
City of Troutdale

Housing Needs Analysis

December 2019

Prepared for:

City of Troutdale

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1. Introduction

This report presents Troutdale'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), OAR 660 Division 7, 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).

Troutdale's last periodic review occurred in 2011, using data from 2010. The housing market in the Portland region, including in Troutdale, has changed considerably since 2011. Troutdale has changed considerably in the last two decades. Troutdale grew from 13,777 people in 2000 to 16,185 people in 2018. This is an addition of 2,408 people or 17% growth. During the 2000 to 2013–2017 period, rates of housing cost burden increased from 32% to 38% for all Troutdale households, with renter cost burdened rates increasing from 42% to 58%. Median gross rents increased by \$329 (from \$748 in 2000 to \$1,077 in 2013–2017) and median home values increased by \$13,559 (from \$238,941 in 2000 to \$252,500 in 2013–2017).

In addition, Troutdale's economy is changing. The closure of the Reynolds Aluminum plant in the mid-2000s and changes in the use of land at the Troutdale Airport, making more land available for industrial development, have allowed Federal Express and Amazon to locate fulfillment and distribution centers in Troutdale. These and other changes in employment in Troutdale are driving demand for housing that is affordable to people who work at businesses in Troutdale.

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

Timeline of Residential Development in Troutdale

The City of Troutdale was formally incorporated in 1907, but the original plat of Troutdale (the original downtown grid) was filed in 1890, with the First Addition filed a year later. For many years, the municipality's population, which remained under 1,000 through the 1960s, resided within the original grid.

The first major increase in development began in the late 1960s and accelerated during the 1970s, when Troutdale's first major subdivisions were established and extended the city limits southward. Troutdale's population increased from 1,661 in 1970 to 5,831 in 1980, reflecting a similar trend of suburban expansion that affected east Multnomah County communities.

Subdivisions established during this time include Old Sweetbriar Farm, Sandee Palisades, Weedin Addition, and Corbeth, which are among the larger communities in the city. These subdivisions were mostly detached single-family residential neighborhoods, though several duplex communities or areas were also established.

In the late 1970s and for much of the 1980s, subdivision development slowed compared to the previous decade, aligning with overall downward trends in Oregon's economy. During that time, Troutdale's stock of apartment residential development was largely built. The City's population increased by about 2,000 people between 1980 and 1990, which was largely driven by family growth within existing residential communities and new apartment dwellers.

Conditions for homebuilding improved during the 1990s, which saw an increase in subdivision development from the previous decade. Subdivisions established included Stuart Ridge Estates, Hampton Point, and Strawberry Meadows. This decade also established the Town Center Overlay, which began to encourage denser development patterns and middle housing typologies within the overlay—a trend that began in this decade and continues through today. The 1990s also featured the development of the City's only master-planned mixed-use (MPMU) development, Cherry Ridge, which included single-family and multifamily residentially zoned areas in conjunction with commercial services. Several other neighborhoods established in this time also featured a mixture of residential zones and dwelling types, often in proximity to commercial areas or schools. Troutdale's population nearly doubled in the 1990s, increasing from 7,852 in 1990 to almost 14,000 residents by 2000.

The first decade of the 2000s showed continued development, though at a slower pace than the 1970s or 1990s. Smaller lot size developments, such as Edgefield Estates and Morgan Meadows, mixed in with larger-lot traditional subdivisions such as the Estates at Riverbend. The effects of the Great Recession slowed housing activity in the final years of this decade, leading into the 2010s. Residential development in this decade began at a modest pace but has increased since 2015. Subdivision developments have decreased in size, and with the costs of land escalating regionwide, developers are focused on smaller lots, higher densities, and the ability to establish a price point for new construction that can still lead to a return on investment.

Development of middle housing and multifamily residential housing typologies have also occurred in Troutdale, demonstrating the City's efforts at attracting a variety of housing types in response to changing demographics and economic conditions.

Since 2015, the City has approved the following residential developments, with developments of four or more units shown in Exhibit 1.

Exhibit 1. Recent Residential Development by Type, Troutdale, 2015 to 2019

Year	Name	Type	Number of Units	Status (as of November 2019)
Single Family Detached				
2015	Cherry Park Lane	Single-Family Detached	7	Complete
2015	Gateway Estates	Single-Family Detached	16	Complete
2018	Columbia Ridge	Single-Family Detached	22	Under Construction
		Subtotal	45	
Multifamily				
2018	Eagle Ridge	Multifamily (Apartments)	216	Complete in 2020
2018	Cherry Park Apts.	Multifamily (Apartments)	24	Under Construction
		Subtotal	240	
Middle Housing				
2018	Lancaster Park	Middle Housing (Townhomes)	70*	Under Construction
2018	Howard Estates	Middle Housing (Townhomes)	40**	Under Construction
		Subtotal	110	

* Lancaster Park's allocation is 60 townhome units and 10 accessory dwelling units

** Howard Estates was formally platted in 2008 but did not begin construction until 2018

In addition to the units developed in Exhibit 1, Troutdale anticipates the development of roughly 280 additional multifamily residential units (of which 110 would be income restricted) by 2022. This estimate is based on preapplications reviewed by the City or anticipated through the Metro Housing Bond approved in 2018. All of these 280 units are forecasted to be in Troutdale's Town Center Overlay District.

The efforts to update Troutdale's Town Center Plan for the 2020 to 2040 period also calls for establishing 13 Opportunity Sites in the Town Center Overlay in which up to 600 residential units are to be considered for placement. Of these, the Town Center Committee has endorsed middle housing typologies, generally treated as medium-density residential in several of these sites.

Framework for a Housing Needs Analysis

Economists view housing as a bundle of services for which people are willing to pay, including shelter, 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., public, medical, transportation). Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make trade-offs. 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 markets in Multnomah County and Troutdale 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 Troutdale between 2020 and 2040. These housing types include single-family detached, single-family attached, and multifamily (including duplexes, triplexes, and quadplexes, in addition to buildings with more than five units). This report discusses these housing types in detail, as well as the range of affordability issues that will affect Troutdale households in the 2020 to 2040 period.

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 Urban Growth Boundary (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, through ORS 197.303, 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:

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

- (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.

Troutdale 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 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)).

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

OAR 660-007-0035 sets specific density targets for cities in the Metro UGB. Troutdale'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.

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 Troutdale 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).

³ OAR 660-024-0010(6) defines net buildable acres as "43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads."

Metro's 2017 *Compliance Report* concludes that Troutdale 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 Troutdale's inventory of residential land.
- **Chapter 3. Historical and Recent Development Trends** summarizes the state, regional, and local housing market trends affecting Troutdale's housing market.
- **Chapter 4. Demographic and Other Factors Affecting Residential Development in Troutdale** presents factors that affect housing need in Troutdale, focusing on the key determinants of housing need: age, income, and household composition. This chapter also describes housing affordability in Troutdale relative to the larger region.
- **Chapter 5. Housing Need in Troutdale** presents the forecast for housing growth in Troutdale, describing housing need by density ranges and income levels.
- **Chapter 6. Residential Land Sufficiency within Troutdale** estimates Troutdale'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 Troutdale. 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 completed 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 June 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 and a building value less than \$300,000, or lots that are 5 times larger than the minimum lot 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 semipublic 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 semipublic organizations and properties with conservation easements. These lands are identified using 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 BLI. The unit capacity of 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 combined regional and national wetlands shapefile, available from Metro RLIS, was used to identify areas within wetlands. Riparian corridors and other natural resource areas identified in Metro's Title 13 shapefile were also considered undevelopable for the purposes of this inventory.
- *Land with slopes over 25%.* Lands with slopes over 25% are considered unsuitable for residential development.

Buildable Lands Inventory Results

Land Base

The BLI for Troutdale includes all residential land designated in the comprehensive plans within city limits and designated planning areas. Per Goal 10, this includes all lots (or portions of lots) with residential and other nonemployment plan designations where residential uses are planned for and allowed by the implementing zones. This BLI includes lands in the following plan designations or zones:

- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Urban Planning Area Low-Density Residential
- Commercial zones that allow residential uses outright: CBD, MO/H, and NC

Exhibit 2 shows residential land in Troutdale by classification (development status). The results show that Troutdale has 1,452 total acres in residential plan designations. (This includes the zones of the commercial plan designation that allow residential uses.) Of these 1,452 acres, about 1,207 acres (83%) are classified as developed or public (or exempt) and do not have development capacity, and the remaining 244 acres (17%) are vacant or partially vacant and have development capacity (not including development constraints).⁴

Exhibit 2. Residential Acres by Classification and Plan Designation, Troutdale City Limits, 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	Undevelopable	Developed	Public or Exempt	Total Acres	Percent of Total
Residential							
Low Density Residential	73	37	0.1	680	117	907	63%
Medium Density Residential	26	10	0.3	140	51	227	16%
High Density Residential	20	7	0.1	92	7	126	9%
Urban Planning Area Low Density Res.	-	48	-	1	-	49	3%
Commercial							
Master Plan Mixed Use	-	-	-	63	6	69	5%
Commercial (CBD)	6	-	-	13	6	24	2%
Commercial (MO/H)	15	-	-	20	7	42	3%
Commercial (NC)	3	-	-	3	2	8	1%
Total	143	102	0.5	1,012	195	1,452	100%

Exhibit 3 shows land in all residential plan designations by development and constraint status. After development constraints have been applied, about 72% of Troutdale's total residential land (1,041 acres) has no development capacity (i.e., committed), 19% (273 acres) is constrained, and 10% (139 acres) is unconstrained and buildable.

Exhibit 3. Residential Land by Comprehensive Plan Designation and Constraint Status, Troutdale City Limits, 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	907	676	189	43
Medium Density Residential	227	183	16	28
High Density Residential	126	82	19	25
Urban Planning Area Low Density Res.	49	1	19	29
Commercial				
Master Plan Mixed Use	69	68	1	0
Commercial (CBD)	24	17	5	2
Commercial (MO/H)	42	13	18	11
Commercial (NC)	8	1	7	0
Total	1,452	1,041	273	139

⁴ The buildable lands inventory results in Exhibit 1 do not account for development constraints (yet). Land with development constraints are not classified as buildable; we remove development constraints in Exhibit 2, and we present final buildable land results in Exhibit 3.

Vacant Buildable Land

Exhibit 4 shows buildable acres (e.g., acres in tax lots after constraints are deducted) for vacant and partially vacant land by plan designation. Of Troutdale's 139 unconstrained buildable residential acres, about 54% are in tax lots classified as vacant, and 46% are in tax lots classified as partially vacant. About 31% of Troutdale's buildable residential land is in the low-density residential plan designation, and about 20% of Troutdale's buildable residential land is located in the medium-density residential plan designation.

Exhibit 4. Buildable Acres in Vacant and Partially Vacant Tax Lots by Plan Designation and Zoning, Troutdale City Limits, 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	43	20	23
Medium Density Residential	28	22	7
High Density Residential	25	19	6
Urban Planning Area Low Density Res.	29	0	29
Commercial			
Master Plan Mixed Use	0	0	0
Commercial (CBD)	2	2	0
Commercial (MO/H)	11	11	0
Commercial (NC)	0	0	0
Total	139	75	64

Exhibit 5 and 5 (upcoming pages) show the results of Troutdale's residential BLI.

Exhibit 5. Residential Land by Development Status with Constraints, Troutdale City Limits, 2019

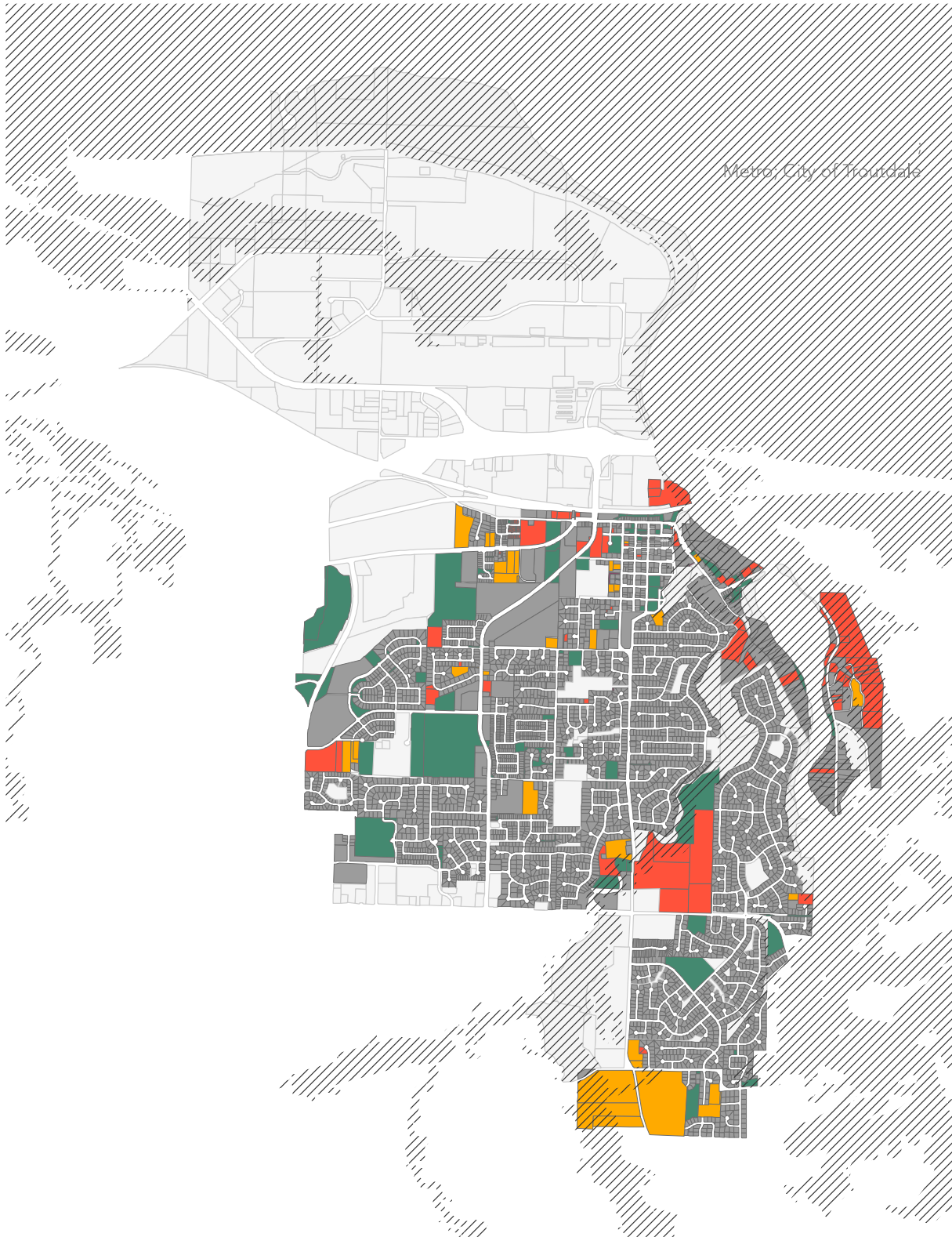


Exhibit 6. Unconstrained Vacant and Partially Vacant Residential Land, Troutdale City Limits, 2019



Redevelopment Potential

Over the 20-year study period, a share of developed lots are likely to redevelop with new buildings. To account for the development capacity on these developed lots, Metro has identified a subset of developed lots as “redevelopable.” Metro has created two filters to identify lots with the potential to redevelop.⁵

- **Threshold Method.** This method identifies lots where redevelopment would result in a net increase of 50% more than the current number of units on the site. The method uses property value thresholds where it is economically viable for a lot to redevelop at this intensity. For suburban areas in the regional UGB, the threshold is \$10 per square foot of property value for multifamily structures and \$12 per square foot for mixed-use structures. If a lot's current property value is below these thresholds, it is assumed to have the potential to redevelop.
- **Historic Probability Method.** This method determines the probability of lot redevelopment based on a statistical analysis of lots that historically redeveloped within the region. The probability for each lot is multiplied by the total zoned capacity of the lot to determine the likely future residential capacity.

For the Troutdale BLI, ECONorthwest used the estimate of redevelopable units on developed lots, as identified based on the Threshold method, which is based on discussion with Metro staff.

Note, the capacity of partially vacant lots (where the lot could be further developed under current development standards without demolishing existing structures) is accounted for in the unconstrained buildable acres.

Metro's analysis shows potential for redevelopment to add about 273 new dwelling units, in areas such as low-density residential, medium-density residential, high-density residential, and commercial CBD zone. However, little redevelopment has occurred in Troutdale over the last decade or so. Given the age of some of Troutdale's housing and the ongoing changes in the housing market in Troutdale and the Portland region, Troutdale may see more redevelopment over the next twenty years than in the past decade. The City may need to actively plan for redevelopment through identifying opportunity areas for redevelopment and support redevelopment through use of tools such as urban renewal funding, density bonuses, and tax exemptions.

