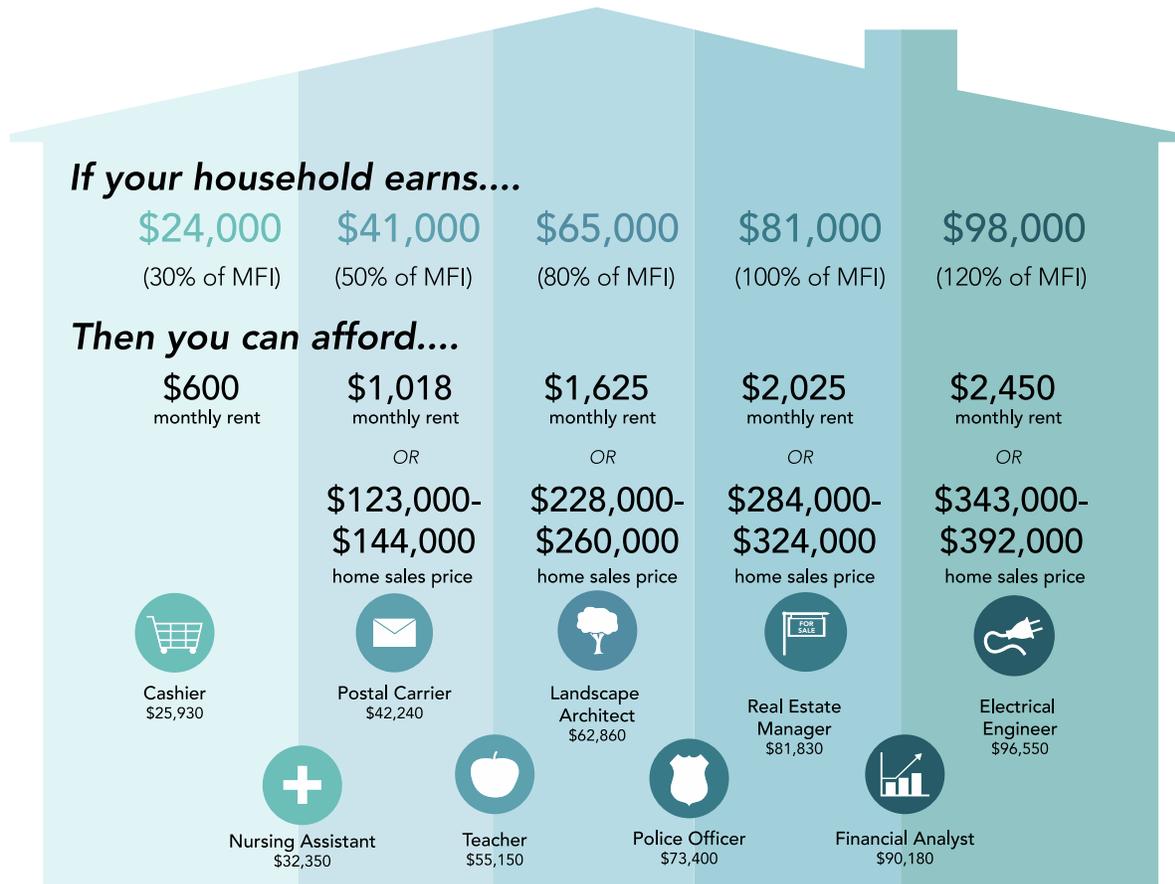
\$25.58 per hour

Affordable Housing Wage for two-bedroom Unit in Washington County

Illustrated in Exhibit 79, a household earning median family income in Washington County (about \$81,000 per year) can afford a monthly rent of about \$2,025 or a home roughly valued between \$284,000 and \$324,000.

Exhibit 79. Financially Attainable Housing, by Median Family Income (MFI) for Washington County (\$81,400), Tualatin, 2018

Source: U.S. Department of Housing and Urban Development, Washington, 2018. Bureau of Labor Services, 2017, for Portland MSA.



About 26% of Tualatin's households had incomes less than \$41,000 and cannot afford a two-bedroom apartment at Washington County's Fair Market Rent (FMR) of \$1,330.

Exhibit 80. Share of Households, by Median Family Income (MFI) for Washington County (\$81,400), Tualatin, 2018

Source: U.S. Department of Housing and Urban Development, Washington County, 2018. U.S. Census Bureau, 2013-2017 ACS Table 19001.

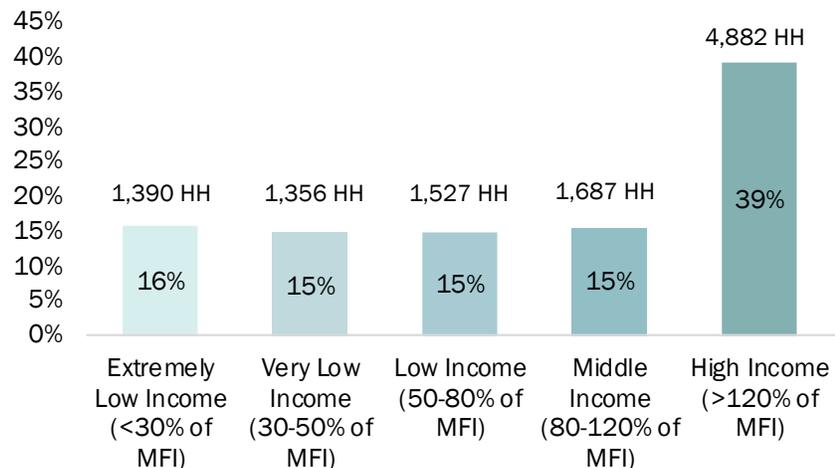
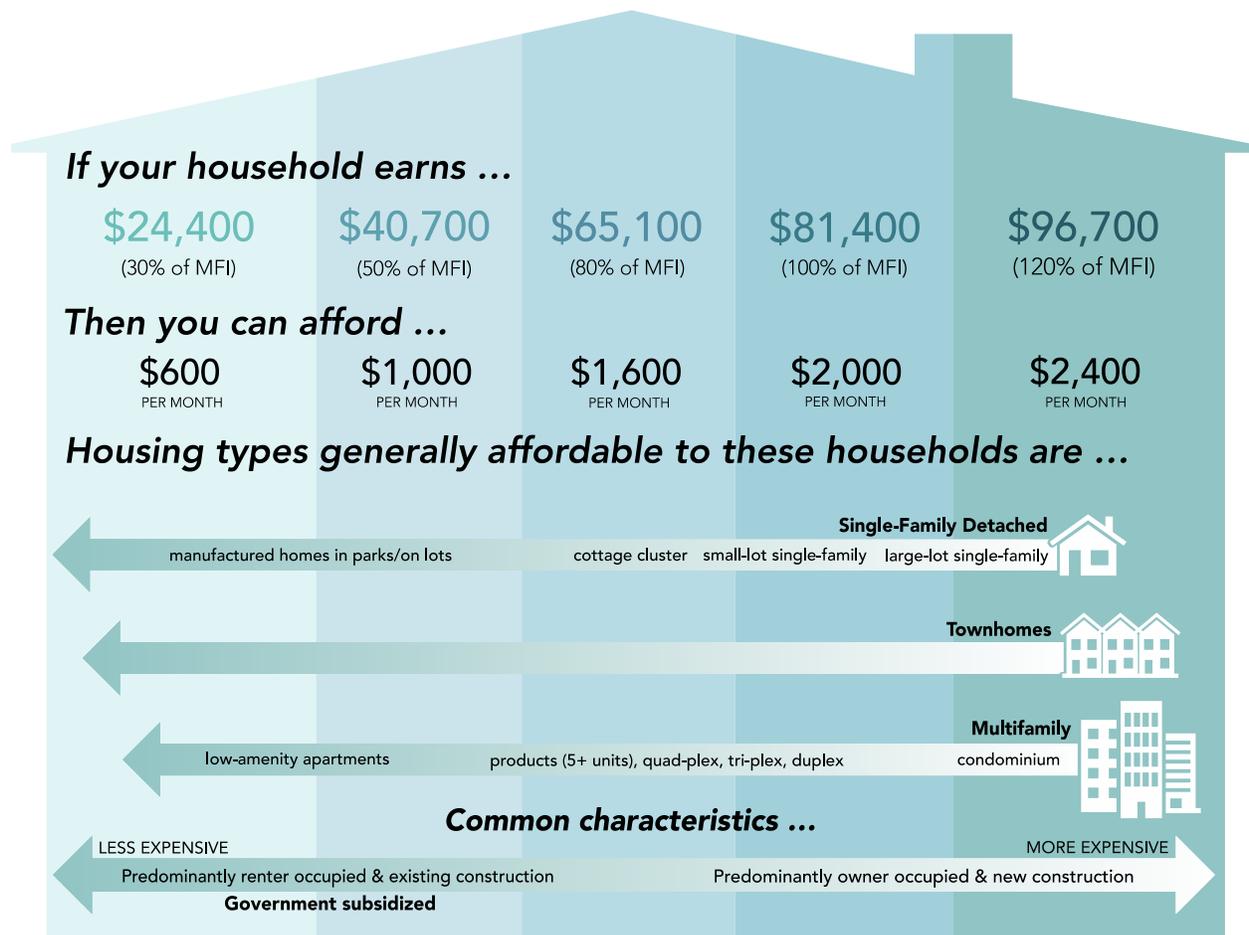


Exhibit 81 illustrates the types of financially attainable housing by income level in Washington County. Generally speaking, lower-income households will be renters occupying existing housing. Newly built housing will be a combination of renters (most likely in multifamily housing) and homeowners. The types of housing affordable for the lowest income households is limited to subsidized housing, manufactured housing, lower-cost single-family housing, and multifamily housing (apartments). The range of financially attainable housing increases with increased income.

Exhibit 81. Types of Financially Attainable Housing by Median Family Income (MFI) for Washington County (\$81,400), Tualatin, 2018

Source: U.S. Department of Housing and Urban Development, Washington County, 2018.