⁵ Oregon Metro. Appendix 2: Buildable Lands Inventory. November 21, 2018.
https://www.oregonmetro.gov/sites/default/files/2018/12/03/Appendix2-BuildableLandsInventory_12032018.pdf

3. Historical and Recent Development Trends

Analysis of historical development trends in Troutdale 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 Growth: A Workbook for Oregon's Urban Areas* 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 Troutdale'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 Troutdale's housing market before and after the national housing market bubble's growth and deflation, as well as the more recent increase in housing costs and (2) data about Troutdale'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 separated into two subgroups of attached structures other than single-family detached units, manufactured units, or single-family attached units. The two subgroups are defined as:

- Duplexes, triplexes, and quadplexes
- Multifamily buildings with five or more units

In Troutdale, government-assisted housing (ORS 197.303[b]) and housing for farmworkers (ORS 197.303[e]) can be any of the housing types listed above, as these housing types are regulated in the Troutdale Development Code in the same manner as any other housing type.

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 United States. 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 Troutdale. 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 U.S. 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).⁶

It is worth commenting on the methods used for the American Community Survey.⁷ 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.

The foundation of the Housing Needs Analysis is the population forecast for Troutdale from Metro’s *2040 Household Distributed Forecast*. OAR 660-032-0020(2) requires cities within the Metro UGB to use this forecast when conducting analysis, including a housing needs analysis, that will change the comprehensive plan for land use regulations.

⁶ We use RLIS tax lot data as a proxy for building permit data for Troutdale. The analysis period is 2000–2017, unless otherwise noted.

⁷ 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>

Trends in Housing Mix

This section provides an overview of changes in the mix of housing types in Troutdale and compares Troutdale to Multnomah County and the Portland region. These trends demonstrate the types of housing developed in Troutdale historically. Unless otherwise noted, this chapter and the next chapter use 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 Troutdale:

- **Nearly three-quarters (72%) of Troutdale’s housing stock is single-family detached housing units.** Twenty-two percent of Troutdale’s housing stock is multifamily and 6% is single-family attached (e.g., townhouses, row houses).
- **Since 2000, Troutdale’s housing mix has shifted toward a larger share of single-family attached and multifamily housing.** Troutdale’s housing stock grew by approximately 22% (about 1,095 new units) between 2000 and the 2013–2017 period.
- **Single-family housing accounted for the majority of new housing growth in Troutdale between 2000 and 2017.** Fifty-six percent of new housing built between 2000 and 2017 was single-family housing (detached and attached).
- **Troutdale’s housing stock is diversifying and is likely to continue to do so.** Exhibit 1 shows upcoming development of multifamily and single-family housing, with construction started in 2018. In addition, the City expects development of about 280 additional multifamily units, 110 of which are expected to be income-restricted affordable housing by 2022.

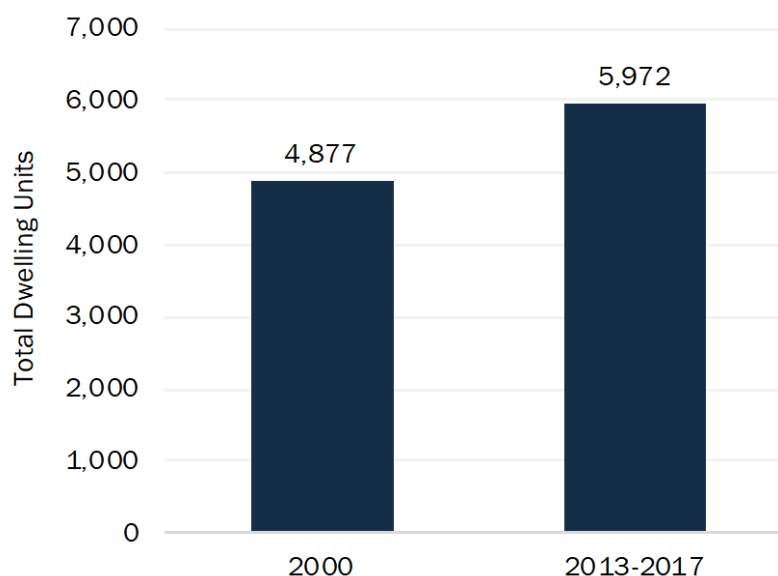
Housing Mix

The total number of dwelling units in Troutdale increased by 22% from 2000 to 2013–2017.

Troutdale has added 1,095 units since 2000.

Exhibit 7. Total Dwelling Units, Troutdale, 2000 and 2013–2017

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

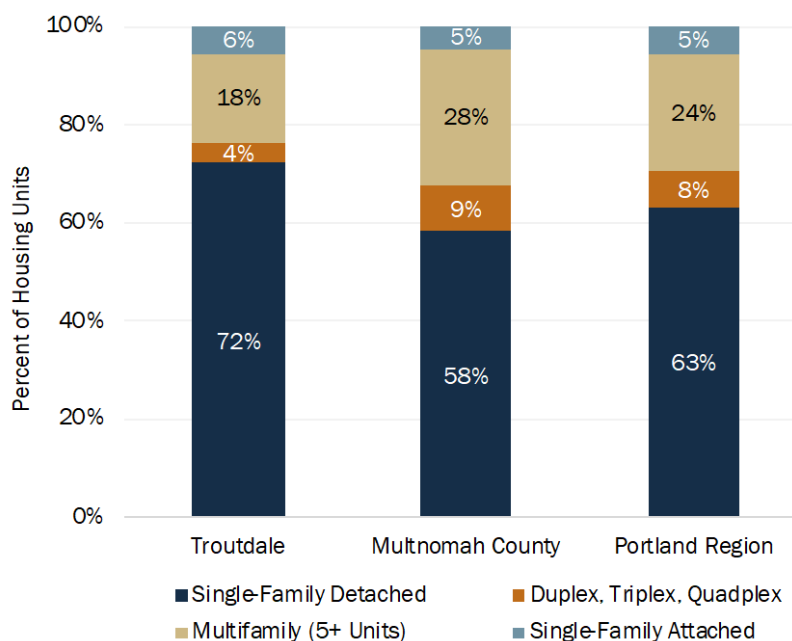


Troutdale has a larger share of single-family detached housing and a smaller share of multifamily housing relative to Multnomah County and the Portland region.

In 2013–2017, Troutdale's housing stock included 4,310 single-family detached units, 337 single-family attached units, 239 duplex to quadplex units, and 1,086 units with five or more units per structure.

Exhibit 8. Housing Mix, Troutdale, Multnomah County, and Portland Region, 2013–2017

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

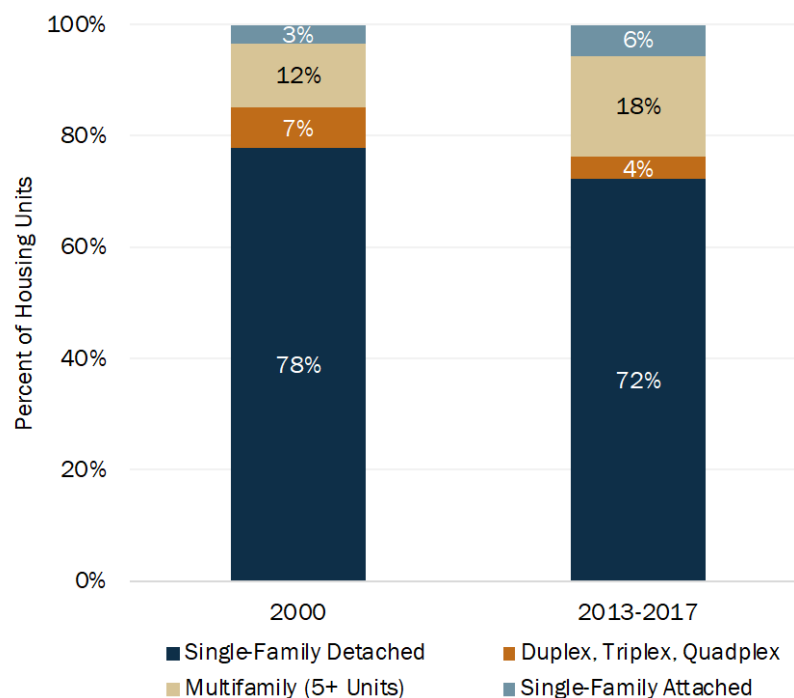


From 2000 to 2013–2017, Troutdale’s housing mix shifted to a larger share of single-family attached and multifamily housing.

Over this period, the share of multifamily (5+ units) housing increased from 12% to 18%, the share of single-family attached housing increased from 3% to 6%, and the share of duplexes, triplexes, and quadplexes decreased from 7% to 4%.

Exhibit 9. Change in Housing Mix, Troutdale, 2000 and 2013–2017

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



Dwelling Units Built

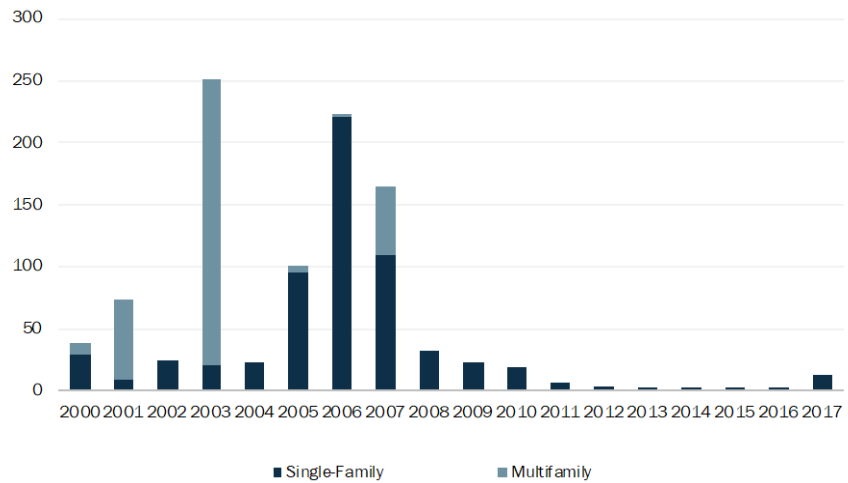
Over the 2000 to 2017 period, Troutdale added **1,006 dwelling units**, with an annual average of **28 dwelling units**.

Of these 1,006 units, about 63% were single-family units and 27% were multifamily units.

While little housing, including multifamily housing, has been permitted since 2008, Exhibit 1 shows that there were about 350 multifamily or single-family attached units under construction (or nearing construction) in 2018. Troutdale expects development of an additional 280 multifamily units by about 2022.

Exhibit 10. Units Built by Year and Type of Unit, Troutdale, 2000 through 2017

Source: RLIS.



Size of Units

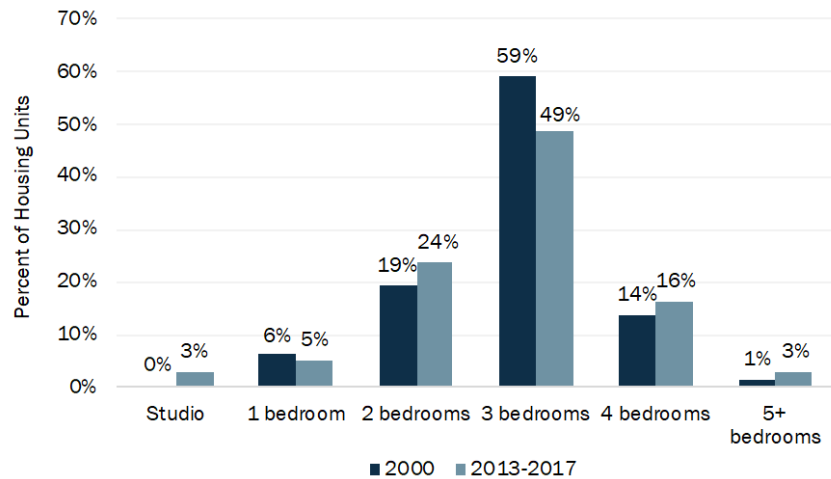
This section provides an overview of dwelling unit size in Troutdale.

In the 2013–2017 period, the majority of dwelling units in Troutdale were two-bedroom, three-bedroom, and four-bedroom units, making up about 89% of the City's housing market.

This trend in the mix of units by number of bedrooms has remained relatively constant since 2000, with slight increases in the number of studios and units with more than 5 bedrooms.

Exhibit 11. Share of Units by Number of Bedrooms, Troutdale, 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 was 4,877; the total number of units in the 2013–2017 period was 5,972.

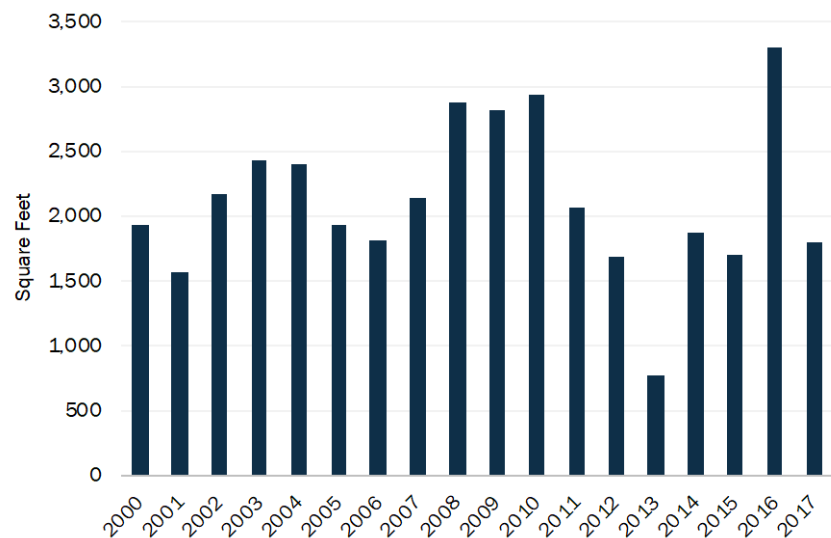


Single-family units built in Troutdale since 2000, averaged 2,074 sq. ft. per unit.

Single-family units built in Troutdale since 2014, averaged 1,945 sq. ft. per unit.

Exhibit 12. Average Size of Single-Family Units Built by Year, Troutdale, 2000 through 2017

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



On average, a 2-bedroom multifamily unit in Troutdale is about 950 sq. ft.

Exhibit 13. Average Square Feet of Multifamily Units, Troutdale, 2019

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

Multifamily Unit by Bedroom Count	Average Sq. Ft.	Number of Units
All Beds	912	1,473
Studio	549	18
1-Bedroom	649	227
2-Bedroom	950	680
3-Bedroom	1,212	121

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, Troutdale permitted 1,006 new dwelling units. During this time, housing in Troutdale developed at an average net density of 10.1 dwelling units per net acre. Exhibit 14 shows average net residential development by structure type for the historical analysis period. Single-family housing (detached and attached) developed at 8.3 units per net acre, and multifamily housing developed at 15.9 units per net acre.

Exhibit 14. Net Density by Unit Type and Zone, Troutdale, 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			Multifamily			Total, combined		
	Units	Acres	Net Density	Units	Acres	Net Density	Units	Acres	Net Density
Low Density Residential	211	41	5.1				211	41	5.1
Medium Density Residential	228	21	10.9	59	5	12.3	287	26	11.1
High Density Residential	157	12	13.1	310	18	16.8	467	31	15.3
Commercial	41	2	18.6				41	2	18.6
Total	637	76	8.3	369	23	15.9	1,006	100	10.1

Trends in Tenure

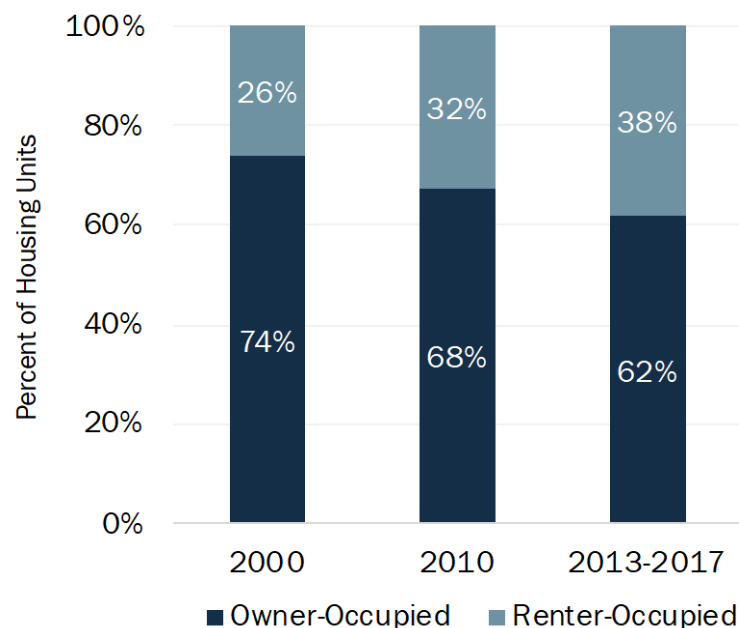
Housing tenure describes whether a dwelling unit is owner or renter-occupied. This section shows:

- **Homeownership in Troutdale is higher than both Multnomah County's and the Portland region's rates.** About 62% of Troutdale's households own their own home. In comparison, 54% of Multnomah County households and 60% of Portland region households are homeowners.
- **Homeownership in Troutdale has steadily decreased over the 2000 and 2013–2017 period.** The homeownership rate was 74% in 2000 and it decreased to 62% in the 2013–2017 period.
- **Most Troutdale homeowners (97%) live in single-family detached housing, while over half of Troutdale's renters (57%) live in multifamily housing.**
- **Troutdale has limited opportunities for rental housing.** Given that Troutdale has 1,325 multifamily units (22% of all units) and 57% of renters live in multifamily housing, the relatively small amount of multifamily housing limits opportunities for people to rent housing in Troutdale.

The homeownership rate in Troutdale decreased from 68% in 2000 to 62% in the 2013–2017 period.

Exhibit 15. Tenure, Occupied Units, Troutdale, 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.

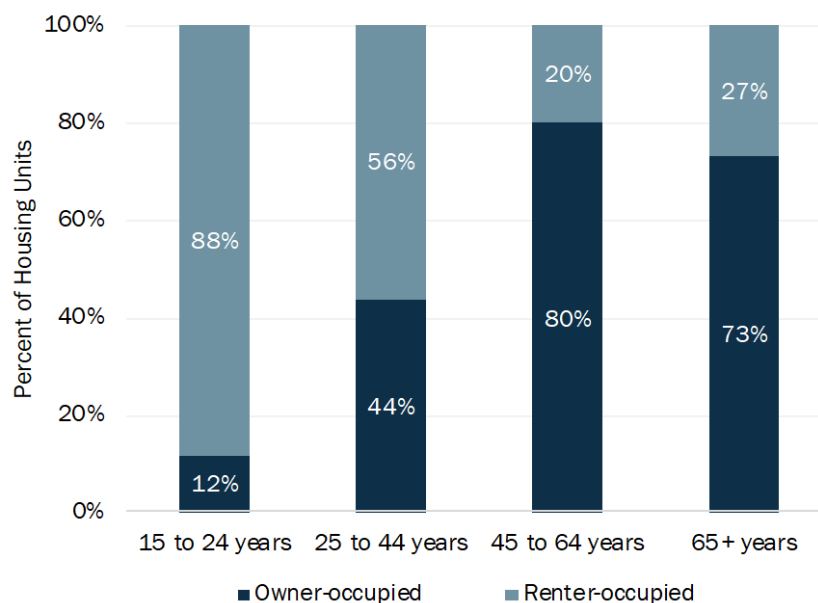


During the 2013–2017 period, Troutdale residents 45 years of age and older tended to own their homes as opposed to renting them.

Residents between the ages of 15 to 44 years tended to rent their homes instead of owning them.

Exhibit 16. Tenure by Age Group, Occupied Units, Troutdale, 2013–2017

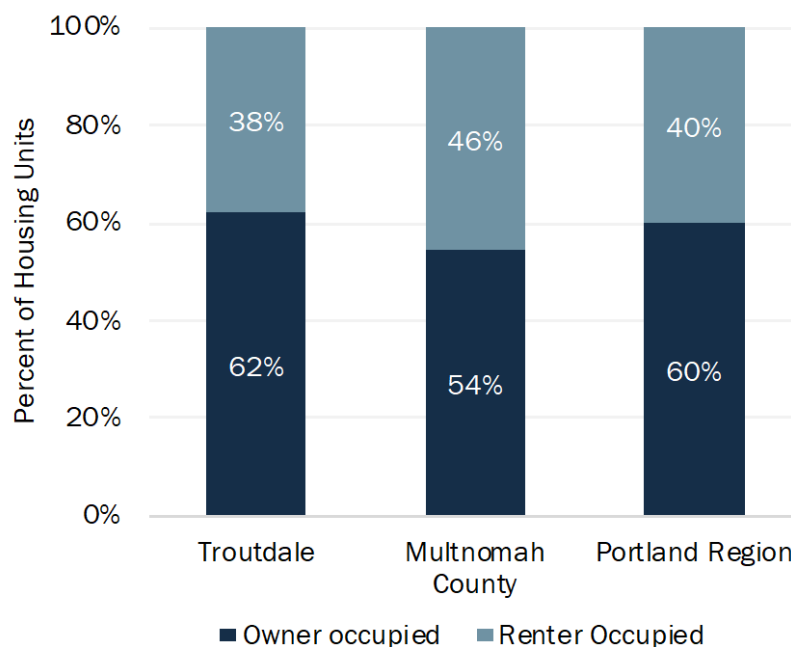
Source: 2013–2017 ACS 5-Year Estimates, Table B25007.



Troutdale's homeownership rate for the 2013–2017 period is higher than that of Multnomah County and the Portland region.

Exhibit 17. Tenure, Occupied Units, Troutdale, Multnomah County, and Portland Region, 2013–2017

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

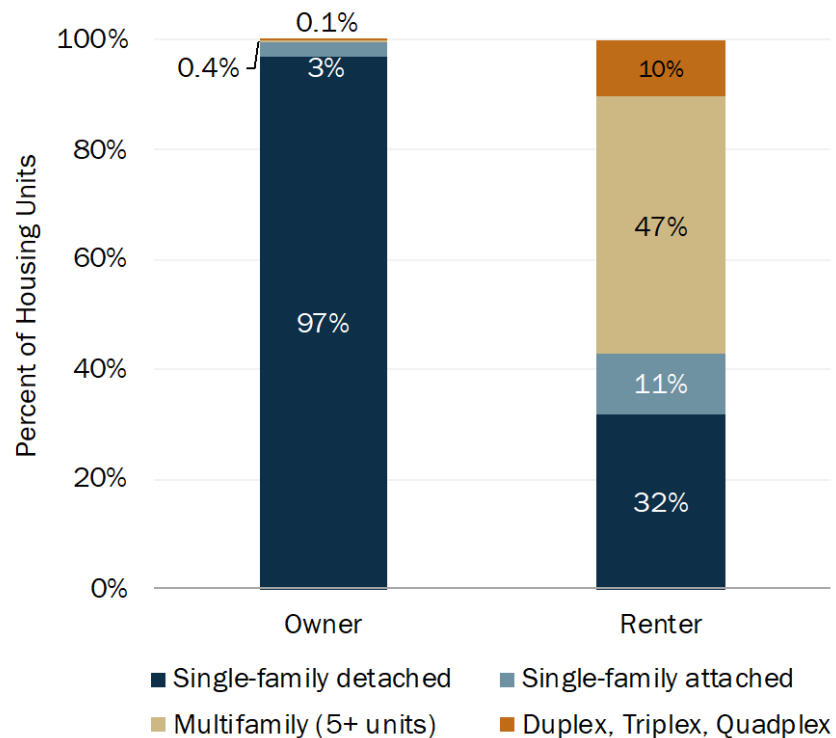


The vast majority of Troutdale homeowners (97%) lived in single-family detached housing during the 2013–2017 period.

In comparison, 57% of Troutdale renters lived in multifamily housing (including duplex, triplex, quadplex), with 32% occupying single-family detached housing.

Exhibit 18. Housing Units by Type and Tenure, Troutdale, 2013–2017

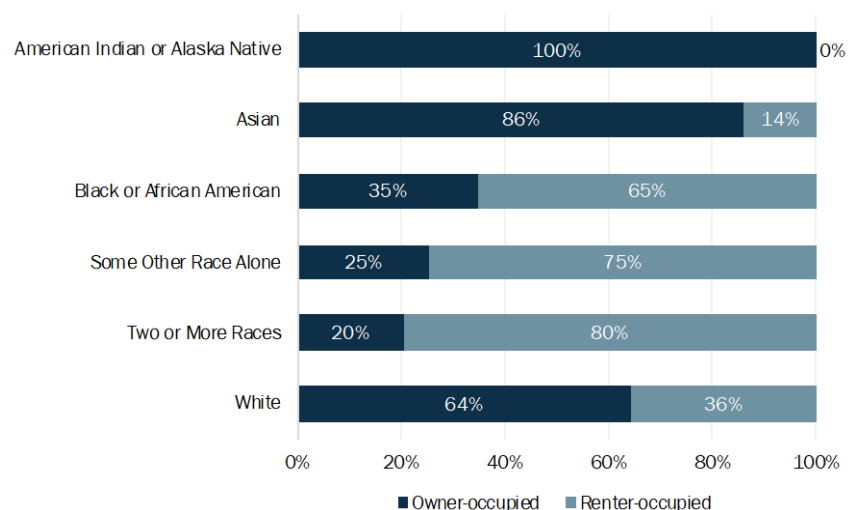
Source: U.S. Census Bureau, 2013–2017 ACS Table B25032.



A proportionately smaller share of households with an African American, Some Other Race alone, or Multi-Racial head of household were homeowners.

Exhibit 19. Tenure by Race of the Head of Household, Troutdale, 2013–2017

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



The majority of households with a Latinx head of household were renters.

Exhibit 20. Tenure by Latinx Head of Household, Troutdale, 2013–2017

Source: U.S. Census Bureau, 2013–2017 ACS Table B25003I.

Latinx Head of Household	44% Homeowners	56% Renters
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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 Troutdale was 1.1%, compared to 5.8% for Multnomah County, 5.5% for the Portland region, and 9.3% for Oregon.

Troutdale's vacancy rate declined 2.9 percentage points from 2000 to the 2013–2017 period.

Exhibit 21. Vacancy Rate, Troutdale, 2000 and 2013–2017

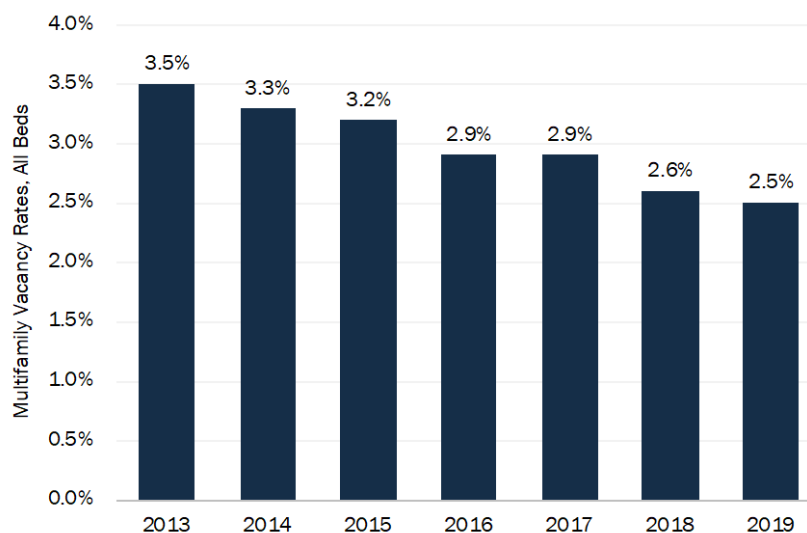
Source: U.S. Census Bureau, 2000 Decennial Census SF1 Table H005, 2013–2017 ACS Table B25004.

2000	4.0% Of Total Dwelling Units
2013–2017	1.1% Of Total Dwelling Units

Troutdale's average multifamily vacancy rate has decreased since 2013 from 3.5% to 2.5% in 2019.

Exhibit 22. Average Multifamily Vacancy Rate, Troutdale, 2013 through 2019

Source: CoStar.



As of the 2013–2017 period, 0.5% of Troutdale’s total dwelling units were vacant for seasonal, recreational, or occasional use (e.g., short-term rentals or vacation homes).

Exhibit 23. Vacancy for Seasonal, Recreational, or Occasional Use, Troutdale, 2000 and 2013–2017

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

2000	17 Units	0.3%
		Share of Total Dwelling Units
2013–2017	29 Units	0.5%
		Share of Total Dwelling Units

Government-Assisted Housing

Governmental agencies offer subsidies to support housing development for low and moderate-income households. Troutdale has three government-assisted housing developments, with 431 subsidized units.

Exhibit 24. Government-Assisted Housing, Troutdale, May 2019

Source: Oregon Housing and Community Services. (May 2019). Affordable Housing Inventory in Oregon.

Development Name	Total Units	Total Affordable Units	Population Served	Government Subsidy Type	Affordability Contract Expiration
Cherry Ridge Apartments	160	160	Families	LIHTC	5/1/26
Hewitt Townhouses	44	43	Families	LIHTC	9/12/68
Troutdale Terrace Apartments	228	228	Families	LIHTC	11/6/62
Total	432	431			

Potential Home Forward Development Property

In January 2019, Metro adopted a work plan for its Affordable Housing Bond Program. The overall regional goal of the bond program is to produce 3,900 units that are affordable to households at 60% of area median income (AMI), with 1,600 units affordable at 30% AMI and 1,950 units that will accommodate families (i.e., two or more bedrooms). For the bond program, Home Forward, Multnomah County’s housing authority, is responsible for implementation in East Multnomah County in the communities of Fairview, Wood Village, and Troutdale.⁸

Home Forward identified a potential site (at SW Kendall and SW 2nd St.) for an affordable housing development in Troutdale. This property would be developed as part of, and partially funded by, the bond program. The site is about 4 acres and is currently owned by Multnomah County. At the time of this analysis, Home Forward had conducted initial outreach to Troutdale City Council and had started initial feasibility analysis for the potential affordable housing development. This development would provide needed housing for low and moderate-income households, helping to achieve the goals of the regional bond program.

⁸ Metro. “Affordable Housing Bond Program Work Plan.” January 2019.

Manufactured Homes

Manufactured homes provide a source of affordable housing in Troutdale. 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.⁹ Exhibit 25 presents the inventory of mobile and manufactured home parks within Troutdale as of May 2019.

Troutdale has six manufactured housing parks, with a total of 367 spaces within its city limits.

As of May 2019, only one manufactured housing park space was vacant.

Exhibit 25. Inventory of Mobile/Manufactured Home Parks, Troutdale city limits, May 2019

Source: Oregon Manufactured Dwelling Park Directory.

Name	Location	Type	Total Spaces	Vacant Spaces	Comprehensive Plan Designation
Buxton Place	116 SE 8th	Family	27	0	Medium Density Residential
Columbia Heights	843 SE Crestview Way	Family	88	0	Medium Density Residential
Columbia Vista	839 SW Livingston Pl	Family	77	1	Medium Density Residential
Sandy Frontier Trailer Court	1542 E Historic Columbia River Hwy	Family	9	0	Low Density Residential
Tower Estates	SW 29th St	Family	76	0	Medium Density Residential
Wood Village	23200 NE Sandy Blvd	Family	90	0	Multi Residential 2,000 (MR2) - Located in Wood Village
Total			367	1	

⁹ ORS 90.645 regulates rules about closure of manufactured dwelling parks. Before a park closure, the landlord must give at least one year's notice and must pay the tenant between \$5,000 and \$9,000 for each manufactured dwelling park space, in addition to not charging tenants for demolition costs of abandoned manufactured homes.

4. Demographic and Other Factors Affecting Residential Development in Troutdale

Demographic trends are important for a thorough understanding of the dynamics of the Troutdale housing market. Troutdale exists in a regional economy; trends in the region impact the local housing market. This chapter documents demographic, socioeconomic, and other trends relevant to Troutdale 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 Troutdale to Multnomah County, the Portland region (defined as Clackamas, Multnomah, and Washington Counties), and Oregon. We also compare Troutdale 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 guidebook, 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 Choice¹⁰

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 multiperson households (often with children).
- **Household income** is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., a single-family detached unit, duplex, triplex, quadplex, or a building with more than five units) and to household tenure (e.g., rent or own).

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

¹⁰ 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.