While Exhibit 63 presented a distribution of home sale prices in Tualatin from homes sold in 2017–2018, Exhibit 82 presents a distribution of home sale prices by affordability range for Tualatin in 2016–2018. Most housing sold in Tualatin in 2016, 2017, 2018 these years were affordable to households earning between 150% and 200% of the Median Family Income (MFI), or a household income of about \$122,100 to \$162,800. If housing prices continue to rise as they have in Exhibit 82, Tualatin may need to consider policies to support development of housing affordable for homeownership for households earning 80% to 150% of MFI, such as allowing smaller lot and smaller unit single-family detached housing or townhouses or policies to lower the costs of housing development such as SDC waivers or other financial support for development of housing affordable for homeownership.

Exhibit 82. Distribution of Home Sale Prices by Affordability Range, Tualatin, 2016, 2017, 2018

Source: RLIS. Note: 2018 data is through September 2018.

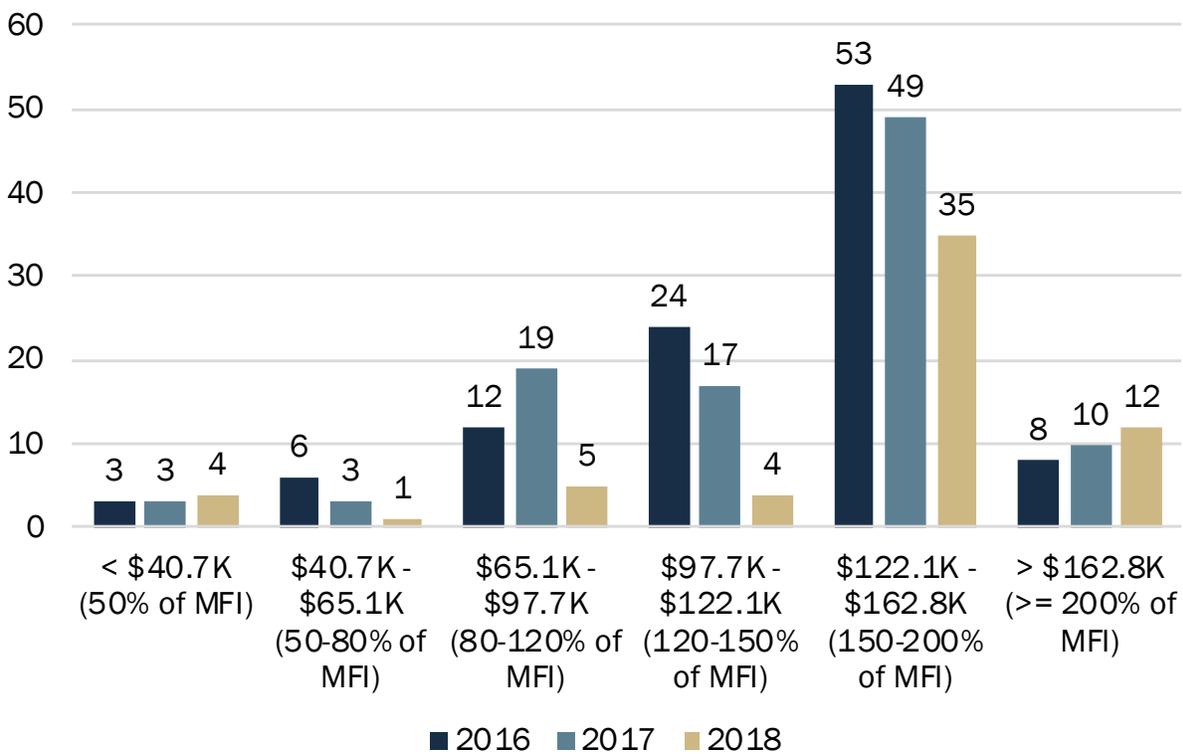
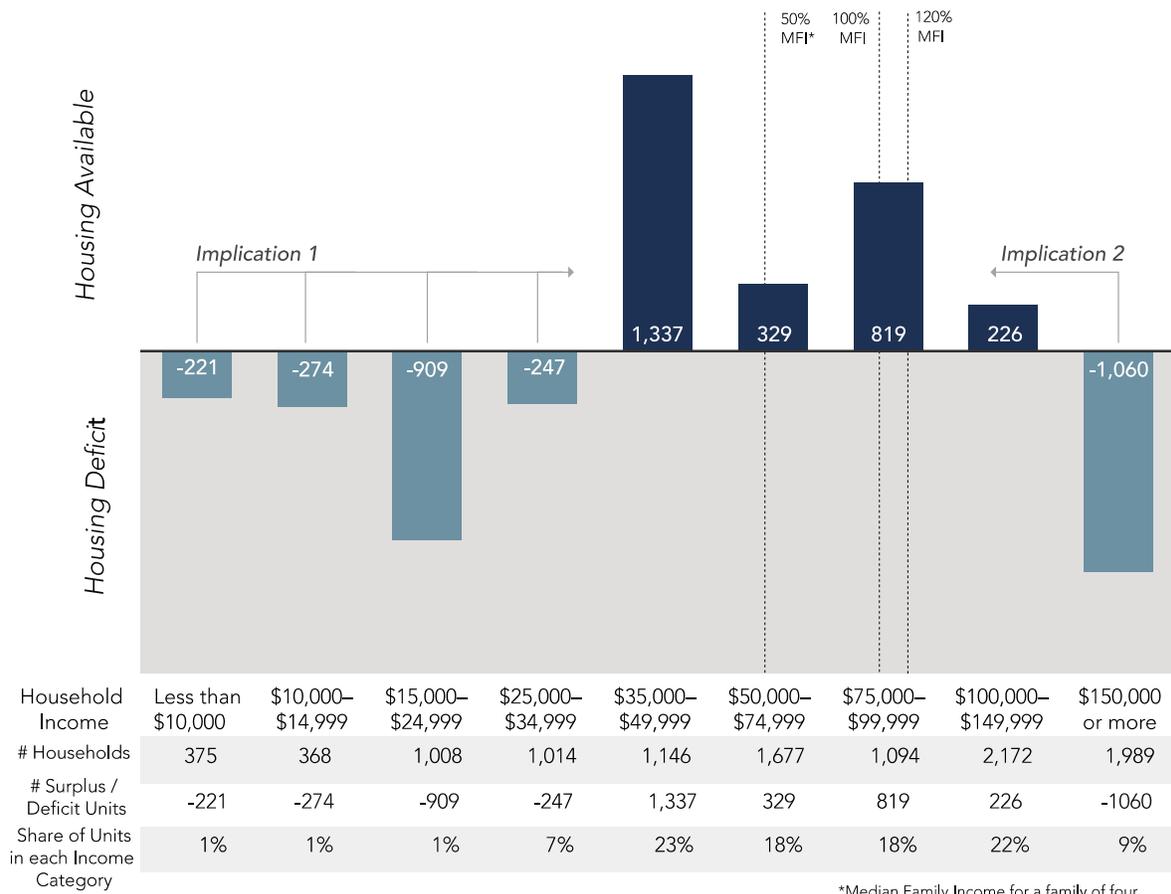


Exhibit 83 compares the number of households by income with the number of units affordable to those households in Tualatin. Tualatin currently has a deficit of housing affordable to households earning less than \$35,000. The types of housing that Tualatin has a deficit of are more affordable housing types such as: government-subsidized housing, multifamily products, and more affordable single-family homes (e.g. tiny homes, cottages, manufactured housing). Tualatin also shows a need for higher amenity housing types for households earning more than \$150,000 per year or more. Higher amenity housing types include single-family detached housing, single-family attached housing (e.g. townhomes and rowhouses), and higher-end multifamily products (including condominiums).

Exhibit 83. Affordable Housing Costs and Units by Income Level, Tualatin, 2018

Source: U.S. Census Bureau, 2013-2017 ACS. Note: MFI is Median Family Income, determined by HUD for the Portland MSA. Portland MSA's MFI in 2018 was \$81,400.



*Median Family Income for a family of four.

Implication 1

Some lower-income households live in housing that is more expensive than they can afford because affordable housing is not available. These households are cost burdened.

Implication 2

Some higher-income households choose housing that costs less than they can afford. This may be the result of the household's preference or it may be the result of a lack of higher-cost and higher-amenity housing that would better suit their preferences.

Exhibit 58 shows that 7% of the people who work in Tualatin also live in Tualatin. One of the key questions for Tualatin is whether people who work at businesses in Tualatin can afford housing in Tualatin.

Tualatin has 0.7 residents for every job (Exhibit 84).⁴² In comparison, Washington County has 1.6 residents for every job and the Portland Region (Clackamas, Multnomah, and Washington County) has 1.4 residents for every job. The large number of jobs relative to the number of residents in Tualatin was an important part of the discussion in the development of the Housing Needs Analysis, with concerns focusing on the impacts of commuting on Tualatin’s transportation system and negative impacts on quality of life in Tualatin (such as heavy traffic congestion).

Tualatin has more jobs per capita than Washington County and the Portland Region.

Exhibit 84. Ratio of Residents to Jobs, Tualatin, 2017

Source: Bureau of Labor Services, Quarterly Census of Employment and Wages.

	Employees	Residents	Residents for every Job
Tualatin	38,838	26,960	0.7
Washington County	595,860	337,127	1.6
Portland Region	1,811,860	1,259,773	1.4

Exhibit 85 shows affordable housing costs for workers at businesses in Tualatin. For example, a household with one individual employed in furniture manufacturing (earning about \$39,000 per year) can afford neither the average multifamily rents in Tualatin (\$1,220 per month) nor the median housing sale price in Tualatin (about \$480,000 as of February 2019) is affordable.

However, Exhibit 85 reflects housing affordability costs for one worker per household. This analysis recognizes that most multi-person households have more than one person employed, and many have dual incomes. According to Census and Oregon Employment Department data, Washington County and Tualatin both have about 1.4 jobs per household, including both full-time and part-time jobs. This shows that most multi-person households in Tualatin have more than one worker. **It is not necessarily reasonable to expect one worker to be able to afford housing costs in Tualatin alone (or any other city in the Portland region), given the prevalence of dual-income households.**

⁴² Ratios rely on population estimates from Portland State University’s Population Research Center (2017) and Bureau of Economic Analysis (2017).

Exhibit 85. Housing affordability for workers at existing jobs in Tualatin, 2017

Source: Oregon Employment Department. Note: Average multifamily rent in Tualatin is \$1,220 (Costar, 2018) and median housing price is \$480,000 (Redfin, February 2019).

Industry / Sector	Average Wage per Employee (Tualatin)	Affordable Average Monthly Rent	Can a person in this industry afford average multifamily rent in Tualatin?	Affordable Housing Price (Approximate)	Can a person in this industry afford the median housing price in Tualatin?
Agriculture, Forestry, & Mining	\$58,960	\$1,474	Yes	\$206,359	No
Construction	\$67,726	\$1,693	Yes	\$237,039	No
Manufacturing (Mfg.)	\$76,654	\$1,916	Yes	\$268,287	No
Food, Beverage, & Apparel Mfg.	\$105,489	\$2,637	Yes	\$369,211	No
Wood, Paper, & Material Product Mfg.	\$55,784	\$1,395	Yes	\$195,242	No
Metal Mfg.	\$51,311	\$1,283	Yes	\$179,587	No
Machinery Mfg.	\$105,837	\$2,646	Yes	\$370,430	No
Computer & Electronic Product Mfg.	\$60,545	\$1,514	Yes	\$211,908	No
Electrical Equipment, Appliance, & Component Mfg.	\$70,665	\$1,767	Yes	\$247,328	No
Transportation Equipment Mfg.	\$69,047	\$1,726	Yes	\$241,665	No
Furniture & Related Product Mfg.	\$39,324	\$983	No	\$137,634	No
Miscellaneous Mfg.	\$59,538	\$1,488	Yes	\$208,384	No
Wholesale Trade	\$60,767	\$1,519	Yes	\$212,683	No
Retail Trade	\$28,260	\$707	No	\$98,911	No
Transportation, Warehousing & Utilities	\$61,459	\$1,536	Yes	\$215,108	No
Information	\$93,233	\$2,331	Yes	\$326,315	No
Finance & Insurance	\$79,155	\$1,979	Yes	\$277,042	No
Real Estate, Rental & Leasing	\$52,102	\$1,303	Yes	\$182,357	No
Professional, Scientific, & Technical Services	\$66,277	\$1,657	Yes	\$231,969	No
Management of Companies & Enterprises	\$73,374	\$1,834	Yes	\$256,808	No
Administrative & Waste Management Services	\$34,561	\$864	No	\$120,964	No
Private Educational Services	\$24,952	\$624	No	\$87,334	No
Health Care & Social Assistance	\$62,746	\$1,569	Yes	\$219,610	No
Arts, Entertainment, & Recreation	\$18,144	\$454	No	\$63,504	No
Accommodation & Food Services	\$20,334	\$508	No	\$71,170	No
Other Services, Except Public Administration	\$40,441	\$1,011	No	\$141,543	No
Government	\$55,058	\$1,376	Yes	\$192,703	No

Exhibit 86 displays housing affordability of workers in Tualatin’s current target industries. Tualatin’s target industries were identified in their Economic Opportunities Analysis (2019). These industries may change as the Economic Opportunities Analysis is revised.

Exhibit 86. Housing Affordability for workers at target industries in Washington County, 2017

Source: Oregon Employment Department. Note1: Average multifamily rent in Tualatin is \$1,220 (Costar, 2018) and median housing price is \$480,000 (Redfin, February 2019). Note2: Advanced manufacturing uses the average wage for all manufacturing subsectors and Distribution and Electric Commerce uses the average wage for the transportation, warehousing, and utilities sector.

Industry / Sector	Average Wage per Employee (Washington County)	Affordable Average Monthly Rent	Can a person in this industry afford average multifamily rent in Tualatin?	Affordable Housing Price	Can a person in this industry afford the median housing price in Tualatin?
Food Processing & Manufacturing	\$66,166	\$1,654	Yes	\$231,581	No
Furniture Manufacturing	\$44,797	\$1,120	No	\$156,790	No
Plastics Manufacturing	\$50,725	\$1,268	Yes	\$177,538	No
Information Technology & Analytical Instruments	\$95,907	\$2,398	Yes	\$335,675	No
Distribution and Electronic Commerce	\$50,314	\$1,258	Yes	\$176,099	No
Advanced Manufacturing	\$110,756	\$2,769	Yes	\$387,646	No
Business Services	\$89,380	\$2,235	Yes	\$312,830	No

Summary of the Factors Affecting Tualatin's Housing Needs

The purpose of the analysis thus far has been to provide background on the kinds of factors that influence housing choice. While the number and interrelationships among these factors ensure that generalizations about housing choice are difficult to make and prone to inaccuracies, it is a crucial step to informing the types of housing that will be needed in the future.

There is no question that age affects housing type and tenure. Mobility, the ability to move freely and easily from one community to another, is substantially higher for people aged 20 to 34. People in that age group will also have, on average, less income than people who are older and they are less likely to have children. These factors mean that younger households are much more likely to be renters, and renters are more likely to be in multifamily housing.

The data illustrates what more detailed research has shown and what most people understand intuitively: life cycle and housing choice interact in ways that are predictable in the aggregate; age of the household head is correlated with household size and income; household size and age of household head affect housing preferences; and income affects the ability of a household to afford a preferred housing type. The connection between socioeconomic and demographic factors and housing choice is often described informally by giving names to households with certain combinations of characteristics: the "traditional family," the "never-marrieds," the "dinks" (dual-income, no kids), and the "empty-nesters."⁴³ Thus, simply looking at the long wave of demographic trends can provide good information for estimating future housing demand.

⁴³ See *Planning for Residential Growth: A Workbook for Oregon's Urban Areas* (June 1997).

Still, one is ultimately left with the need to make a qualitative assessment of the future housing market. The following is a discussion of how demographic and housing trends are likely to affect housing in Tualatin over the next 20 years:

- **Growth in housing will be driven by growth in households.** Households in Tualatin’s city limits are forecast to grow from 10,791 households to 11,362 households, an increase of 571 households between 2020 and 2040.⁴⁴ In that same time, households in Basalt Creek are forecast to grow from 203 households to 646 households, an increase of 443 households. Together, Tualatin city limits and Basalt Creek will grow by 1,014 households between 2020 and 2040. Tualatin is planning for 1,014 new dwelling units to meet the needs of its forecasted new households.
- **Housing affordability is a growing challenge in Tualatin.** It is a challenge in most of the region in general, and Tualatin is affected by these regional trends. Housing prices are increasing faster than incomes in Tualatin and Washington County, which is consistent with state and national challenges. Tualatin has a large share of multifamily housing (about 41% of the City’s housing stock), but over half of renter households are cost burdened. Tualatin’s key challenge over the next 20 years is providing opportunities for development of relatively affordable housing of all types, such as lower-cost single-family housing, townhouses and duplexes, market-rate multifamily housing, and government-subsidized affordable housing.
- **Without substantial changes in housing policy, on average, future housing will look a lot like past housing.** That is the assumption that underlies any trend forecast, and one that is important when trying to address demand for new housing.

The City’s residential policies can impact the amount of change in Tualatin’s housing market, to some degree. If the City adopts policies to increase opportunities to build smaller-scale single-family and multifamily housing types (particularly single-family attached that is comparatively affordable to moderate-income households), a larger percentage of new housing developed over the next 20 years in Tualatin may begin to address the city’s needs. Examples of policies that the City could adopt to achieve this outcome include: allowing a wider range of housing types (e.g., duplex or townhouses) in single-family zones, ensuring that there is sufficient land zoned to allow single-family attached and multifamily housing development, supporting development of government-assisted affordable housing, and encouraging multifamily residential development in downtown. The degree of change in Tualatin’s housing market, however, will depend on market demand for these types of housing in Washington County.

- **If the future differs from the past, it is likely to move in the direction, on average, of smaller units and more diverse housing types.** Most of the evidence suggests that the bulk of the change will be in the direction of smaller average house and lot sizes for

⁴⁴ This forecast is based on Metro’s 2040 *Population Distributed Forecast* (2016) for Tualatin from 2015 (extrapolated to 2020) to 2040 period, shown in Exhibit 31.

single-family housing. This includes providing opportunities for development of smaller single-family detached homes, townhomes, and multifamily housing.

Key demographic and economic trends that will affect Tualatin's future housing needs are: (1) the aging of the Baby Boomers, (2) the aging of the Millennials, and (3) the continued growth in Latinx population.

- *The Baby Boomer's population is continuing to age.* By 2040, people 60 years and older will account for 24% of the population in Washington County (up from 20% in 2020). The changes that affect Tualatin's housing demand as the population ages are that household sizes and homeownership rates decrease. The majority of Baby Boomers are expected to remain in their homes as long as possible, downsizing or moving when illness or other issues cause them to move. Demand for specialized senior housing, such as age-restricted housing or housing in a continuum of care from independent living to nursing home care, may grow in Tualatin.
- *Millennials will continue to form households and make a variety of housing choices.* As Millennials age and form households, generally speaking, their household sizes will increase, and their homeownership rates will peak by about age 55. Between 2020 and 2040, Millennials (and the generation after) will be a key driver in demand for housing for families with children. The ability to attract Millennials will depend on the City's availability of affordable renter and ownership housing. It will also depend on the location of new housing in Tualatin as many Millennials prefer to live in more urban environments.⁴⁵ The decline in homeownership among the Millennial generation has more to do with financial barriers rather than the preference to rent.⁴⁶
- *Latinx population will continue to grow.* The U.S. Census projects that by about 2040, the Latinx population will account for one-quarter of the nation's population. The share of Latinx population in the Western U.S. is likely to be higher. The Latinx population currently accounts for about 16% of Tualatin's population. In addition, the Latinx population is generally younger than the U.S. average, with many Latinx people belonging to the Millennial generation.