National Trends¹¹

This brief summary on national housing trends builds on previous work by ECONorthwest, Urban Land Institute (ULI) reports, and conclusions from *The State of the Nation's Housing, 2019* report from the Joint Center for Housing Studies of Harvard University. The Harvard report summarizes the national housing outlook as follows:

“If housing costs continue to rise faster than incomes, growth of households—and of housing demand—is likely to slow. As it is, the market has only produced enough homes to match the pace of household growth, let alone cover replacement and second-home demand and allow normal levels of vacancies. If current housing supply trends persist, house prices and rents will continue to rise at a healthy clip, further limiting the housing options for many. To ensure that the market can produce homes that meet the diverse needs of the growing US population, the public, private, and nonprofit sectors must address constraints on the development process. And for the millions of families and individuals that struggle to find housing that fits their budgets, much greater public efforts will be necessary to close the gap between what they can afford and the cost of producing decent housing.”

However, challenges to a strong domestic housing market remain. High mortgage rates 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 ninth year of gains in 2018 with 1.25 million units added to the national stock. There were about 374,000 multifamily starts in 2018, an increase after a two-year slump in 2015 and 2016, putting multifamily growth at its highest rate since 1988. The supply of sale homes in 2018 averaged 4.0 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 land prices, and land use regulations as constraints on new construction.

¹¹ 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 2019*, (2) Urban Land Institute, “2019 Emerging Trends in Real Estate,” and (3) the U.S. Census.

- **Demand shift from renting to owning.** After years of decline, the national homeownership rate increased to 64.4% in 2017–2018, up half a percentage point from the prior year. Trends suggest the recent homeownership increases are among householders of all age groups; however, homeownership rates continue to remain below historic levels from thirty years ago. Homeownership rates of those aged 65 and older have remained strong, 2.9 percentage points above 1988 levels, and homeownership rates among young adults have begun stabilizing after years of decline.
- **Housing affordability.** In 2017, about 31.5% of American households spent more than 30% of their income on housing. This figure is down from the prior year and continues to improve relative to its 2010 peak, bolstered by a considerable drop in the owner share of cost-burdened households. The share of cost-burdened renter households, however, continue to remain above that of homeowners and renter households, and now exceed the number of cost burdened homeowners by more than 3 million. 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, 72% 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 2018 and 2028. Much of the demand will come from Baby Boomers, Millennials,¹² and immigrants. The Urban Land Institute cites the trouble of overbuilding in the luxury sector while demand is in midpriced single-family houses affordable to a larger buyer pool.
- **Growth in rehabilitation market.**¹³ 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

¹² 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.

¹³ 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

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 the continued aging of Baby Boomers, the oldest of whom were in their seventies in 2019 and the youngest of whom were in their fifties in 2019. 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 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.¹⁴ 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."¹⁵ 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.¹⁶ 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."¹⁷ 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."¹⁸

¹⁴ Urban Land Institute. Emerging Trends in Real Estate, United States and Canada. 2018.

¹⁵ 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/

¹⁶ Vanleerberghe, Patricia, et al. The quality of life of older people aging in place: a literature review. 2017.

¹⁷ Ibid.

¹⁸ American Planning Association. Making Space for Tiny Houses, Quick Notes.

- *Millennials*. Over the last several decades, young adults have increasingly been living in multigenerational housing—more so than older demographics.¹⁹ Despite this trend, as Millennials age over the next twenty years, they will be forming households and families. In 2018, the oldest Millennials were in their late thirties 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, 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, Millennials comprised 28% of active home buyers, while Gen Xers comprised 32% and Boomers 31%.²⁰ 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 multigenerational housing. Still, immigration and increased homeownership among minorities could also play a key role in accelerating household growth over the next ten 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 staunchly 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 United States 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.

¹⁹ According to the Pew Research Center, in 1980, just 11% of adults aged 25 to 34 lived in a multigenerational family household, and by 2008, 20% did (82% change). Comparatively, 17% of adults aged 65 and older lived in a multigenerational family household, and by 2008, 20% did (18% change).

²⁰ 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>

- *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 1988, the difference in homeownership rates between whites and blacks has risen by 3.9 percentage points to 30.1% in 2018. Alternatively, the gap between white and Latinx homeownership rates and white and Asian homeownership rates both decreased during this period but remained sizable at 26.0 and 16.0 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, leads to higher rates of cost burden for minority homeowners—30.2% for blacks, 29.6% for Latinx, 27.3% for Asians/others, and 20.4% for whites in 2017.
- **Changes in housing characteristics.** The U.S. Census Bureau’s Characteristics of New Housing Report (2018) 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:²¹
 - *Larger single-family units on smaller lots.* Between 1999 and 2018, the median size of new single-family dwellings increased by 18% nationally, from 2,028 sq. ft. to 2,386 sq. ft., and 17% in the western region from 2,001 sq. ft. in 1999 to 2,341 sq. ft. in 2018. Moreover, the percentage of new units smaller than 1,400 sq. ft. nationally decreased by more than half, from 15% in 1999 to 7% in 2018. The percentage of units greater than 3,000 sq. ft. increased from 17% in 1999 to 28% of new one-family homes completed in 2018. In addition to larger homes, a move toward smaller lot sizes is seen nationally. Between 2009 and 2018, the percentage of lots less than 7,000 sq. ft. increased from 25% to 32% of lots.
 - *Larger multifamily units.* Between 1999 and 2018, the median size of new multiple family dwelling units increased by 5.4% nationally. In the western region, the median size decreased by 2.0%. Nationally, the percentage of new multifamily units with more than 1,200 sq. ft. increased from 28% in 1999 to 36% in 2018 and increased from 25% to 29% in the western region.

²¹ U.S. Census Bureau, Highlights of Annual 2018 Characteristics of New Housing. Retrieved from: <https://www.census.gov/construction/chars/highlights.html>.

- *Household amenities.* Across the United States since 2013, an increasing number of new units have 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 96% in 2018. The share of new multifamily units with two or more bathrooms decreased from 55% of new multifamily units to 44%. As of 2018, 92% of new single-family houses in the United States have garages for one or more vehicles (from 89% 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),²² cottage clusters, cohousing developments, and multifamily products are common housing types that take advantage of this trend. Shared amenities may take many forms and include bathrooms, kitchens and other home appliances (e.g., laundry facilities, outdoor grills), security systems, outdoor areas (e.g., green spaces, pathways, gardens, rooftop lounges), fitness rooms, swimming pools, tennis courts, and free parking.²³

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:²⁴

- 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.

²² 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>

²³ 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.

²⁴ 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>.

- 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.
- 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 twenty, many of whom have earned a college degree, or some level of higher education.
- In 2019, minimum wage in Oregon²⁵ was \$11.25, compared to \$12.50 in the Portland region and \$11.00 for nonurban 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.²⁶

- **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, compared to 15% of the white population.

²⁵ 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>

²⁶ 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: 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%.
 - 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%. 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 affordable units are needed to house those households earning below 30% of median family income (MFI). 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 Troutdale.

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.

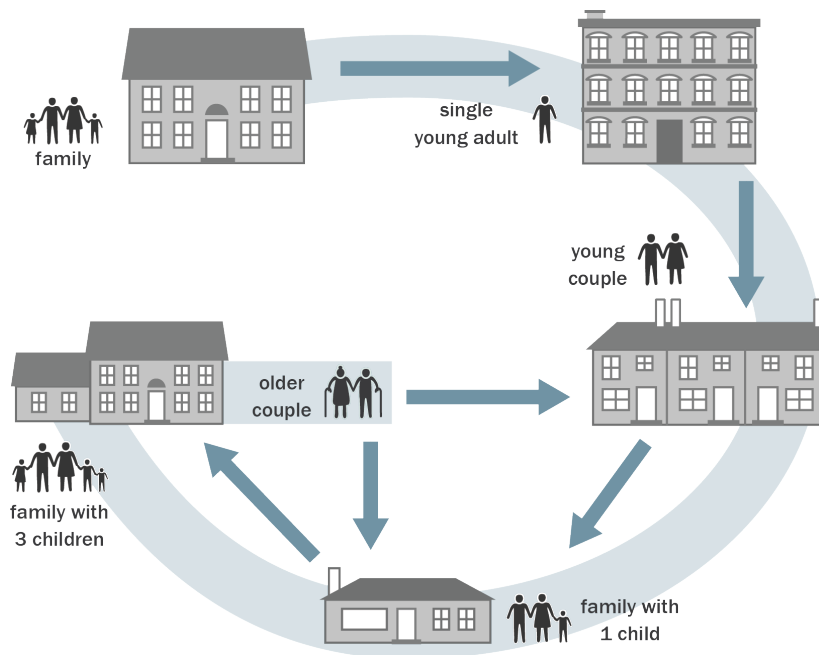
An individual's housing needs change throughout their life, with changes in income, family composition, and age. The types of housing needed by a 20-year-old college student differ from the needs of a 40-year-old parent with children, or an 80-year-old single adult. As Troutdale's population ages, different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

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

As the adults in households age, incomes generally increase and the household composition changes. Incomes generally increase until retirement, allowing households to afford to spend more on housing as they age. At the same time, household composition changes, generally with addition of children for younger households and departure of children for older households. The changes in these three factors illustrate the housing life cycle that most households experience in one form or another.

Exhibit 26. 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

Troutdale's population growth will drive future demand for housing in the City over the planning period. The population forecast in Exhibit 28 is Troutdale's official population forecast, from the Oregon Metro 2040 Distributed Population and Household Forecast. Troutdale must use this forecast as the basis for forecasting housing growth over the 2020 to 2040 period.

Troutdale's population grew by 106% over the 1990 to 2018 period. Troutdale added 8,333 new residents over this time frame, at an average annual growth rate of 2.6%, higher than both Multnomah County (1.2%) and the Portland region (1.6%).

Exhibit 27. Population Growth and Change, Troutdale, Multnomah County, Portland Region, Oregon, and the United States, 1990, 2000, 2010, and 2018

Source: U.S. Decennial Census 1990, 2000, 2010 and Annual Estimates of the Resident Population: July 1, 2018.

Note: the Portland region is the aggregate of Clackamas, Multnomah, and Washington Counties.

Geography					Change 1990 to 2018		
	1990	2000	2010	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	4,141,100	1,298,779	46%	1.4%
Portland Region	1,174,291	1,444,219	1,644,535	1,839,005	664,714	57%	1.6%
Multnomah County	583,887	660,486	730,140	813,300	229,413	39%	1.2%
Troutdale	7,852	13,777	15,595	16,185	8,333	106%	2.6%

The resident population in Troutdale's city limits is projected to grow by 1,507 people between 2020 and 2040, at an average annual growth rate of 0.44%.²⁷

Exhibit 28. Forecast of Population Growth, Troutdale City Limits, 2020 to 2040

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

16,377	17,884	1,507	9.2% increase
Residents in 2020	Residents in 2040	New residents 2020 to 2040	0.44% Annual Average Growth Rate

²⁷ This forecast of population growth is based on Troutdale'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.

Aging Population

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

- **Seniors.** Troutdale currently has a smaller share of people over 60 years old than Multnomah County and the Portland region. As Troutdale'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 Baby Boomers continue to age and retire. The Multnomah County forecast share of residents aged 60 years and older will account for 22% of its population in 2040, compared to around 19% in 2020.

The impact of growth in seniors in Troutdale will depend, in part, on whether older people already living in Troutdale 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 Troutdale 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 as their health declines, 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). The challenges aging seniors face in continuing to live in their community include changes in health-care needs, loss of mobility, the difficulty of home maintenance, financial concerns, and increases in property taxes.²⁹

- **Troutdale has a larger share of younger people than Multnomah County and the Portland region.** About 27% of Troutdale's population is under 20 years old, compared to 22% of Multnomah County's population and 24% of the Portland region's population. The forecast for population growth in Multnomah County shows the percent of people under 20 years decreasing from 21% of the population in 2020 to 19% in 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 Multnomah County shows a growth in Millennials from about 27% of the population in 2020 to about 29% 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/>.

Troutdale'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, Troutdale is attractive because of the amenities of the Portland region.

The long-term housing preference of Millennials is uncertain. Research suggests that Millennials' housing preferences may be similar to 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 Troutdale 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.

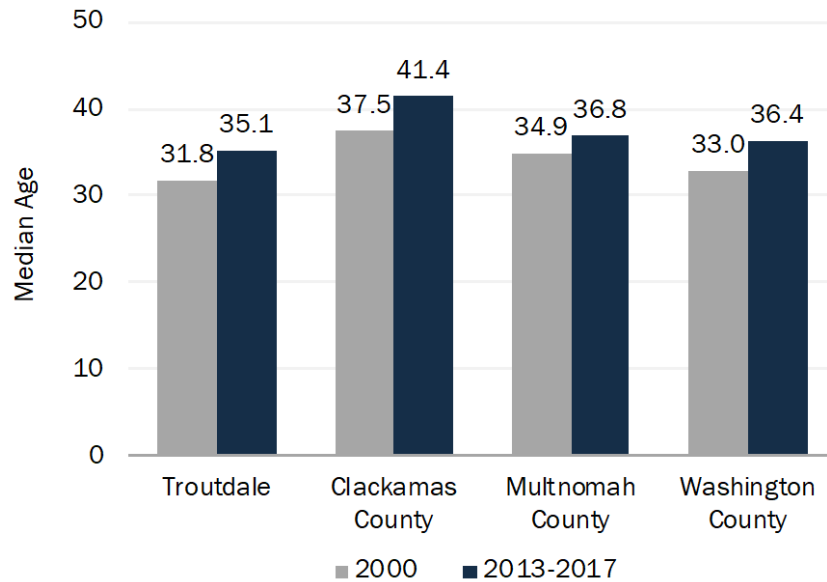
"Survey Says: Home Trends and Buyer Preferences," National Association of Home Builders International Builders

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

Over the 2000 to 2013–2017 period, Troutdale’s median age grew by 3.3 years, larger than Multnomah County’s median age change of 1.9 years, but smaller than Clackamas County’s and Washington County’s median age change.

Exhibit 29. Median Age, Troutdale, Clackamas County, Multnomah County, and Washington County, 2000 and 2013–2017

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

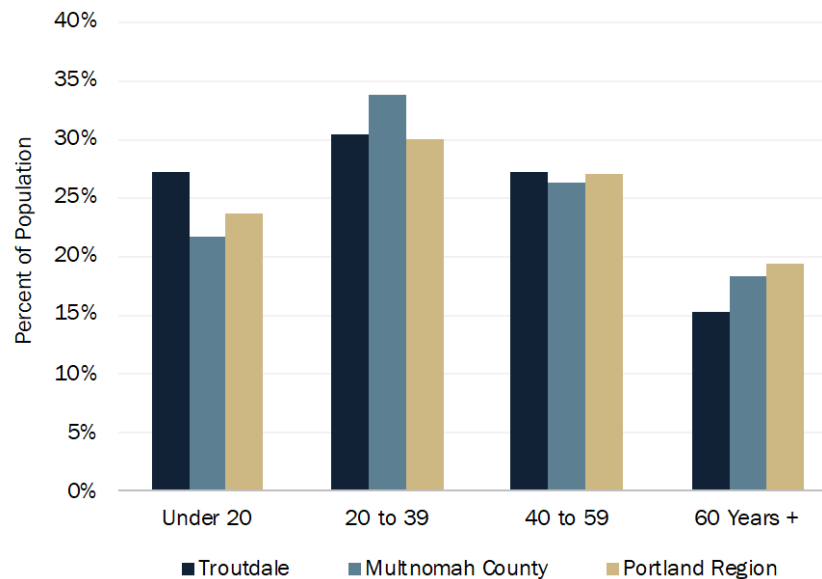


In the 2013–2017 period, about 57% of Troutdale’s residents were between the ages of 20 and 59 years.

Compared to Multnomah County and the Portland region, Troutdale had a larger share of residents under 20 years of age (27% versus 22% and 24%, respectively). Troutdale’s share of residents aged 20 to 59 is comparable to that of both Multnomah County and the Portland region (58% versus 60% and 57%, respectively).

Exhibit 30. Population Distribution by Age, Troutdale, Multnomah County, and the Portland Region, 2013–2017

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

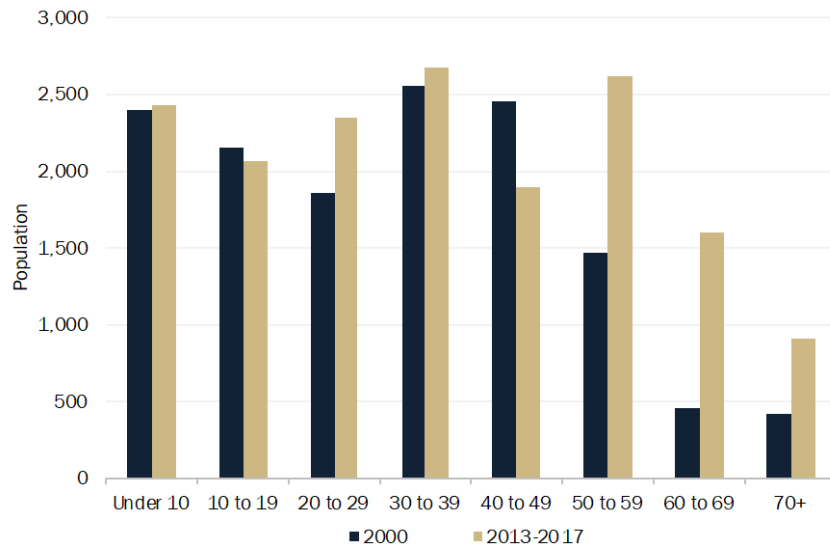


The largest population increases in Troutdale over the 2000 to 2013–2017 period were for older adult and senior age groups.