The Latinx population growth will be an important driver in growth of housing demand, both for owner- and renter-occupied housing. Growth in the Latinx population will drive demand for housing for families with children. Given the lower income for Latinx households, especially first-generation immigrants,

⁴⁵ Choi, Hyun June; Zhu, Jun; Goodman, Laurie; Ganesh, Bhargavi; Strochak, Sarah. (2018). Millennial Homeownership, Why is it So Low, and How Can We Increase It? Urban Institute. https://www.urban.org/research/publication/millennial-homeownership/view/full_report

⁴⁶ Ibid.

growth in this group will also drive demand for affordable housing, both for ownership and renting.⁴⁷

In summary, an aging population, increasing housing costs (although lower than the Region), housing affordability concerns for Millennials and the Latinx populations, and other variables are factors that support the conclusion of need for a broader array of housing choices. Growth of retirees will drive demand for small single-family detached houses and townhomes for homeownership, townhome and multifamily rentals, age-restricted housing, and assisted-living facilities. Growth in Millennials and Latinx populations will drive demand for affordable housing types, including demand for affordable single-family units (many of which may be ownership units), for affordable multifamily units (many of which may be rental units), and for dwellings with a larger number of bedrooms.

- **No amount of analysis is likely to make the distant future completely certain: the purpose of the housing forecasting in this study is to get an approximate idea about the future (so policy choices can be made today).** Economic forecasters regard any economic forecast more than three (or at most five) years out as highly speculative. At one year, one is protected from being disastrously wrong by the sheer inertia of the economic machine. A variety of factors or events could, however, cause growth forecasts to be substantially different.

⁴⁷ The following articles describe housing preferences and household income trends for Latinx families, including differences in income levels for first, second, and third generation households. In short, Latinx households have lower median incomes than the national averages. First and second generation Latinx households have median incomes below the average for all Latinx households. Latinx households have a strong preference for homeownership, but availability of mortgages and availability of affordable housing are key barriers to homeownership for this group.

Pew Research Center. *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, February 7, 2012.

National Association of Hispanic Real Estate Professionals. *2014 State of Hispanic Homeownership Report*, 2014.

5. Housing Need in Tualatin

Project New Housing Units Needed in the Next 20 Years

The results of the housing needs analysis are based on: (1) Metro’s official household forecast for growth in Tualatin over the 20-year planning period, (2) information about Tualatin’s housing market relative to Washington County and the Portland Region, and (3) the demographic composition of Tualatin’s existing population and expected long-term changes in the demographics of Washington County.

Forecast for Housing Growth

A 20-year household forecast (in this instance for 2020 to 2040) is the foundation for estimating needed new dwelling units. The forecast for Tualatin is based on Metro’s 2040 Household Distributed Forecast, 2016 and Metro’s 2040 TAZ Forecast for households, 2015. Tualatin city limits will grow from 10,994 households in 2020⁴⁸ to 12,008 households in 2040, an increase of 1,014 households.⁴⁹

To accommodate new households, Exhibit 87 shows that Tualatin will have demand for 1,014 new dwelling units over the 20-year period, with an annual average of 51 dwelling units.

Exhibit 87. Forecast of demand for new dwelling units, Tualatin Planning Area (city limits and Basalt Creek), 2020 to 2040

Source: Metro’s 2040 Household Distributed Forecast, July 12, 2016. Metro’s 2040 TAZ Forecast for households, November 6, 2015. Calculations by ECONorthwest. Note: DU is dwelling unit.

Variable	New DU City Limits	New DU Basalt Creek	New DU Tualatin Planning Area
Household Forecast 2020	10,791	203	10,994
Household Forecast 2040	11,362	646	12,008
Total New Dwelling Units (2020-2040)	571	443	1,014
Annual Average of New Dwelling Units	29	22	51

⁴⁸ Metro’s 2040 Household Distributed Forecast shows that in 2015, the Tualatin city limits had 10,653 households. The Metro forecast shows Tualatin growing to 11,362 households in 2040, an average annual growth rate of 0.26% for the 25-year period. Using this growth rate, ECONorthwest extrapolated the forecast to 2020 (10,791 households).

In addition, ECONorthwest included the forecast for new households in the Basalt Creek Planning Area. The forecast for households in Basalt Creek derive from Metro’s 2040 TAZ Forecast for households (TAZ 980 and 981). The Metro forecast shows Basalt Creek growing to 646 households in 2040, an average annual growth rate of 5.96% for the 25-year period. Using this growth rate, ECONorthwest extrapolated the forecast from 2015 (152 households) to 2020 (203 households).

⁴⁹ This forecast is based on Tualatin city limits’ official household forecast from Metro for the 2020 to 2040 period.

Housing Units Needed Over the Next 20 Years

Exhibit 87 presents a forecast of new housing in Tualatin for the 2020 to 2040 period. This section determines the needed mix and density for the development of new housing developed over this 20-year period in Tualatin.

Exhibit 89 shows that over the next 20-years, the need for new housing developed in Tualatin will generally include a wider range of housing types across the affordability spectrum. This conclusion is consistent with housing need in other in the Portland Region and most cities across the State. This conclusion is based on the following information, found in Chapter 3 and 4 of this report.

- Tualatin's housing mix is predominately single-family detached and multifamily. In the 2013-2017 period, 53% of Tualatin's housing was single-family detached, 41% was multifamily, and 6% was single-family attached. In comparison, the mix of housing for the entire Portland Region was 63% single-family detached, 32% multifamily, and 5% single-family attached.
- Demographic changes across the Portland Region (and in Tualatin) suggest increases in demand for single-family attached housing and multifamily housing. The key demographic trends that will affect Tualatin's future housing needs are the aging of the Baby Boomers, household formation of Millennial households, and growth of Latinx households.
- Tualatin households have incomes about the same as those for the Portland Region. Tualatin's median household income was \$72,580, about \$1,500 lower than Washington County's median. Approximately 36% of Tualatin households earn less than \$50,000 per year, compared to 33% in Washington County and 37% in the Portland Region.
- About 37% of Tualatin's households are cost burdened (paying 30% or more of their household income on housing costs), compared to 42% of households in the Portland Region and 34% in Washington County.⁵⁰ About 56% of Tualatin's renters are cost burdened and about 22% of Tualatin's homeowners are cost burdened.
- About 45% of Tualatin's households are renters, 82% of whom live in multifamily housing. Median rents in Tualatin are \$1,154 per month, compared to the \$1,183 median rent for Washington County as a whole.

A household earning 60% of Tualatin's median household income (\$43,548) could afford about \$1,089 per month in rent. A household with median income in Tualatin (\$72,580) could afford \$1,815 rent per month, compared with the median gross rent of \$1,154. About 41% of Tualatin's housing stock is multifamily, compared to 32% of the housing in the Portland Region.

⁵⁰ The Department of Housing and Urban Development's guidelines indicate that households paying more than 30% of their income on housing experience "cost burden," and households paying more than 50% of their income on housing experience "severe cost burden."

- Housing sales prices increased in Tualatin over the last four years. From February 2015 to February 2019, the median housing sale price increased by \$160,000 (50%), from \$320,000 to \$480,000. A household would need to earn \$120,000 to \$160,000 to afford the median sales price in Tualatin. About 36% of Tualatin’s households have incomes at or above this amount.
- Tualatin needs more affordable housing types for homeowners and renters. A household earning 100% of Tualatin’s median household income of \$72,580 could afford about \$1,815 per month in rent, compared with the median gross rent of about \$1,154. This household could afford to own a home roughly valued between \$254,000 and \$290,000, which is less than the median home sales price of about \$480,000 in Tualatin.⁵¹

While a household could begin to afford Tualatin’s median rents at about 65% of Tualatin’s median household income, the rates of cost burden among renters suggest that Tualatin does not have a sufficient number of affordable rental units. A household can start to afford median home sale prices at about 190% of Tualatin’s median household income.

These factors suggest that Tualatin needs a broader range of housing types with a wider range of price points than are currently available in Tualatin’s housing stock. This includes providing opportunity for development of housing types such as: single-family detached housing (e.g., small homes like cottages or small-lot detached units, traditional detached homes, and high-amenity detached homes), townhouses, and multifamily products (duplexes, triplexes, quadplexes, and apartments and condominiums).

Tualatin evaluated several scenarios to forecast housing growth (Exhibit 88). The scenario selected, and described below, was a combination between Scenario 2 and Scenario 3 (referred to here as Scenario 4). Scenario 4 was 40% single-family detached, 15% multifamily, and 45% multifamily.

⁵¹ In 2016, 2017, and 2018, 19 homes in Tualatin sold within the \$254,000 and \$290,000 price range (out of 268 homes).

Exhibit 88. Forecast of demand for new dwelling units, Tualatin Planning Area (city limits and Basalt Creek), 2020 to 2040

Source: Calculations by ECONorthwest. Note: DU is dwelling unit.