For example, residents aged 60 to 69 grew by 256% over the analysis period. This group's share of Troutdale's total population increased by about 6.4 percentage points, from 3.3% in 2000 to 9.7% in 2013–2017.

Exhibit 31. Population Distribution by Age, Troutdale, 2000 and 2013–2017

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

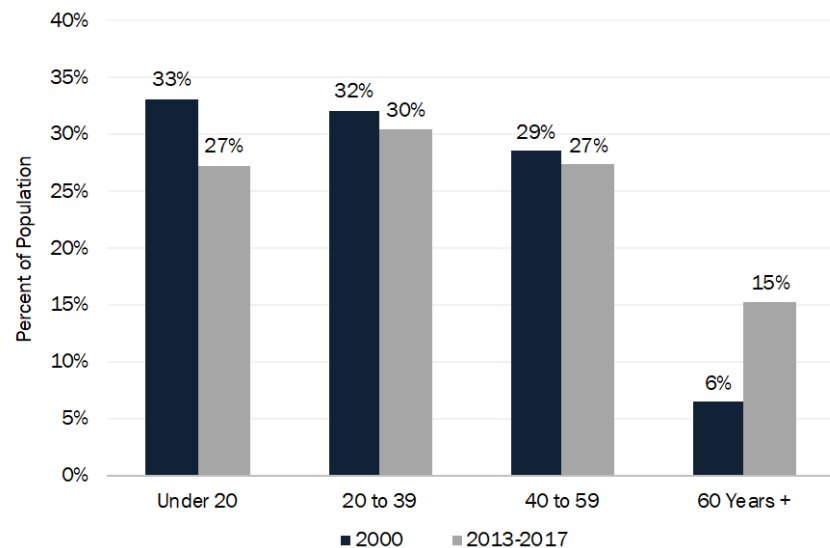


Between 2000 and 2013–2017, the share of Troutdale's population aged 60 years and older more than doubled.

Troutdale's population aged 60 years and older grew by 1,636 people between 2000 and 2013–2017. This increase can be explained, in part, through aging of Baby Boomers across the Portland region. Development of senior housing in Troutdale likely attracted seniors to the city.

Exhibit 32. Change in Population Composition by Age, Troutdale, 2000 and 2013–2017

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



Between 2020 and 2040, Multnomah County's population over 60 years old is forecast to grow the fastest, by 40%.

Exhibit 33. Fastest-growing Age Groups, Multnomah County, 2020 to 2040

Source: Portland State University, Population Research Center, Multnomah County Proposed Forecast Tables, March 2017.

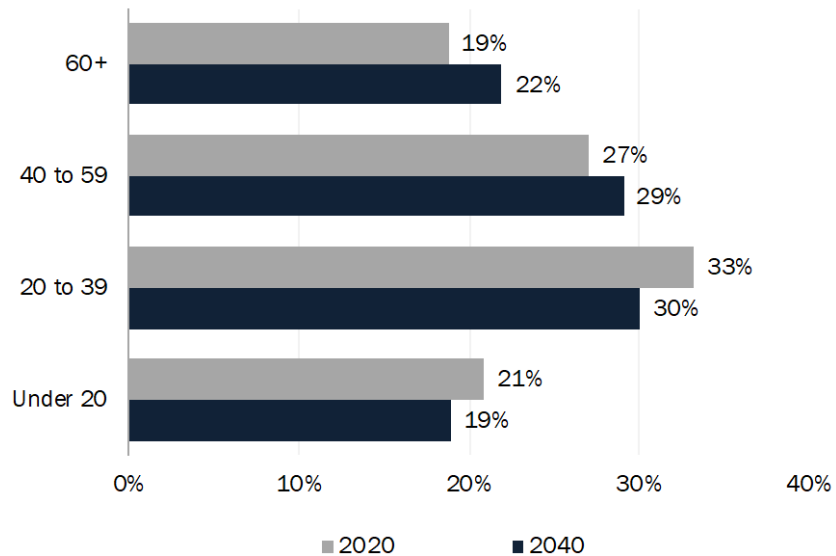
8%	8%	28%	40%
13,638	21,075	62,178	61,002
People	People	People	People
Under 20	20–39 Yrs	40–59 Yrs	60+ Yrs

Between 2020 and 2040, the share of Multnomah County residents over the age of 40 will make up 51% of the county's total population.

Of all the age cohorts, the share of residents 40 to 59 years of age and over 60 years of age will increase by 2040, while the share of those aged 20 to 39 years and those under 20 will decrease.

Exhibit 34. Population Growth by Age Group, Multnomah County, 2020 to 2040

Source: Portland State University, Population Research Center, Multnomah County Proposed Forecast Tables, March 2017.



Increased Ethnic Diversity

Troutdale is becoming more ethnically diverse. The Latinx population grew from 5% of Troutdale's population in 2000 to 14% of the population in the 2013–2017 period, adding about 1,640 new Latinx residents. Troutdale is more ethnically diverse than the Portland region, with the share of Latinx residents in the Portland region making up 12% of its population compared to Troutdale's 14% share of Latinx residents.

The U.S. Census Bureau forecasts that at the national level, the Latinx population will continue growing faster than most other non-Latinx populations 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 Troutdale'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 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 Professionals,³⁵ Latinx accounted for 32.4% of the nation's household formation in 2018, up 3.8 percentage points from 2017. The rate of homeownership for Latinx increased from 45.6% in 2015 to 47.1% in 2018.³⁶ 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 multigenerational 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.

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.

³⁵ National Association of Hispanic Real Estate Professionals (2018). *2018 State of Hispanic Homeownership Report*. Retrieved from: <https://nahrep.org/downloads/2018-state-of-hispanic-homeownership-report.pdf>

³⁶ *Ibid.*

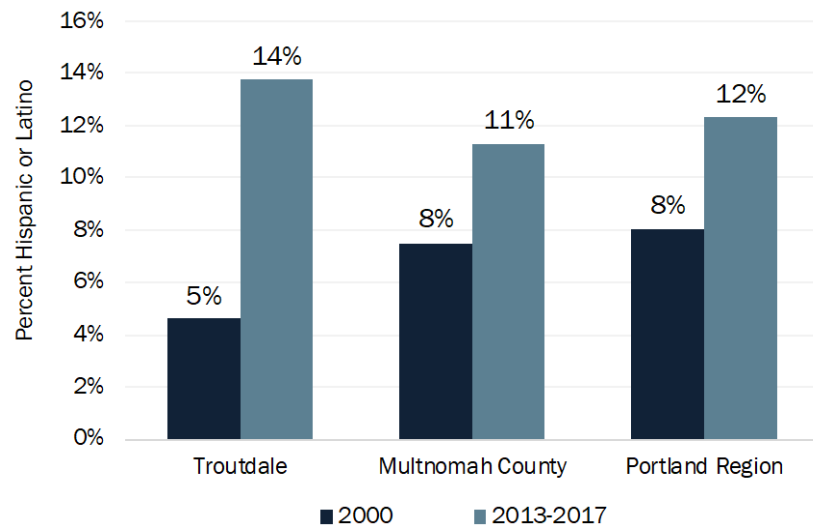
³⁷ *Ibid.*

The share of Troutdale's population that is Latinx increased by 9 percentage points (1,640 people) from 2000 to 2013–2017.

Troutdale was more ethnically diverse than the Portland region during the 2013–2017 period.

Exhibit 35. Latinx Population as a Percent of the Total Population, Troutdale, Multnomah County, and Portland Region, 2000 and 2013–2017

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



Racial Diversity³⁸

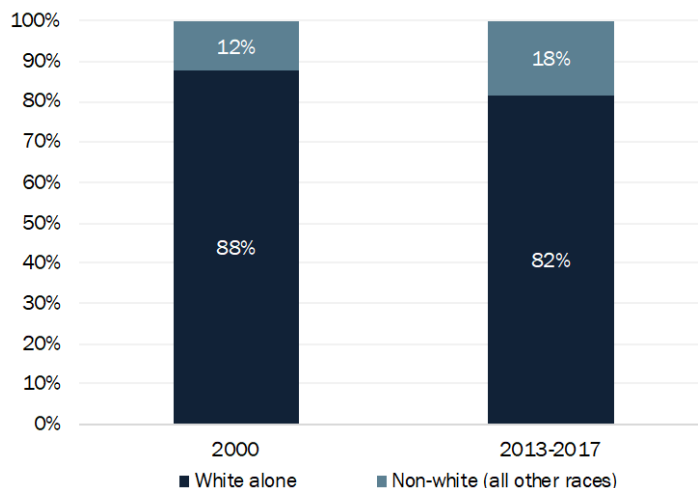
The nonwhite population is defined as the share of the population that identifies as a race other than “white alone,” according to Census definitions. Racial diversity in Troutdale increased over the 2000 to 2013–2017 period. In the 2013–2017 period, Troutdale was less racially diverse than both Multnomah County and the Portland region.

The share of the nonwhite population in Troutdale increased by 6 percentage points over the 2000 to 2013–2017 period.

The nonwhite population includes the following Census-defined races: black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and other Pacific Islander, some other race (not white), and two or more races.

Exhibit 36. Nonwhite Population as a Percent of Total Population, Troutdale, 2000 and 2013–2017

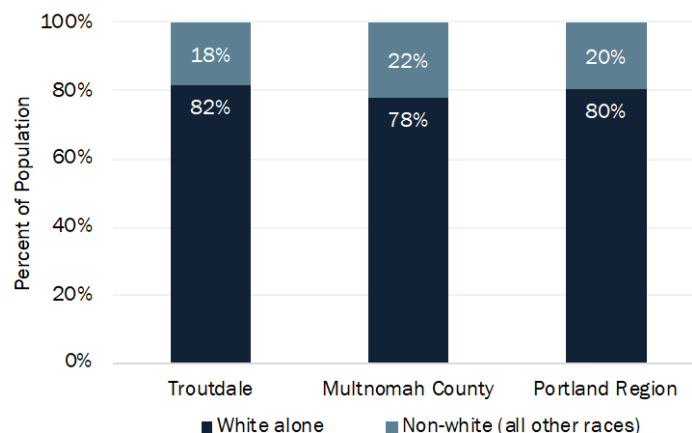
Source: U.S. Census Bureau, 2000 Decennial Census Table P008, 2013–2017 ACS Table B02001.



In the 2013–2017 period, Troutdale was less racially diverse than Multnomah County and the Portland region.

Exhibit 37. Nonwhite Population as a Percent of Total Population, Troutdale, Multnomah County, and the Portland Region, 2013–2017

Source: U.S. Census Bureau, 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.

Homelessness

Multnomah County's Point-in-Time homeless count decreased by about 4% (162 people) from 2017 to 2019.

Between 2013 and 2019, individuals who were homeless (and sheltered) decreased by 22%. Individuals who were homeless (and unsheltered) increased by 22%.

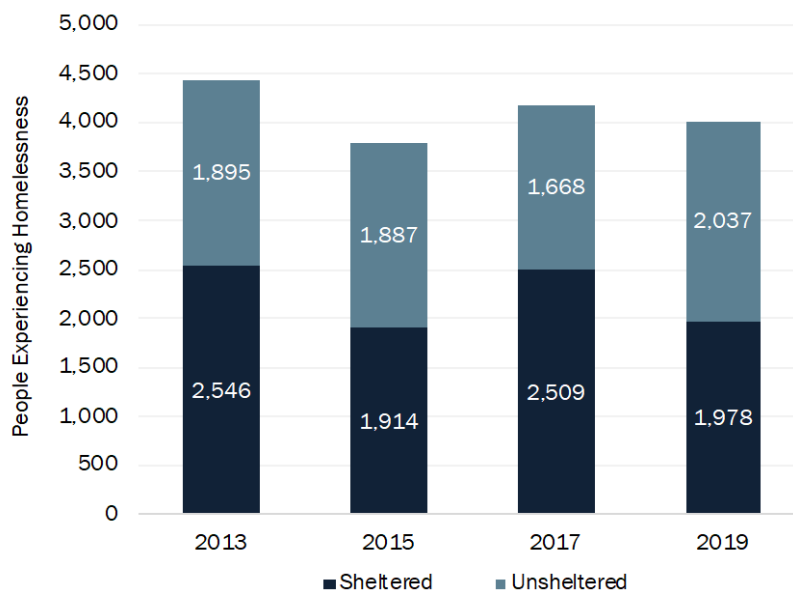
Exhibit 38. Number of Persons Homeless, Multnomah County, Point-in-Time Count, 2017 and 2019

Source: Multnomah County, Point-in-Time Count, January 2017, 2019.

4,177 Persons	4,015 Persons
2017	2019

Exhibit 39. Number of Persons Homeless by Living Situation, Multnomah County, Point-in-Time Count, 2013 through 2019

Source: Multnomah County, Point in Time Count, January 2013, 2015, 2017, 2019.



Household Size and Composition

Troutdale's households are larger than Portland region households. Troutdale's household composition shows that households in Troutdale are larger than Multnomah County and Portland region averages.

This section shows the following trends in household size and composition in Troutdale:

- **Households in Troutdale, on average, are larger than households in the Portland region.** The average household size in Troutdale is 2.80 persons, while the average household size in Clackamas, Multnomah, and Washington Counties is 2.58, 2.42, and 2.66 persons per household, respectively. The average household size for Latinx households in Troutdale is nearly 4 persons per household.
- **Troutdale has a smaller share of 1-person households and a larger share of family households, compared to Multnomah County and the Portland region.** Troutdale's share of 1-person households is 20%, compared to 32% in Multnomah County and 28% in the Portland region overall. The share of family households in Troutdale is 31%, compared to 25% in Multnomah County and 28% in the Portland region.

Troutdale's average household size was larger than that of the three counties covering the Portland region.

Exhibit 40. Average Household Size, Troutdale, Clackamas County, Multnomah County, and Washington County 2013–2017

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

2.80 Persons

Troutdale

2.58 Persons

Clackamas County

2.42 Persons

Multnomah County

2.66 Persons

Washington County

According to the two most recent Decennial Censuses, Troutdale's average household size for householders identifying as Latinx increased by 0.10 persons.

Exhibit 41. Average Household Size for Latinx Householder, Troutdale, 2000 and 2010

Source: U.S. Census Bureau, 2000 Summary File 1 Table H012H and 2010 Summary File 1 Table H12H.

3.98 Persons

Troutdale, 2010

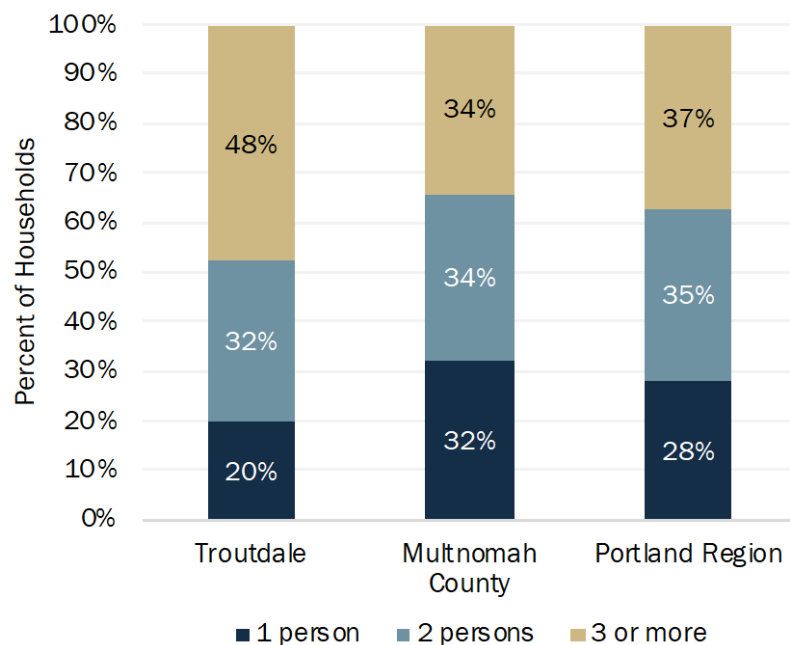
3.88 Persons

Troutdale, 2000

About 52% of Troutdale's households were 1 or 2-person households, compared to 66% of Multnomah County's, and 63% of the Portland region's households.