Variable	Mix of New Dwelling Units (2020-2040)			
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Needed new dwelling units (2020-2040)	1,014	1,014	1,014	1,014
Dwelling units by structure type				
Single-family detached				
Percent single-family detached DU	50%	45%	35%	40%
equals Total new single-family detached DU	507	456	355	406
Single-family attached				
Percent single-family attached DU	9%	10%	15%	15%
equals Total new single-family attached DU	91	102	152	152
Multifamily				
Percent multifamily	41%	45%	50%	45%
Total new multifamily	416	456	507	456
equals Total new dwelling units (2020-2040)	1,014	1,014	1,014	1,014

Exhibit 89 shows the final forecast for housing growth in the Tualatin city limits during the 2020 to 2040 period. The projection is based on the following assumptions:

- Tualatin’s official forecast for population growth shows that the city will add 1,014 households over the 20-year period. Exhibit 89 shows Metro’s forecast for growth of 1,014 new dwelling units over the 20-year planning period.
- The assumptions about the mix of housing in Exhibit 89 are consistent with the requirements of OAR 660-007⁵²:
 - **About 40% of new housing will be single-family detached**, a category which includes manufactured housing. In 2013-2017, 53% of Tualatin’s housing was single-family detached.
 - **Nearly 15% of new housing will be single-family attached**. In 2013-2017, 6% of Tualatin’s housing was single-family attached.
 - **About 45% of new housing will be multifamily**. In 2013-2017, 41% of Tualatin’s housing was multifamily.

⁵² OAR 660-007-0030(1) requires that most Metro cities “...provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing...”

Tualatin will have demand for 1,014 new dwelling units over the 20-year period, 40% of which will be single-family detached housing.

Exhibit 89. Forecast of demand for new dwelling units, Tualatin Planning Area, 2020 to 2040

Source: Calculations by ECONorthwest.

Variable	Mix of New Dwelling Units (2020-2040)
Needed new dwelling units (2020-2040)	1,014
Dwelling units by structure type	
Single-family detached	
Percent single-family detached DU	40%
equals Total new single-family detached DU	406
Single-family attached	
Percent single-family attached DU	15%
equals Total new single-family attached DU	152
Multifamily	
Percent multifamily	45%
Total new multifamily	456
equals Total new dwelling units (2020-2040)	1,014

The forecast of new units does not include dwellings that will be demolished and replaced. This analysis does not factor those units in; however, it assumes they will be replaced at the same site and will not create additional demand for residential land.

Exhibit 90 allocates needed housing to Plan Designations in Tualatin. The allocation is based, in part, on the types of housing allowed in the zoning designations in each Plan Designation.

Exhibit 90 shows:

- **Low Residential (RL)** land will accommodate single-family detached housing, including manufactured houses. Low density will also accommodate duplexes, triplexes, quadplexes, cottage clusters, and townhouses based on the requirements of House Bill 2001.
- **Medium Low Residential (RML)** land will accommodate duplexes, townhomes (or rowhouses), and manufactured homes in manufactured housing parks. For consistency with the housing types allowed in Low Residential, this analysis assumes that RML will also allow triplexes and quadplexes.
- **Medium High Residential (RMH)** land will accommodate duplexes, townhomes (or rowhouses), and multifamily housing.
- **High Density Residential (RH)** land will accommodate duplexes, townhomes (or rowhouses), and multifamily housing.
- **High Density High Rise Residential (RH-HR)** land will accommodate duplexes, townhomes (or rowhouses), and multifamily housing.

Exhibit 90. Allocation of needed housing by housing type and Plan Designation, Tualatin Planning Area, 2020 to 2040

Source: ECONorthwest.

Housing Type	Residential Plan Designations					Total
	Low Density	Medium Low Density	Medium High Density	High Density	High High-Rise	
Dwelling Units						
Single-family detached	406	-	-	-	-	406
Single-family attached	30	41	20	61	-	152
Multifamily	30	30	102	193	101	456
Total	466	71	122	254	101	1,014
Percent of Units						
Single-family detached	40%	0%	0%	0%	0%	40%
Single-family attached	3%	4%	2%	6%	0%	15%
Multifamily	3%	3%	10%	19%	10%	45%
Total	46%	7%	12%	25%	10%	100%

Exhibit 91 presents assumptions about future housing density based on historical densities in Tualatin shown in Exhibit 18. Exhibit 91 converts between net acres and gross acres⁵³ to account for land needed for rights-of-way by Plan Designation in Tualatin, based on Metro’s methodology of existing rights-of-way.⁵⁴

- **Low Residential (RL):** Average density in this Plan Designation was historically 5.7 dwelling units per gross acre in tax lots smaller than 0.38 acres and no land is needed for rights-of-ways based on Metro’s assumptions. For lots between 0.38 and 1.0 acres the future density will be 5.1 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 4.6 dwelling units per gross acre.
- **Medium Low Residential (RML):** Average density in this Plan Designation was historically 11.7 dwelling units per gross acre in tax lots smaller than 0.38 acres and no land is needed for rights-of-ways based on Metro’s assumptions. For lots between 0.38 and 1.0 acres the future density will be 10.5 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 9.5 dwelling units per gross acre.
- **Medium High Residential (RMH):** Average density in this Plan Designation was historically 16.1 dwelling units per gross acre in tax lots smaller than 0.38 acres and no land is needed for rights-of-ways based on Metro’s assumptions. For lots between 0.38

⁵³ OAR 660-024-0010(6) uses the following definition of net buildable acre. “Net Buildable Acre” “...consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads.” While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

⁵⁴ Metro’s methodology about net-to-gross assumptions are that: (1) tax lots under 3/8 acre assume 0% set aside for future streets; (2) tax lots between 3/8 acre and 1 acre assume a 10% set aside for future streets; and (3) tax lots greater than an acre assumes an 18.5% set aside for future streets. The analysis assumes an 18.5% assumption for future streets.

and 1.0 acres the future density will be 14.5 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 13.1 dwelling units per gross acre.

- **High Density Residential (RH):** Average density in this Plan Designation was historically 20.5 dwelling units per gross acre in tax lots smaller than 0.38 acres and no land is needed for rights-of-ways based on Metro’s assumptions. For lots between 0.38 and 1.0 acres the future density will be 18.4 dwelling units per gross acre and, for lots larger than 1.0 acres the future density will be 16.7 dwelling units per gross acre.
- **High Density High Rise Residential (RH-HR):** Average density in this Plan Designation was historically 28.0 dwelling units per gross acre in tax lots smaller than 0.38 acres and no land is needed for rights-of-ways based on Metro’s assumptions. For lots between 0.38 and 1.0 acres the future density will be 15.2 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 22.8 dwelling units per gross acre.

Exhibit 91. Assumed future density of housing built in the Tualatin Planning Area, 2020 to 2040

Source: ECONorthwest. Note: DU is dwelling unit.

Residential Plan Designations	Tax Lots Smaller than 0.38 acre			Tax Lots > 0.38 and < 1.0 acre			Tax Lots larger than 1.0 acre		
	Net Density (DU/net acre)	% for Rights-of-Way	Gross Density (DU/gross acre)	Net Density (DU/net acre)	% for Rights-of-Way	Gross Density (DU/gross acre)	Net Density (DU/net acre)	% for Rights-of-Way	Gross Density (DU/gross acre)
Low Density	5.7	0%	5.7	5.7	10%	5.1	5.7	18.5%	4.6
Medium Low Density	11.7	0%	11.7	11.7	10%	10.5	11.7	18.5%	9.5
Medium High Density	16.1	0%	16.1	16.1	10%	14.5	16.1	18.5%	13.1
High Density	20.5	0%	20.5	20.5	10%	18.4	20.5	18.5%	16.7
High Density / High-Rise	28.0	0%	28.0	28.0	10%	25.2	28.0	18.5%	22.8

Through the Housing Strategy, Tualatin may consider increasing densities in specific zones. For example, the City may consider increasing the allowed densities in High Density / High-Rise (and adjusting related zoning standards, such as building heights) to allow higher density multifamily housing than is currently allowed in Tualatin.

Needed Housing by Income Level

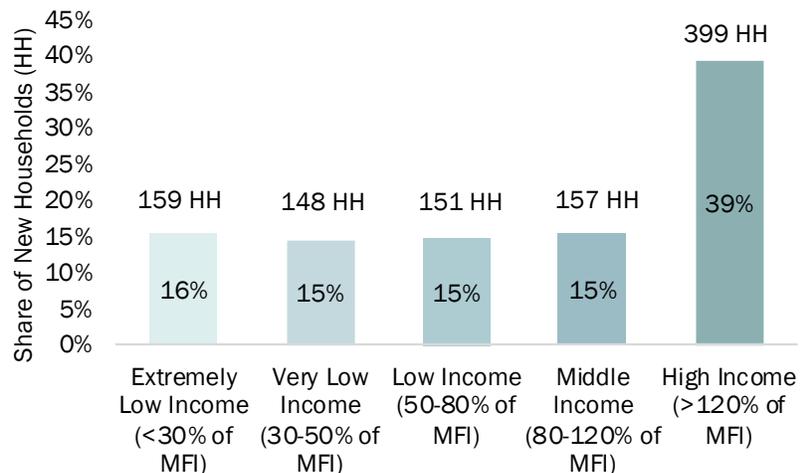
The next step in the housing needs analysis is to develop an estimate of need for housing by income and housing type. This analysis requires an estimate of the income distribution of current and future households in the community. Estimates presented in this section are based on (1) secondary data from the Census, and (2) analysis by ECONorthwest.

The analysis in Exhibit 92 is based on American Community Survey data about income levels for existing households in Tualatin. Income is categorized into market segments consistent with HUD income level categories, using Washington County's 2018 Median Family Income (MFI) of \$81,400. The Exhibit is based on existing household income distribution, assuming that approximately the same percentage of households will be in each market segment in the future.

About a third of Tualatin's future households are forecast to be extremely or very low income and nearly 40% are forecast to have high incomes.

Exhibit 92. Future (New) Households, by Median Family Income (MFI) for Washington County (\$69,600), Tualatin Planning Area, 2018

Source: U.S. Department of Housing and Urban Development, Washington County, 2018. U.S. Census Bureau, 2013-2017 ACS Table 19001.



Need for Government-Assisted and Manufactured Housing

ORS 197.303, 197.307, 197.312, and 197.314 requires cities to plan for government-assisted housing, manufactured housing on lots, and manufactured housing in parks.

- **Government-assisted housing.** Government subsidies can apply to all housing types (e.g., single-family detached, apartments, etc.). Tualatin allows development of government-assisted housing in all residential Plan Designations, with the same development standards for market-rate housing. This analysis assumes that Tualatin will continue to allow government housing in all of its residential Plan Designations. Because government assisted housing is similar in character to other housing (with the exception being the subsidies), it is not necessary to develop separate forecasts for government-subsidized housing.
- **Farmworker housing.** Farmworker housing can apply to all housing types and the City allows development of farmworker housing in all residential Plan Designations, with the same development standards as market-rate housing. This analysis assumes that Tualatin will continue to allow this housing in all of its residential Plan Designations. Because it is similar in character to other housing (with the possible exception of government subsidies, if population restricted), it is not necessary to develop separate forecasts for farmworker housing.
- **Manufactured housing on lots.** Tualatin allows manufactured homes on lots in Low Density Residential zones.
- **Manufactured housing in parks.** Tualatin allows manufactured homes in parks in Medium Low Density zones. According to the Oregon Housing and Community Services' Manufactured Dwelling Park Directory,⁵⁵ Tualatin has two manufactured home parks with 178 spaces.
- ORS 197.480(2) requires Tualatin to project need for mobile home or manufactured dwelling parks based on: (1) population projections, (2) household income levels, (3) housing market trends, and (4) an inventory of manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial, or high density residential.
 - Exhibit 87 shows that Tualatin will grow by 1,014 dwelling units over the 2020 to 2040 period.
 - Analysis of housing affordability shows that about 31% of Tualatin's new households will be considered very low or extremely low income, earning 50% or less of the region's median family income. One type of housing affordable to these households is manufactured housing.

⁵⁵ Oregon Housing and Community Services, Oregon Manufactured Dwelling Park Directory, <http://o.hcs.state.or.us/MDPCRParcs/ParkDirQuery.jsp>

- Manufactured homes in manufactured housing parks accounts for about 2% (about 178 dwelling units) of Tualatin’s current housing stock.
- National, state, and regional trends since 2000 showed that manufactured housing parks are closing, rather than being created. For example, between 2000 and 2015, Oregon had 68 manufactured parks close, with more than 2,700 spaces. Discussions with several stakeholders familiar with manufactured home park trends suggest that over the same period, few to no new manufactured home parks have opened in Oregon.
- The households most likely to live in manufactured homes in parks are those with incomes between \$24,420 and \$40,700 (30% to 50% of MFI), which include 15% of Tualatin’s households. However, households in other income categories may live in manufactured homes in parks.

Manufactured home subdivision development is an allowed use in the Medium Low Density Plan Designation. The national and state trends of closure of manufactured home parks, and the fact that no new manufactured home parks have opened in Oregon in over the last 15 years, demonstrate that development of new manufactured home parks or subdivisions in Tualatin is unlikely.

Our conclusion from this analysis is that development of new manufactured home parks or subdivisions in Tualatin over the 2020 to 2040 planning period is unlikely, although manufactured homes may continue to locate on lots in the Low Density Plan Designation. The forecast of housing assumes that no new manufactured home parks will be opened in Tualatin over the 2020 to 2040 period. The forecast for new dwelling units includes new manufactured homes on lots in the category of single-family detached housing.

- Over the next 20 years (or longer) one or both of Tualatin’s manufactured housing parks may close. This may be a result of the manufactured home park landowners selling or redeveloping their land for uses with higher rates of return, rather than lack of demand for spaces in manufactured home parks. Manufactured home parks contribute to the supply of low-cost affordable housing options, especially for affordable homeownership.

While there is statewide regulation of the closure of manufactured home parks designed to lessen the financial difficulties of this closure for park residents,⁵⁶ the City has a role to play in ensuring that there are opportunities for housing for the displaced residents. The City’s primary roles are to ensure that there is sufficient land zoned for new multifamily housing and to reduce barriers to residential

⁵⁶ ORS 90.645 regulates rules about closure of manufactured dwelling parks. It requires that the landlord must do the following for manufactured dwelling park tenants before closure of the park: give at least one year’s notice of park closure, pay the tenant between \$5,000 to \$9,000 for each manufactured dwelling park space, and cannot charge tenants for demolition costs of abandoned manufactured homes.

development to allow for development of new, relatively affordable housing (i.e. housing affordable to households earning less than 80% of MFI and especially those earning less than 60% of MFI). The City may use a range of policies to encourage development of relatively affordable housing, such as allowing a wider range of moderate density housing (e.g., duplexes or cottages) in Low Density Plan Designation, removing barriers to multifamily housing development, using tax credits to support affordable housing production, developing an inclusionary zoning policy, or partnering with a developer of government-subsidized affordable housing.

6. Residential Land Sufficiency within Tualatin

This chapter presents an evaluation of the sufficiency of vacant residential land in Tualatin to accommodate expected residential growth over the 2020 to 2040 period. This chapter includes an estimate of residential development capacity (measured in new dwelling units) and an estimate of Tualatin’s ability to accommodate needed new housing units for the 2020 to 2040 period, based on the analysis in the housing needs analysis. The chapter ends with a discussion of the conclusions and recommendations for the housing needs analysis.

Capacity Analysis

The buildable lands inventory summarized in Chapter 2 (and presented in full in Appendix A) provides a *supply* analysis (buildable land by type), and Chapter 5 provided a *demand* analysis (population and growth leading to demand for more residential development). The comparison of supply and demand allows the determination of land sufficiency.

There are two ways to calculate estimates of supply and demand into common units of measurement to allow their comparison: (1) housing demand can be converted into acres, or (2) residential land supply can be converted into dwelling units. A complication of either approach is that not all land has the same characteristics. Factors such as zone, slope, parcel size, and shape can affect the ability of land to accommodate housing. Methods that recognize this fact are more robust and produce more realistic results. This analysis uses the second approach: it estimates the ability of vacant residential lands within the UGB to accommodate new housing. This analysis, sometimes called a “capacity analysis,”⁵⁷ can be used to evaluate different ways that vacant residential land may build out by applying different assumptions.

⁵⁷ There is ambiguity in the term *capacity analysis*. It would not be unreasonable for one to say that the “capacity” of vacant land is the maximum number of dwellings that could be built based on density limits defined legally by plan designation or zoning, and that development usually occurs—for physical and market reasons—at something less than full capacity. For that reason, we have used the longer phrase to describe our analysis: “estimating how many new dwelling units the vacant residential land in the UGB is likely to accommodate.” That phrase is, however, cumbersome, and it is common in Oregon and elsewhere to refer to that type of analysis as “capacity analysis,” so we use that shorthand occasionally in this memorandum.

Tualatin Capacity Analysis Results

The capacity analysis estimates the development potential of vacant residential land to accommodate new housing, based on the needed densities shown in Exhibit 91. Exhibit 95 shows that **Tualatin city limit's (Exhibit 93) and Basalt Creek's (Exhibit 94) buildable land has capacity to accommodate approximately 1,207 new dwelling units**, based on the following assumptions:

- **Buildable residential land.** The capacity estimates start with the number of buildable acres in residential Plan Designations, per the buildable lands inventory, for city limits. It starts with the number of buildable acres in residential Plan Designations, per the Basalt Creek Concept Plan, for Basalt Creek.
- **Needed densities.** The capacity analysis assumes development will occur at assumed future densities. Those densities were derived from the densities shown in Exhibit 91.
- **Average net density.** Exhibit 93 shows capacity and densities in gross acres. OAR 660-007 requires that Tualatin provide opportunity for development of housing at an overall average density of eight dwelling units per net acre. The average density of dwelling units in Exhibit 93 is 7.9 dwelling units per net acre and 6.7 dwelling units per gross acre. The average net density of dwelling units in Exhibit 95 is approximately 7.9 dwelling units per net acres and 6.6 dwelling units per gross acre.

Exhibit 93. Estimate of residential capacity on unconstrained vacant and partially vacant buildable land, Tualatin City Limits, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Residential Plan Designations	Tax Lots Smaller than 0.38 acre			Tax Lots > 0.38 and < 1.0 acre			Tax Lots larger than 1.0 acre			Total, combined	
	Buildable Acres	Density Assumption (DU/gross acre)	Capacity (Dwelling Units)	Buildable Acres	Density Assumption (DU/gross acre)	Capacity (Dwelling Units)	Buildable Acres	Density Assumption (DU/gross acre)	Capacity (Dwelling Units)	Buildable Acres	Capacity (Dwelling Units)
Low Density	18	5.7	100	17	5.1	85	44	4.6	204	79	389
Medium Low Density	0	11.7	5	1	10.5	7	0	9.5	-	1	12
Medium High Density	0	16.1	-	0	14.5	-	1	13.1	13	1	13
High Density	0	20.5	6	0	18.4	7	12	16.7	205	13	218
High High-Rise	0	28.0	-	0	25.2	-	0	22.8	-	0	-
Total	18	-	111	18	-	99	58	-	422	94	632

Exhibit 94. Estimate of residential capacity on unconstrained vacant and partially vacant buildable land, Basalt Creek, 2018

Source: Basalt Creek Concept Plan. Note: this table uses the Basalt Creek Concept Plan's estimate for capacity and of buildable land; it does not rely on historic net densities by Plan Designation to calculate capacity on buildable lands. Historic net densities in Basalt Creek were not increased as they were in the estimate of capacity for Tualatin city limits. The amount of buildable land in Exhibit 90 is based on the Basalt Creek Concept Plan and is different than the amount of buildable land shown in Exhibit 7 of the Buildable Lands Inventory.

Residential Plan Designations	Dwelling Units	Buildable Acres from Basalt Creek Concept Plan	Density Assumption (DU per Gross Acre)
Low Density	134	24.8	5.4
Medium Low Density	374	59.8	6.3
High Density	67	3.4	19.9
Total	575	88	6.5

Exhibit 95. Estimate of residential capacity on unconstrained vacant and partially vacant buildable land, Tualatin Planning Area, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: Capacity in Basalt Creek uses the Basalt Creek Concept Plan's estimate of capacity (Exhibit 94).