Exhibit 42. Household Size, Troutdale, Multnomah County, and Portland Region, 2013–2017

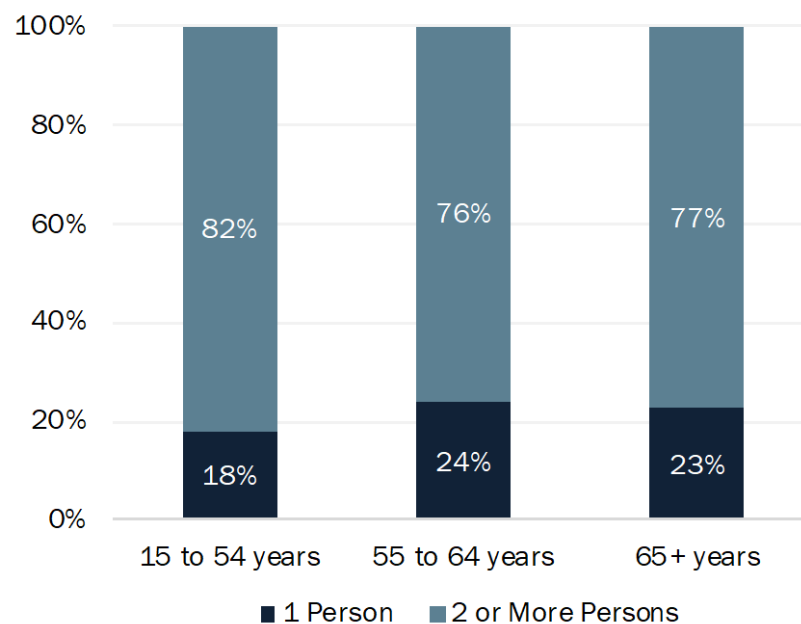
Source: U.S. Census Bureau, 2013–2017 ACS 5-year estimate, Table B25010.



The share of 1-person households in Troutdale increases with the age of the householder. About 18% of households in the “15 to 54 years” category are 1-person householders, compared to about 23% of households in the 65+ category.

Exhibit 43. Household Size by Age Category, Troutdale, 2013–2017

Source: U.S. Census Bureau, 2013–2017 ACS 5-year estimates, Table B25116.

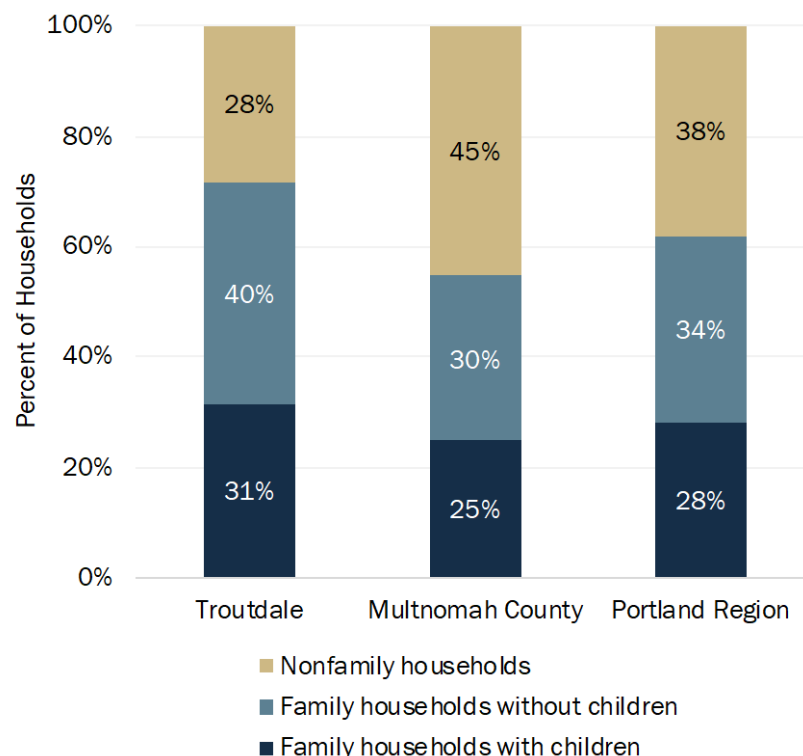


Over the 2013–2017 period, Troutdale had a household composition that differed from that of Multnomah County and the Portland region. Troutdale had the smallest share of nonfamily households (i.e., 1-person households and households composed of roommates) and the largest share of family households with children relative to comparison geographies.

Close to one-third of Troutdale’s households were family households with children.

Exhibit 44. Household Composition, Troutdale, Multnomah 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 relative to all households in Troutdale during the 2013–2017 period.

Exhibit 45. Households with One or More Occupants per Room, Troutdale, 2013–2017

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

4.2%

All Households

3.7%

Households, with white (alone) head of household

19.5%

Households, with Latinx head of household

Income of Troutdale Residents

Income is one of the key determinants in housing choice and households’ ability to afford housing. Income for residents living in Troutdale was higher than Multnomah County’s and the state’s median incomes but below that of the other two Portland region counties, Clackamas County and Washington County.

This section shows the following trends in income of Troutdale residents:

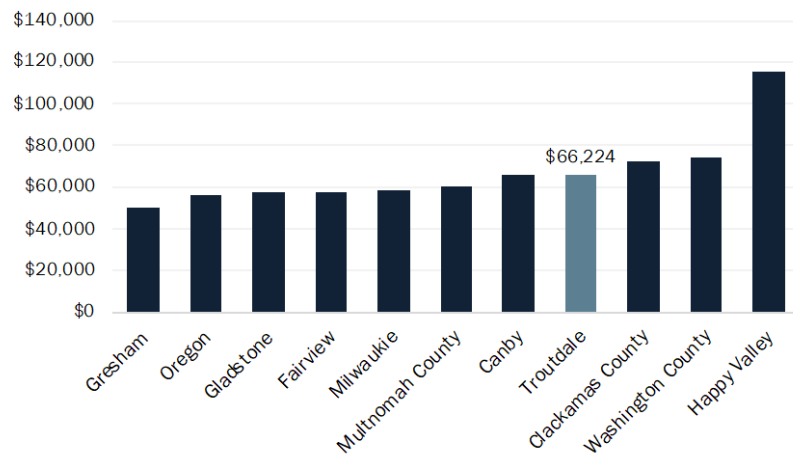
- **The median household income (MHI) in Troutdale is \$66,224.** This is higher than the MHI in Multnomah County and other cities near Troutdale, such as Gresham, Gladstone, Fairview, and Milwaukie.
- **Troutdale's MHI has decreased since 2000, similar to trends across the region.** After adjusting for inflation, Troutdale's MHI decreased by 23% since 2000. Other counties in the Portland region (Clackamas, Multnomah, and Washington Counties) also saw decreases of 7%, 3%, and 6%, respectively.

Over the 2013–2017 period, Troutdale's median household income (MHI) was above that of Multnomah County's but below Clackamas County's, Washington County's, and Happy Valley's.

Troutdale's MHI was \$5,855 above Multnomah County's MHI (\$60,369), \$6,184 below Clackamas County's MHI (\$72,408), \$7,809 below Washington County's MHI (\$74,033), and \$49,494 below Happy Valley's MHI (\$115,718).

Exhibit 46. Median Household Income, Troutdale, Multnomah County, and Comparison regions, 2013–2017

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



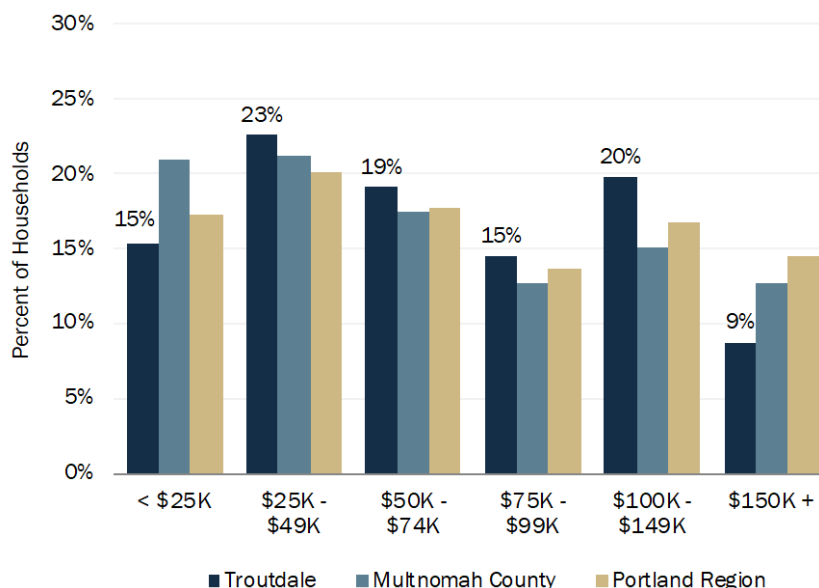
Troutdale had a comparable share of higher-earning households during the 2013–2017 period relative to Multnomah County and the Portland region.

About 38% of Troutdale’s households earned less than \$50,000 per year, compared to 42% of Multnomah County’s households and 37% of the Portland region’s households.

About 43% of Troutdale’s households earned \$75,000 or more per year, compared to 41% of Multnomah County’s households and 45% of the Portland region’s households.

Exhibit 47. Household Income, Troutdale, Multnomah County, and the Portland Region, 2013–2017

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



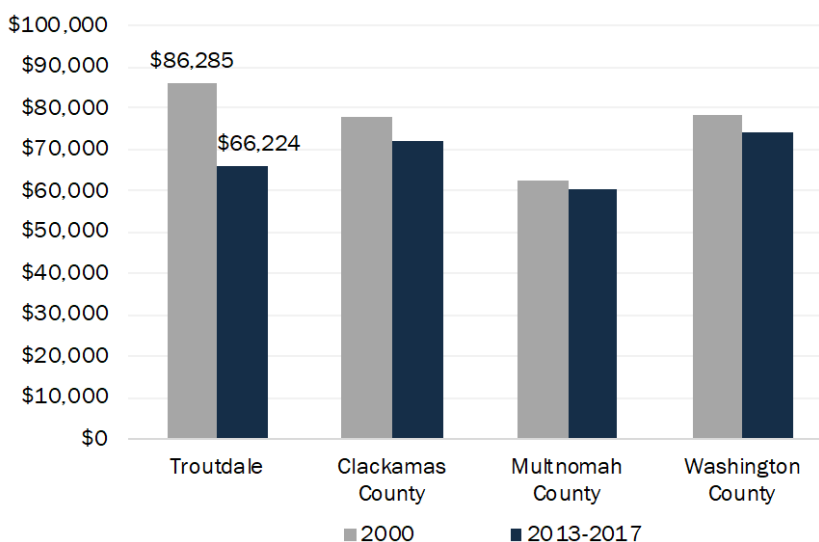
After adjusting for inflation, Troutdale’s median household income (MHI) decreased by about 23%, from \$86,285 in 1999 to \$66,224 in the 2013–2017 period.

In this same time, Clackamas County’s MHI decreased by 7%, Multnomah County’s MHI decreased by 3%, and Washington County’s MHI decreased by 6%.

Exhibit 48. Change in Median Household Income (Inflation-Adjusted 2017 dollars), Troutdale, Clackamas County, Multnomah County, and Washington 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, CPI.

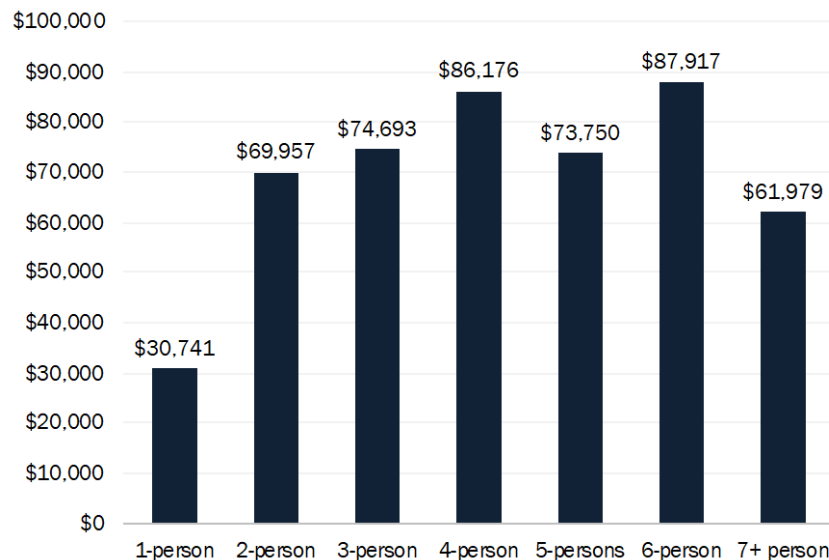
Note: Household income data reported by each household in the 2000 Decennial Census is from 1999, hence income estimates are inflation-adjusted from 1999 to 2017.



The median household income for a 4-person and 6-person household were close to two times the median household income for a 1-person household in Troutdale.

Exhibit 49. Median Household Income by Household Size, Troutdale, 2013–2017

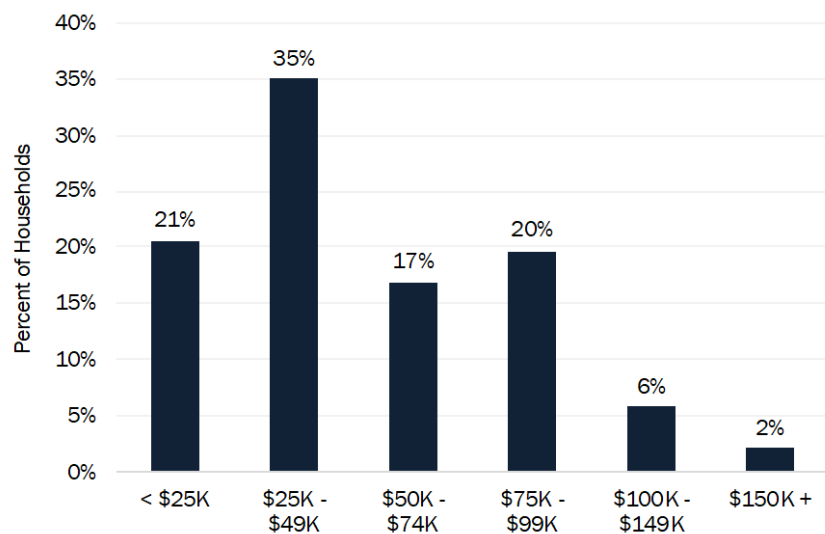
Source: U.S. Census Bureau, 2013–2017 ACS 5-year estimate, Table B19019.



The majority of Troutdale households with a Latinx head of household earned less than \$50,000 per year (56%).

Exhibit 50. Household Income by Latinx Head of Household, Troutdale, 2013–2017

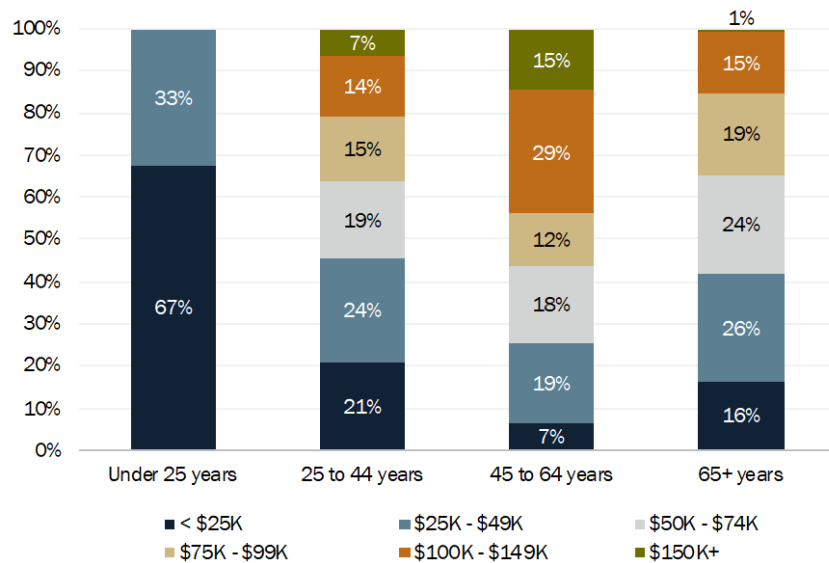
Source: U.S. Census Bureau, 2013–2017 ACS 5-year estimate, Table B19001I.