Residential Plan Designations	Dwelling Units		
	Capacity (in City Limits)	Capacity (in Basalt Creek Concept Plan)	Capacity (Total)
Low Density	389	134	523
Medium Low Density	12	374	386
Medium High Density	13	-	13
High Density	218	67	285
High Density / High-Rise	-	-	-
Total	632	575	1,207

The amount of buildable land in Basalt Creek in the BLI (Exhibit 7) is more than the amount of buildable land from the Basalt Creek Concept Plan (Exhibit 94). The reason for the difference in capacity is primarily differences in assumptions about land constraints to development of vacant land. The Concept Plan assumed that more land would have soft constraints (that would decrease development capacity) and be unbuildable than the buildable lands inventory for this analysis.

Exhibit 96 shows an estimate of the additional capacity for development in Basalt Creek, if buildout occurs at densities consistent with development in Tualatin (the densities shown in Exhibit 91) and the amount of buildable land is consistent with the buildable lands inventory in this report (Exhibit 7). Under those conditions, Basalt Creek has capacity for 1,339 dwelling units, which is 764 dwelling units beyond the capacity in the Basalt Creek Concept Plan.

Exhibit 96. Estimate of additional residential capacity on unconstrained vacant and partially vacant buildable land, Basalt Creek, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Residential Plan Designations	Capacity for Dwelling Units (using BLI)	Capacity for Dwelling Units (using Concept Plan)	Additional Capacity Potentially Available
Low Density	433	134	299
Medium Low Density	804	374	430
High Density	102	67	35
Total	1,339	575	764

Residential Land Sufficiency

The next step in the analysis of the sufficiency of residential land within Tualatin is to compare the demand for housing by Plan Designation (Exhibit 90) with the capacity of land by Plan Designation (Exhibit 95), which does **not** include the potential additional capacity in Basalt Creek discussed in Exhibit 96.

Exhibit 97 shows that Tualatin has sufficient land to accommodate development in the Low Density Plan Designation, Medium Low Density Plan Designation, and High Density Plan Designation – with a surplus of capacity for 57 dwelling units, 315 dwelling units, and 31 dwelling units respectively. Tualatin has a deficit of capacity for 109 dwelling units in the Medium High Plan Designation and a deficit of capacity for 101 dwelling units in the High Density High-Rise Plan Designation. **The land sufficiency results are inclusive of capacity of land in Basalt Creek but are not inclusive of capacity which may become available as redevelopment occurs.**

Exhibit 97. Comparison of capacity of existing residential land with demand for new dwelling units and land surplus or deficit, Tualatin City Limits and Basalt Creek, 2020 to 2040

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Residential Plan Designations	Capacity (Dwelling Units)	Demand for New Housing	Remaining Capacity (Supply minus Demand)	Land Surplus or (Deficit) Gross Acres
Low Density	523	466	57	10
Medium Low Density	386	71	315	27
Medium High Density	13	122	(109)	(7)
High Density	285	254	31	2
High Density High-Rise	-	101	(101)	(4)

Tualatin’s surplus of Low Density Residential capacity (57 dwelling units) means that the City has an approximate surplus of 10 gross acres of Low Density land (at 5.7 dwelling units per gross acre). Tualatin’s surplus of Medium Low Density Residential capacity (315 dwelling units) means that the City has an approximate surplus of 27 gross acres of Medium Low Density land (at 11.7 dwelling units per gross acre).⁵⁸ Tualatin’s surplus of High Density Residential capacity (31 dwelling units) means that the City has an approximate surplus of two gross acres of High Density Land (at 20.5 dwelling units per gross acre).

This estimate of capacity does **not** include the potential additional capacity in Basalt Creek, shown in Exhibit 96. If Basalt Creek builds out with more housing than shown in the Concept Plan (shown in Exhibit 94), then Tualatin has about 764 dwelling units of additional capacity, all in Low Density, Medium Low Density, and High Density Plan Designations.

⁵⁸ This estimate of land is approximate, as densities in Medium Low Density may range from 11.7 to 9.5 dwelling units per gross acre depending on parcel size, as shown in Exhibit 91.

Conclusions and Recommendations

The key findings of the Tualatin Housing Needs Analysis are that:

- **Growth in housing will be driven by growth in households.** Households in Tualatin’s city limits is forecast to grow from 10,791 households to 11,362 households, an increase of 571 households between 2020 and 2040. In that same time, households in Basalt Creek are forecast to grow from 203 households to 646 households, an increase of 443 households.
- **To accommodate households in Tualatin city limits and Basalt Creek, Tualatin is planning for 1,014 new dwelling units.** To accommodate the 1,014 dwelling units over the 20-year planning period, Tualatin will average 51 new dwelling units annually.
- **Tualatin will plan for more single-family attached and multifamily dwelling units in the future to meet the City’s housing needs.** Historically, about 53% of Tualatin’s housing was single-family detached. New housing in Tualatin is forecast to be 40% single-family detached, 15% single-family attached, and 45% multifamily.
 - The factors driving the shift in types of housing needed in Tualatin include changes in demographics and decreases in housing affordability. The aging of senior populations and the household formation of young adults will drive demand for renter- and owner-occupied housing, such as small single-family detached housing, townhouses, duplexes, and apartments / condominiums. Both groups may prefer housing in walkable neighborhoods, with access to services.
 - Tualatin’s existing deficit of housing that is affordable for low- and high-income households indicates a need for a wider range of housing types, for renters and homeowners. About 37% of Tualatin’s households have affordability problems, including a cost burden rate of 56% for renter households.
 - Without diversification of housing types, lack of affordability will continue to be a problem, possibly growing in the future if incomes continue to grow at a slower rate than housing costs. Under the current conditions, 307 of the forecasted new households will have incomes of \$40,700 (in 2018 dollars) or less (50% of MFI income or less). These households cannot afford market rate housing without government subsidy. Another 151 new households will have incomes between \$40,700 and \$65,120 (50% to 80% of MFI). These households will all need access to affordable housing, such as the housing types described above.
- **Tualatin cannot accommodate all of its housing needs.** Tualatin has a deficit of land in the Medium High Density and High Density High Rise Plan Designations, of 7 acres and 4 acres respectively. The deficits shown in Exhibit 97 may be addressed in multiple ways, such as by re-zoning land, increasing densities allowed in Plan Designations with deficits, or by accommodating housing in Plan Designations with surpluses.

- **Tualatin will need to meet the requirements of House Bill 2001.** The Legislature passed House Bill 2001 in the 2019 Legislative session. The bill requires cities within the Metro UGB to allow “middle” housing types in low-density residential zones. The bill defines middle housing types as: duplexes, triplexes, quadplexes, cottage clusters, and townhouses. To comply with House Bill 2001, Tualatin will need to:
 - Allow cottage cluster as a housing type in the Residential Low Density zone. Tualatin may want to allow cottage cluster housing in the Medium-Low Density and Medium-High Density zones. Tualatin will also need to include development standards in the Tualatin Development Code.
 - Allow duplexes, townhouses, and multifamily housing as a permitted use in the Residential Low Density zone.

Following is a summary of ECONorthwest’s recommendations to Tualatin based on the analysis and conclusions in this report. The *Tualatin Housing Strategy* memorandum presents the full list of recommendations for Tualatin.

- **Ensure an adequate supply of land that is available and serviceable.** Tualatin should evaluate opportunities to increase residential development densities by modifying the Development Code, such as increasing densities and height limits in higher density zones. Tualatin should identify opportunities to re-zone land, from lower density usage to higher density usage, to provide additional opportunities for multifamily housing development. Tualatin should plan for long-term development of housing in Tualatin through 2040 and beyond by working with Metro on upcoming Growth Management reports.
- **Encourage development of a wider variety of housing types.** Tualatin should allow duplexes, triplexes, quadplexes, cottage clusters, and townhouses in the Residential Low Density zone and allow cottage cluster housing in the Medium-Low Density and Medium-High Density zones (which already allow for the other housing types mentioned). These changes should be made in a way that makes the City’s zoning code compliant with House Bill 2001.
- **Support development and preservation of housing that is affordable for all households.** The City should develop policies to support development of housing affordable to people who live and work in Tualatin. The City should identify opportunities to leverage resources (including funding) from the Metro Bond to support development of housing affordable to households earning less than 60% of Median Family Income in Washington County (\$48,900 for a household size of four people). The City should develop policies to prevent and address homelessness, as well as to prevent and mitigate residential displacement resulting from redevelopment and increases in housing costs. These actions will require Tualatin to evaluate adoption of a wide variety of housing policies such as creative financing opportunities for systems development charges, evaluating tax exemption programs, participating in a land bank, and other approaches to supporting development of housing affordable at all income levels.

- **Identify funding tools to support residential development.** The City should evaluate tools such as establishing a new Urban Renewal District and evaluate establishing a construction excise tax.
- **Identify redevelopment opportunities.** The City should identify districts within Tualatin with opportunities for redevelopment for both housing and employment uses, as well as supporting redevelopment of underutilized commercial buildings for housing.
- **Ensure there are connections between planning for housing and other community planning.** Throughout the project, stakeholders emphasized the need to coordinate housing planning with economic development planning, transportation planning, and other community planning. Updates to the Tualatin Transportation System Plan should be coordinated with planning for housing growth. A key approach to accommodating new residential development is redevelopment that results in mixed-use districts, providing opportunities for more housing affordable to people working at businesses in Tualatin and living closer to work (thus reducing transportation issues). In addition, stakeholders would like to see the incorporation of services needed to meet daily needs of residents of neighborhoods without driving.

The *Tualatin Housing Strategy* memorandum presents more details about each of these topics and recommendations for specific actions to implement these recommendations.

Appendix A – Residential Buildable Lands Inventory

The general structure of the standard method BLI analysis is based on the DLCD HB 2709 workbook “*Planning for Residential Growth – A Workbook for Oregon’s Urban Areas,*” which specifically addresses residential lands.⁵⁹ The steps and sub-steps in the supply inventory are:

1. Calculate the gross vacant acres by plan designation, including fully vacant and partially vacant parcels.
2. Calculate gross buildable vacant acres by plan designation by subtracting unbuildable acres from total acres.
3. Calculate net buildable acres by plan designation, subtracting land for future public facilities from gross buildable vacant acres.
4. Calculate total net buildable acres by plan designation by adding redevelopable acres to net buildable acres.

The methods used for this study are consistent with many others completed by ECONorthwest that have been acknowledged by DLCD and LCDC.

Overview of the Methodology

The BLI for Tualatin is based on the data and methods used by Metro. In addition, ECONorthwest’s approach updated Metro’s results to account for new development (the Metro 2018 UGR is based on 2016 data) and other potential local conditions, such as unique environmental constraints.

Study Area

The BLI for Tualatin includes all residential land designated in the comprehensive plans within city limits and designated planning areas (referred to as Tualatin Planning Area). ECONorthwest used the most recent tax lot shapefile from Metro’s Regional Land Information System (RLIS) for the analysis.

Inventory Steps

The BLI consisted of several steps:

1. Generating UGB “land base”
2. Classifying land by development status

⁵⁹ We note that Newberg is not required to comply with ORS 197.296.

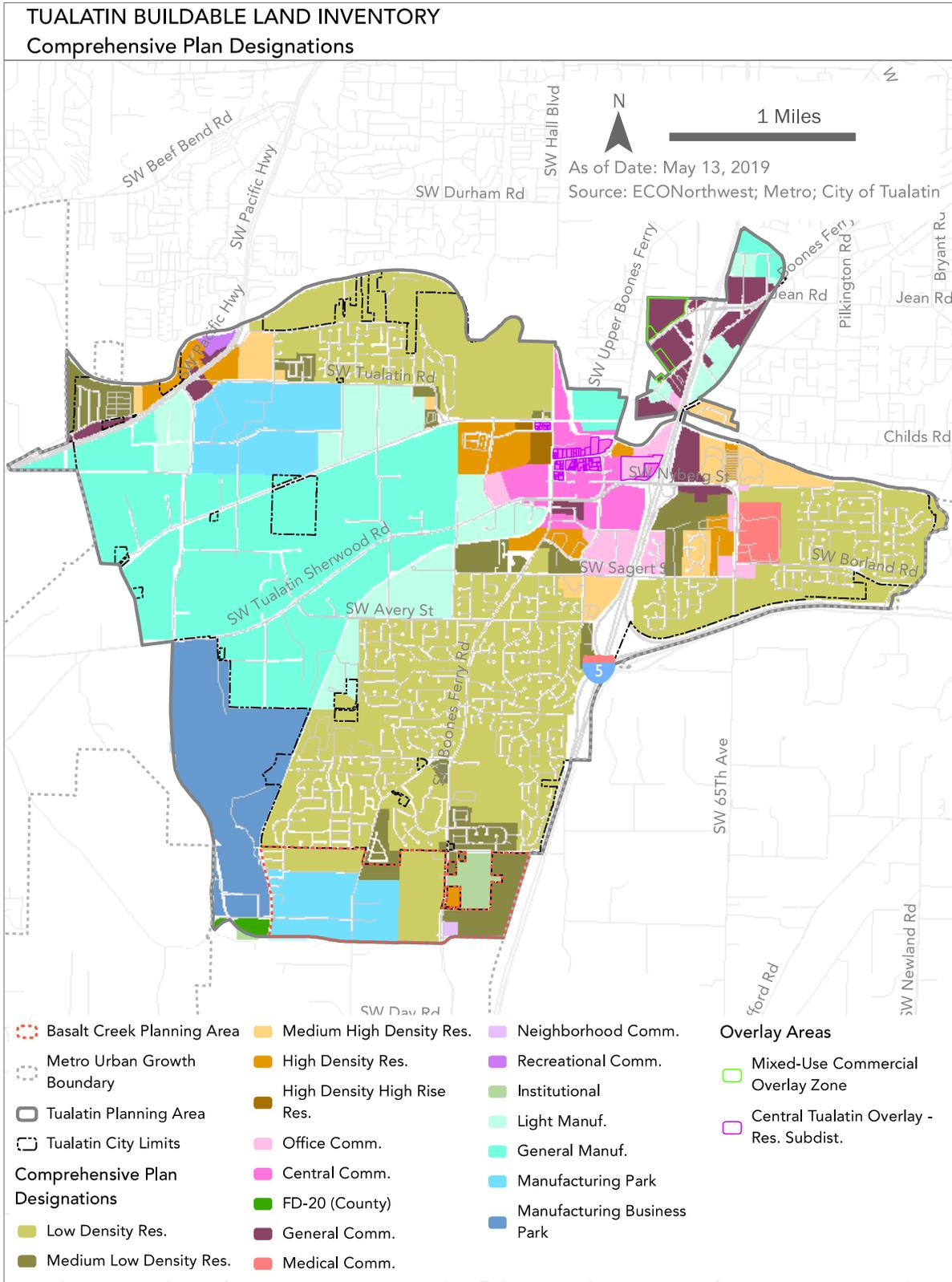
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

Step 1: Generate “land base.”

Per Goal 10 this involves selecting all of the tax lots with residential and other non-employment Plan Designations where residential uses are planned for and allowed by the implementing zones. The City provided ECO with their Comprehensive Plan GIS files and indicated what designations should be included within the inventory.

Exhibit 98 (on the following page) shows Comprehensive Plan designations for the City of Tualatin. This BLI includes lands in the Low Density Residential, Medium Low Density Residential, Medium High Density Residential, High Density Residential, and High Density High Rise Residential Plan Designations. The BLI also includes areas that allow residential use in the Basalt Creek Planning Area, Mixed-Use Commercial Overlay Zone, and Central Tualatin Overlay.

Exhibit 98. Comprehensive Plan Designations, Tualatin Planning Area, 2019



Step 2: Classify lands.

In this step, ECONorthwest classified each tax lot with a plan designation that allows residential uses into one of four mutually exclusive categories based on development status:

- Vacant
- Partially Vacant
- Public or Exempt
- Developed

ECONorthwest used the classification determined through Metro’s model: Vacant, Ignore, and Developed. In addition, ECO included a new classification for partially vacant lots. The definitions for each classification are listed below.

Development Status	Definition	Statutory Authority
Vacant	Tax lots designated as vacant by Metro based on the following criteria: 1) Fully vacant based on Metro aerial photo 2) Tax lots with less than 2,000 square feet developed AND developed area is less than 10% of lot 3) Lots 95% or more vacant from GIS vacant land inventory	OAR 660-008-0006(2) “Buildable Land” means residentially designated land within the urban growth boundary, including both vacant and developed land likely to be redeveloped, that is suitable, available and necessary for residential uses.
Partially Vacant	Single-family tax lots that are 2.5 times larger than the minimum lot size and a building value less than \$300,000 or lots that are 5 times larger than the minimum lots size (no threshold for building value). These lots are considered to still have residential capacity. For this analysis, we are classifying these lots as Partially Vacant. We assume that 0.25 acres of the lot is developed, and the remaining land is available for development, less constraints.	OAR 660-008-0006(2)
Ignore (Public or Exempt uses)	Lands in public or semi-public ownership are considered unavailable for residential development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches and other semi-public organizations and properties with conservation easements. These lands are identified using the Metro’s definitions and categories.	OAR 660-008-0005(2) - Publicly owned land is generally not considered available for residential uses.
Developed	Lands not classified as vacant, partially vacant, or public/exempt are considered developed. Developed land includes lots with redevelopment capacity, which are also included in BLI. The unit capacity of developed but redevelopable lots is based on Metro’s estimates.	OAR 660-008-0006(2) “Buildable Land” means residentially designated land within the urban growth boundary, including both vacant and developed land likely to be redeveloped, that is suitable, available and necessary for residential uses.

Step 3: Identify constraints

Consistent with OAR 660-008-0005(2) guidance on residential buildable lands inventories, ECO deducted certain lands with development constraints from vacant lands. We used some of the constraints established in Metro’s methodology, with modifications to fit local considerations in Tualatin. These constraints are summarized in the table below.

Constraint	Statutory Authority	Threshold
Goal 5 Natural Resource Constraints		
Natural Resources Protection Overlay District	OAR 660-008-0005(2)	Areas in the NRPOD
Riparian Corridors	OAR 660-015-0000(5)	Areas protected by the Stream and Floodplain Plan
Wetlands		
Natural Hazard Constraints		
100 Year Floodplain	OAR 660-008-0005(2)	Lands within FEMA FIRM 100-year floodplain
Steep Slopes	OAR 660-008-0005(2)	Slopes greater than 25%

The lack of access to water, sewer, power, road or other key infrastructure cannot be considered a prohibitive constraint unless it is an extreme condition. This is because tax lots that are currently unserviced could potentially become serviced over the 20-year planning period.

Exhibit 99 maps the development constraints used for the residential BLI.

Step 4: Verification

ECO used a multi-step verification process. The first verification step will included a “rapid visual assessment” of land classifications using GIS and recent aerial photos. The rapid visual assessment involves reviewing classifications overlaid on recent aerial photographs to verify uses on the ground. ECO reviewed all tax lots included in the inventory using the rapid visual assessment methodology. The second round of verification involved City staff verifying the rapid visual assessment output. ECO amended the BLI based on City staff review and comments, particularly related to vacant land developed since 2016.

Step 5: Tabulation and mapping

The results are presented in tabular and map format. The Tualatin Residential BLI includes all residential land designated in the Comprehensive Plan within the Tualatin Planning Area. From a practical perspective, this means that ECONorthwest inventoried all lands within tax lots identified by Metro that fall within the Tualatin Planning Area. The inventory then builds from the tax lot-level database to estimates of buildable land by Plan Designation.