In the 2013–2017 period, 100% of Troutdale households with a householder 25 and younger earned less than \$50,000 per year, compared to 45% of households with a householder 25 to 44 years of age, and 42% of households with a householder 65 years and older.

Exhibit 51. Household Income by Age of Householder, Troutdale, 2013–2017

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



Commuting Trends

Troutdale is part of the complex, interconnected economy of the Portland region. Of the more than 7,400 people who work in Troutdale, 94% of workers commute into Troutdale from other areas, most notably Portland, Gresham, Vancouver, and Fairview. Nearly 7,400 residents of Troutdale commute out of the city for work, many of them to Portland.

Troutdale is part of an interconnected regional economy.

Nearly 7,000 people commuted into Troutdale for work, and nearly 7,400 people living in Troutdale commuted out of the city for work.

Exhibit 52. Commuting Flows, Troutdale, 2015

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



About 6% of people who worked at businesses located in Troutdale also lived in Troutdale.

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

Exhibit 53. Places Where Workers at Businesses in Troutdale Live, 2015

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



About 43% of Troutdale residents worked in Portland.

A little over 6% of Troutdale residents lived and worked in Troutdale.

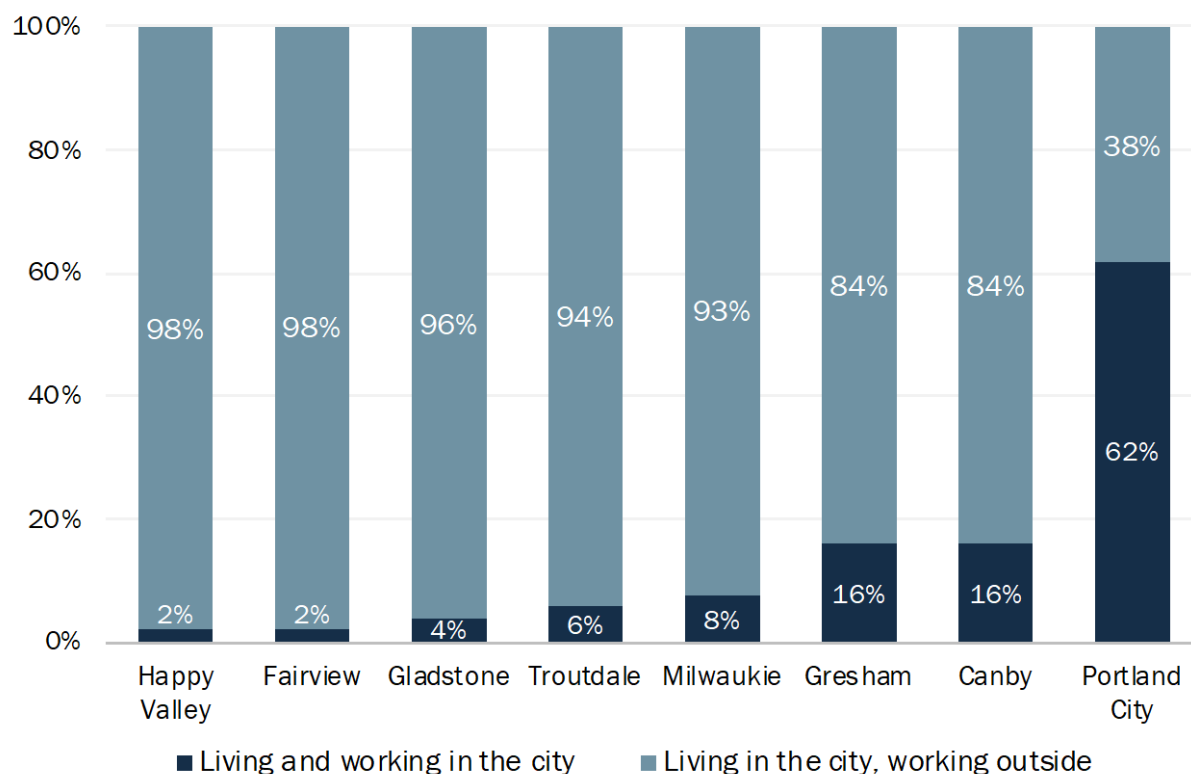
Exhibit 54. Places Where Troutdale Residents were Employed, 2015

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



Exhibit 55. Commuting Flows of Residents, Troutdale Relative to Comparison Geographies, 2015

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

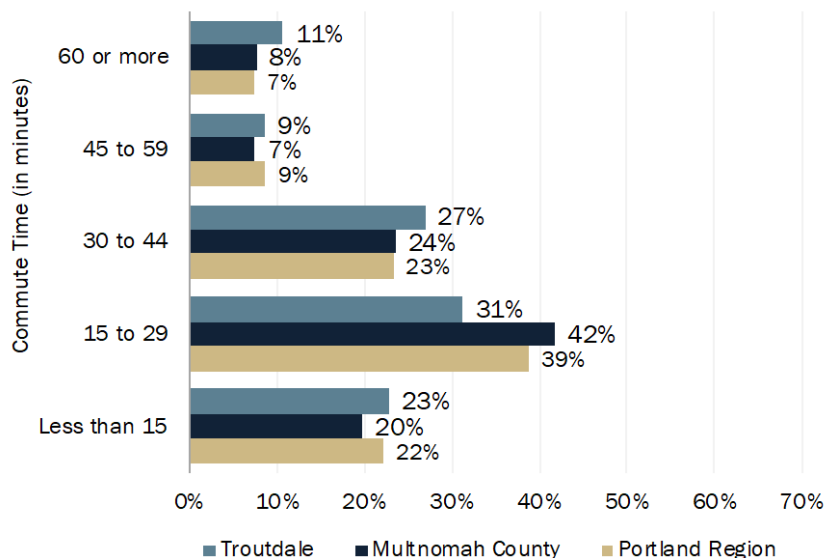


During the 2013–2017 period, the majority of Troutdale residents (54%) had a commute time that took less than 30 minutes.

Comparatively, 62% of Multnomah County residents and 61% of Portland region residents had a commute time of less than 30 minutes.

Exhibit 56. Commute Time by Place of Residence, Troutdale, Multnomah County, and the Portland Region, 2013–2017

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



Regional and Local Trends Affecting Affordability in Troutdale

This section describes changes in sales prices, rents, and housing affordability in Troutdale. It uses cities in the region, such as Canby, Fairview, Gladstone, Gresham, Happy Valley, and Milwaukie as well as the three counties comprising the Portland region as comparisons.

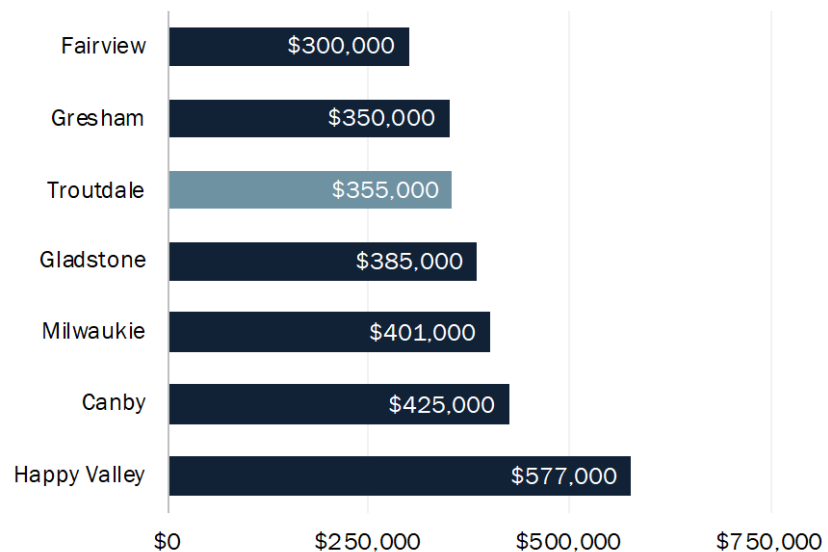
Changes in Housing Costs

With a median sales price of \$355,000 in August 2019, Troutdale's housing sales were slightly higher than some comparison cities in this analysis, but below sales prices of other cities. Troutdale's housing prices grew along with comparison cities over the August 2015 to August 2019 analysis period. Between 2016 and 2019, sales of townhomes in Troutdale ranged from about \$220,000 to \$370,000, and sales of single-family detached homes on small lots (less than 5,000 square feet) ranged from \$225,000 to \$327,000.

The median home sales price in Troutdale in August 2019 was higher than Fairview and Gresham, but lower than Gladstone, Milwaukie, Canby, and Happy Valley.

Exhibit 57. Median Home Sale Price, Troutdale and Comparison Cities, August 2019

Source: Property Radar.

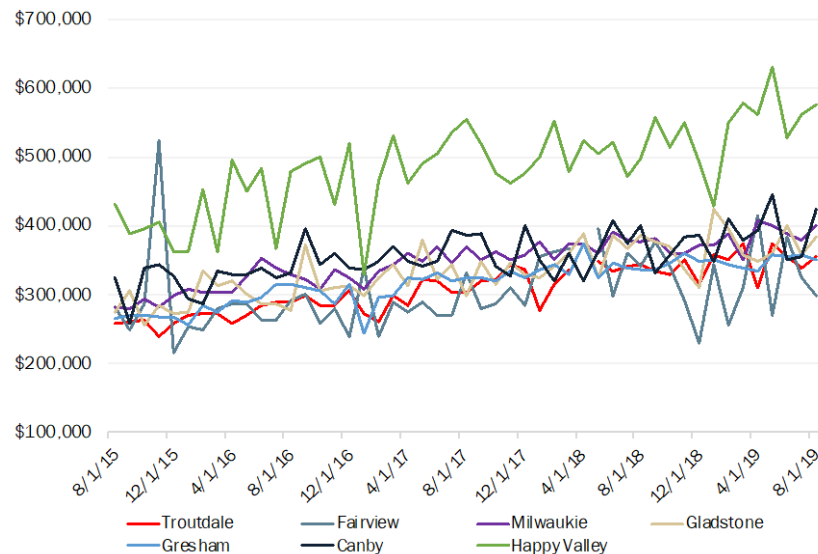


Between August 2015 and August 2019, home sales prices in Troutdale followed similar trends to other nearby cities, with the exception of Happy Valley.

Troutdale's sales price increased from \$259,000 in 2015 to \$355,000 in 2019, an increase of \$96,000 or 37%.

Exhibit 58. Median Home Sales Price, Troutdale and Comparison Cities, August 2015–August 2019

Source: Property Radar.



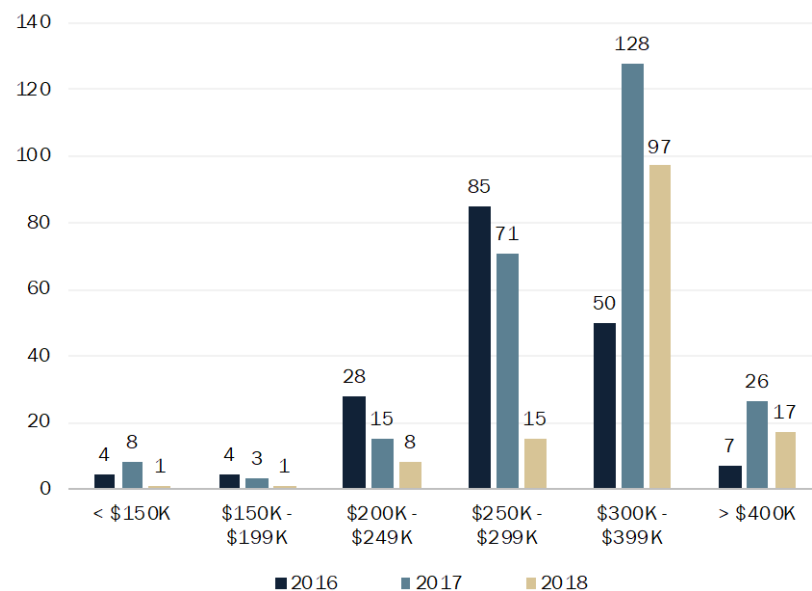
In 2017 to 2018, the largest share of homes sold in Troutdale were between \$300,000 and \$400,000.

The largest home sale category in 2016 was for homes priced between \$250,000 and \$300,000.

In 2017, 51% of Troutdale homes sold were between the price of \$300,000 and \$400,000. In 2018, the share of homes sold in this price category was 70%.

Exhibit 59. Distribution of Home Sale Prices, Troutdale, 2016–2018

Source: Property Radar.



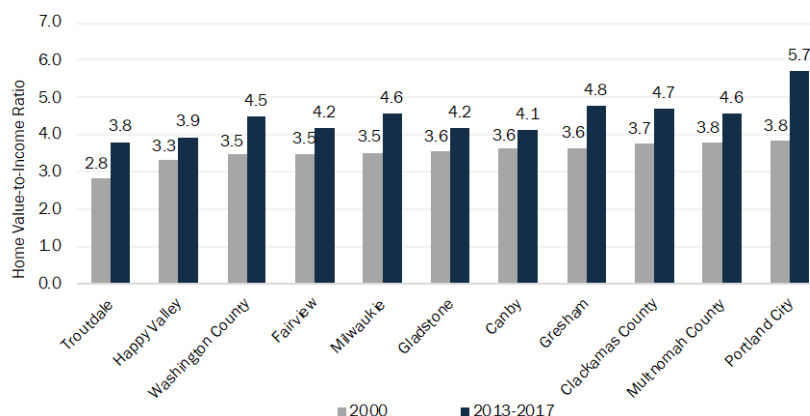
Since 2000, housing costs in Troutdale have increased faster than household incomes.

The household reported median value of a house in Troutdale was 2.8 times the median household income (MHI) in 2000 and 3.8 times MHI in 2013–2017.

The decline of housing affordability was most extreme in Gresham and Portland relative to Troutdale; however, Troutdale's affordability decline was still one of the largest compared to all other cities during 2013–2017.

Exhibit 60. Ratio of Median Housing Value to Median Household Income, Troutdale, Clackamas County, Multnomah County, Washington County, and Comparison Cities, 2000 and 2013–2017³⁹

Source: U.S. Census Bureau, 2000 Decennial Census, Tables HCT012 and H085, and 2013–2017 ACS, Tables B19013 and B25077.



Rental Costs

Median multifamily rents in Troutdale and Multnomah County were about \$1,100 for the 2013–2017 period. The following charts show gross rent (which includes the cost of rent plus utilities) for Troutdale in comparison to Clackamas County, Multnomah County, Washington County, and the Portland region.

This section shows the following trends in rental costs of Troutdale residents:

- **The median gross rent in Troutdale is \$1,077.** This is below the median gross rent of each Portland region county.
- **Over 2013 to July 2019, the average asking rent for multifamily units increased by 31% in Troutdale.** This translates to an average growth rate of 4.6% per year. On a per square foot basis, the average asking rent for multifamily units in Troutdale increased from \$1.06 in 2013 to \$1.39 in July 2019.

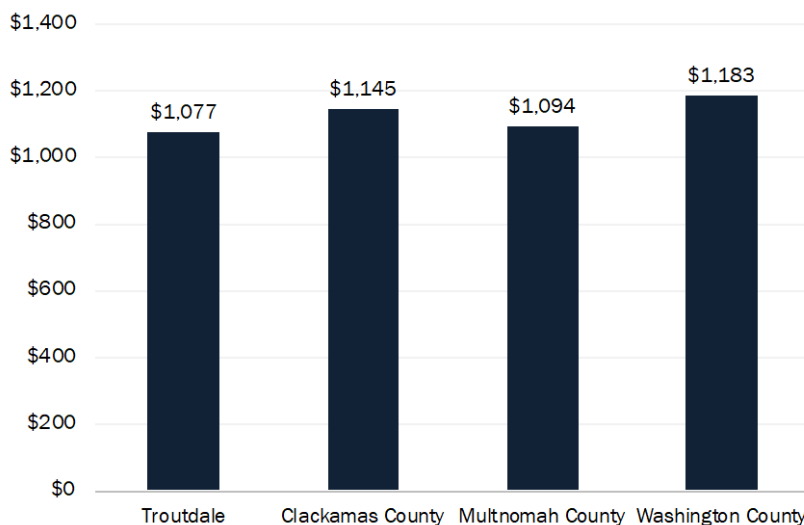
³⁹ This ratio compares the median value of housing in Troutdale (and other places) to the median household income. Inflation-adjusted median owner values in Troutdale increased from \$162,400 in 2000 to \$252,500 in 2013–2017. Over the same period, inflation-adjusted median income decreased from \$84,227 to \$66,224.

The median gross rent in Troutdale was \$1,077 in the 2013–2017 period.

Rent in Troutdale was comparable to that of Portland region counties. The largest rent difference was between Troutdale and Washington County at \$106.

Exhibit 61. Median Gross Rent, Troutdale, Clackamas County, Multnomah County, and Washington County, 2013–2017

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

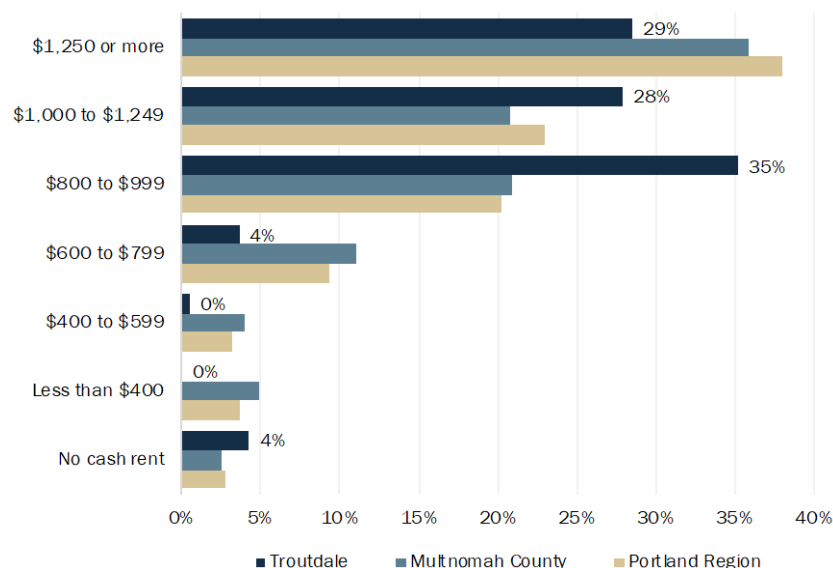


The majority of Troutdale renter households (57%) paid more than \$1,000 per month in rent.

At the higher end of gross rent paid at \$1,250 or more, the share of Troutdale residents paying this amount (29%) is below that of both Multnomah County (36%) and Portland region renters (38%).

Exhibit 62. Gross Rent, Troutdale, Multnomah County, and the Portland Region, 2013–2017

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

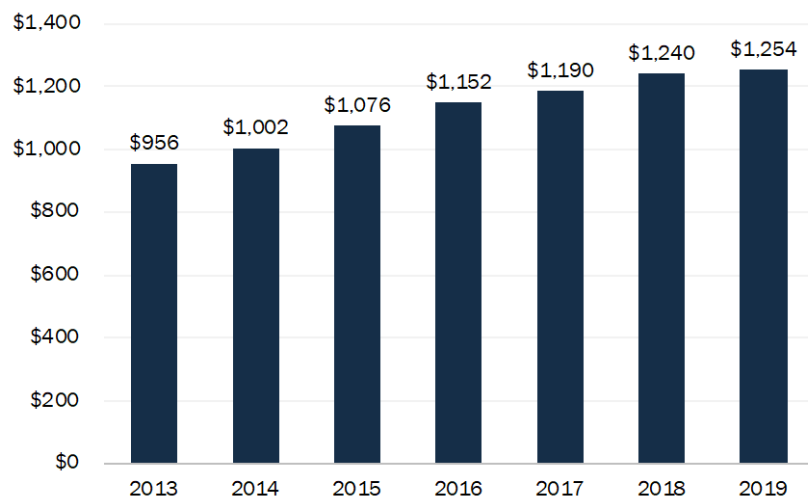


Troutdale's average asking multifamily rent per unit increased by \$298, from \$956 in 2013 to \$1,254 in July 2019.

In comparison, Multnomah County's average asking multifamily rent was higher than Troutdale's, at \$1,306 per unit in July 2019.

Exhibit 63. Average Asking Multifamily Rent Per Unit, Troutdale, 2013 through July 2019

Source: CoStar.

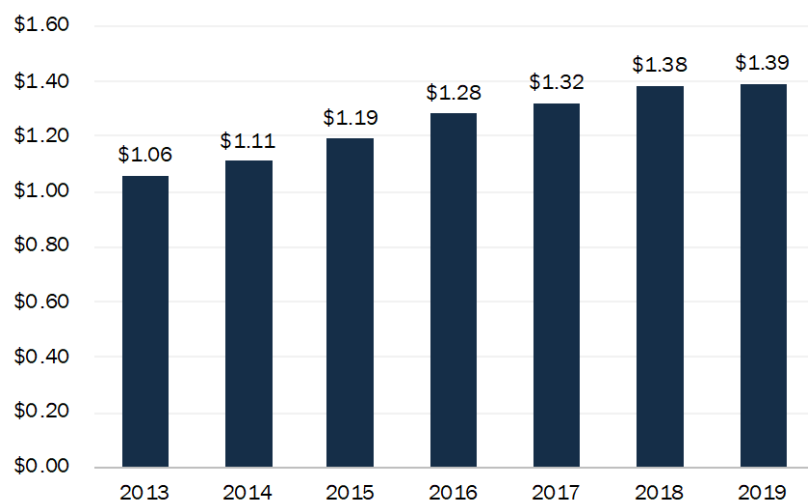


Troutdale's average asking multifamily rent per square foot has increased approximately 31% over 2013 to July 2019.

The average asking multifamily rent per square foot in Multnomah County was \$1.72, about \$0.33 higher than Troutdale in July 2019.

Exhibit 64. Average Asking Multifamily Rent per Square Foot, Troutdale, 2013 through July 2019

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 38% of Troutdale's households (renters and homeowners) are cost burdened, of which 16% are severely cost burdened. About 58% of renter households (households who rent) are cost burdened, compared to 27% of homeowners (households who own their own home). Fifty-six percent of households in Troutdale are rent-burdened households.⁴⁰ Across all households, both renter-occupied and owner-occupied, Troutdale has a slightly smaller share of cost-burdened households than Multnomah County, but a slightly larger share of cost-burdened households than the Portland region.

This section shows the following trends in housing affordability for Troutdale residents:

- **More than one-third of all Troutdale households (renter and owner-occupied) were cost burdened in 2013–2017.** Relative to comparison cities, Troutdale has a higher cost-burden rate than Happy Valley, Canby, Milwaukie, and Fairview. Gresham and Gladstone have cost-burden rates higher than Troutdale.
- **Over the 2000 to 2013–2017 analysis period, the proportion of cost-burdened households in Troutdale grew.** Cost-burdened Troutdale households increased approximately six percentage points, from 32% in 2000 to 38% in 2013–2017.
- **Troutdale renters were more cost burdened than homeowners in 2013–2017.** More than half (58%) of Troutdale renters were cost burdened compared to about one-quarter (26%) of homeowners.
- **A family of four earning 100% of the median family income (MFI) in Multnomah County was \$87,900 in 2018.** Over half (54%) of Troutdale households were lower income earners, taking home incomes below 80% of the median.

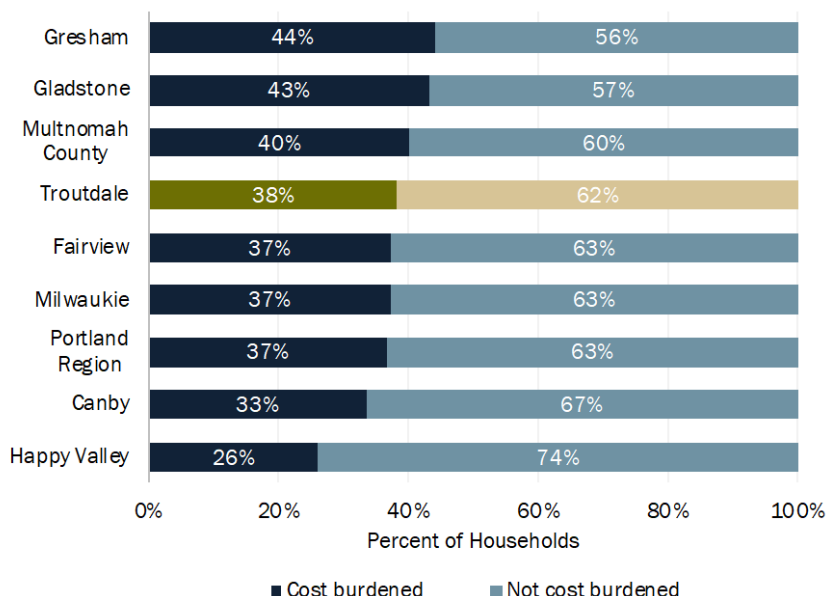
⁴⁰ Cities with populations greater than 10,000 residents are required, per HB 4006, to assess "rent burden" if more than 50% of renters are cost burdened. As of the 2013–2017 period, 56% of total renter households in Troutdale were cost burdened. Upon further assessment, we found that 38% of Troutdale's households (renters and homeowners) were cost-burdened renters (households that pay more than 30% of their income on housing).

Overall, about 38% of all households in Troutdale were cost burdened.

During the 2013–2017 period, Troutdale had a cost-burden rate comparable to Fairview (37%), Milwaukie (37%), the Portland region (37%), and Multnomah County (40%).

Exhibit 65. Housing Cost Burden, Troutdale, Multnomah County, the Portland Region, and Comparison Areas, 2013–2017

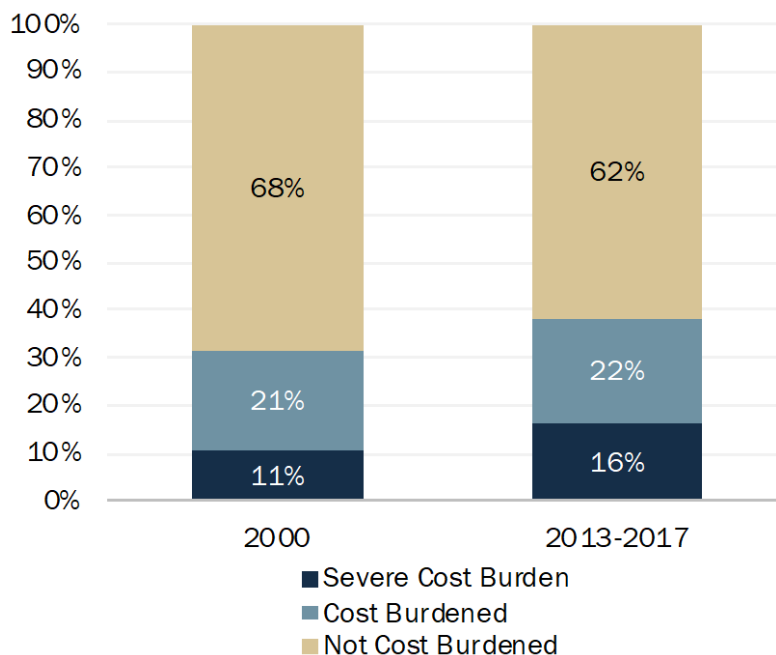
Source: U.S. Census Bureau, 2013–2017 ACS Tables B25091 and B25070.



From 2000 to the 2013–2017 period, the share of cost-burdened and severely cost-burdened households in Troutdale grew by 6 percentage points, from 32% in 2000 to 38% in 2013–2017.

Exhibit 66. Change in Housing Cost Burden, Troutdale, 2000 to 2013–2017

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

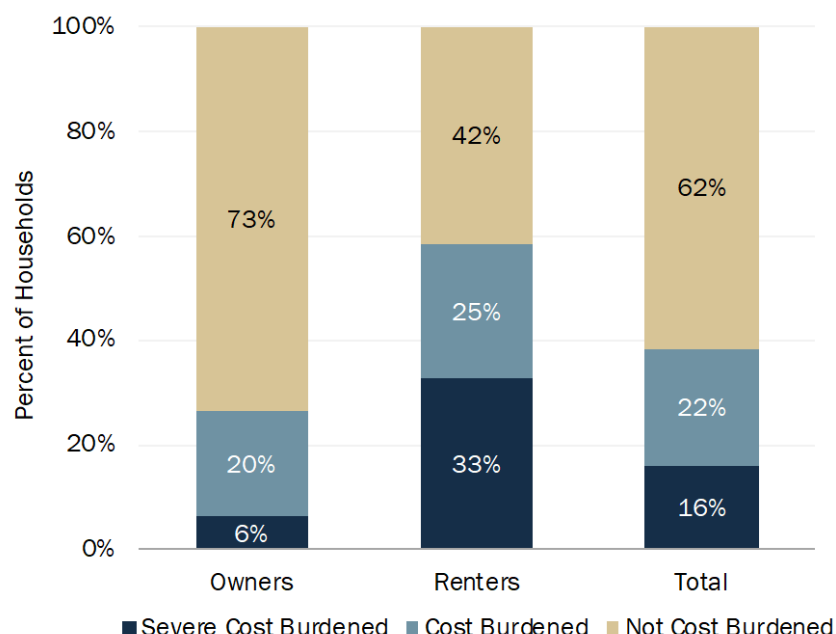


Troutdale renters were much more likely to be cost burdened than homeowners during the 2013–2017 period.

In the 2013–2017 period, about 58% of Troutdale’s renters were cost burdened or severely cost burdened, compared to 26% of homeowners.

Exhibit 67. Housing Cost Burden by Tenure, Troutdale, 2013–2017

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

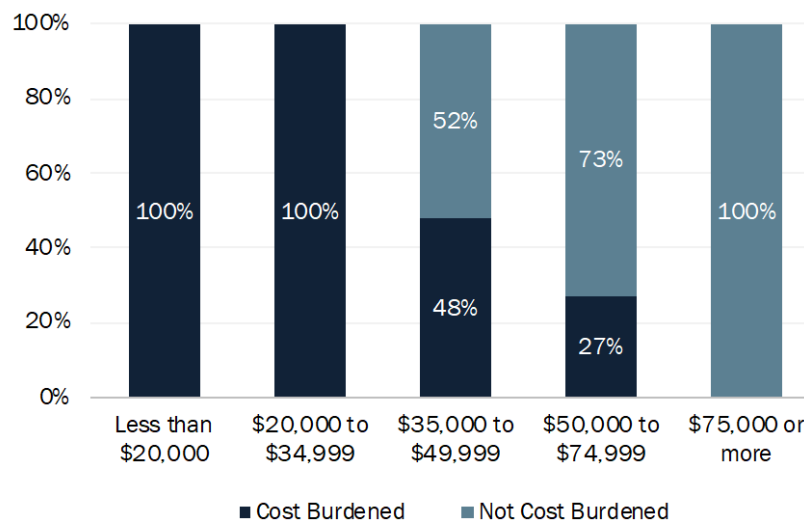


During the 2013–2017 period, all renter households earning less than \$35,000 per year were cost burdened.

Nearly half (48%) of all renter households earning between \$35,000 and \$50,000 per year were cost burdened.

Exhibit 68. Cost-Burdened Renter Households, by Household Income, Troutdale, 2013–2017

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

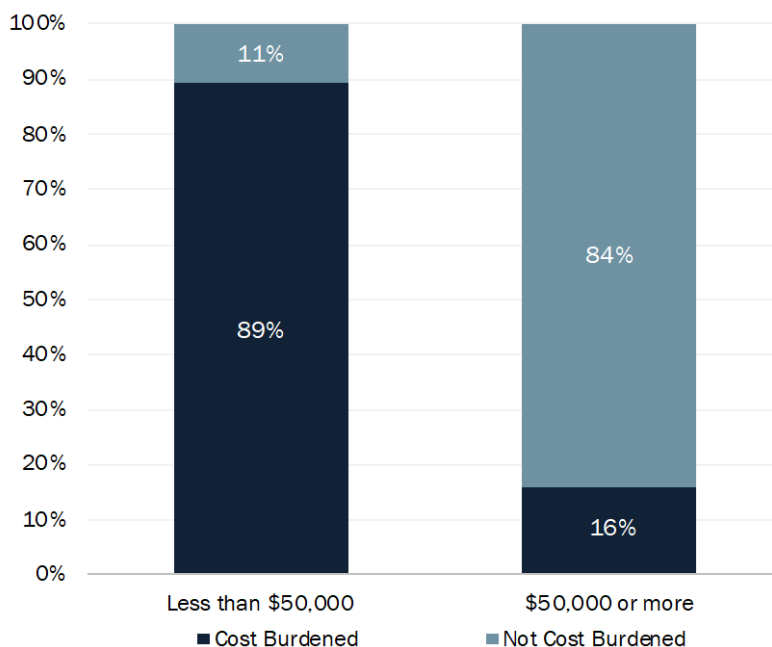


During the 2013–2017 period, 89% of owner households with a mortgage and earning less than \$50,000 per year were cost burdened.

About 16% of owner householders with a mortgage and earning \$50,000 or more were cost burdened.

Exhibit 69. Cost-Burdened Owner Households with a Mortgage by Household Income, Troutdale, 2013–2017

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

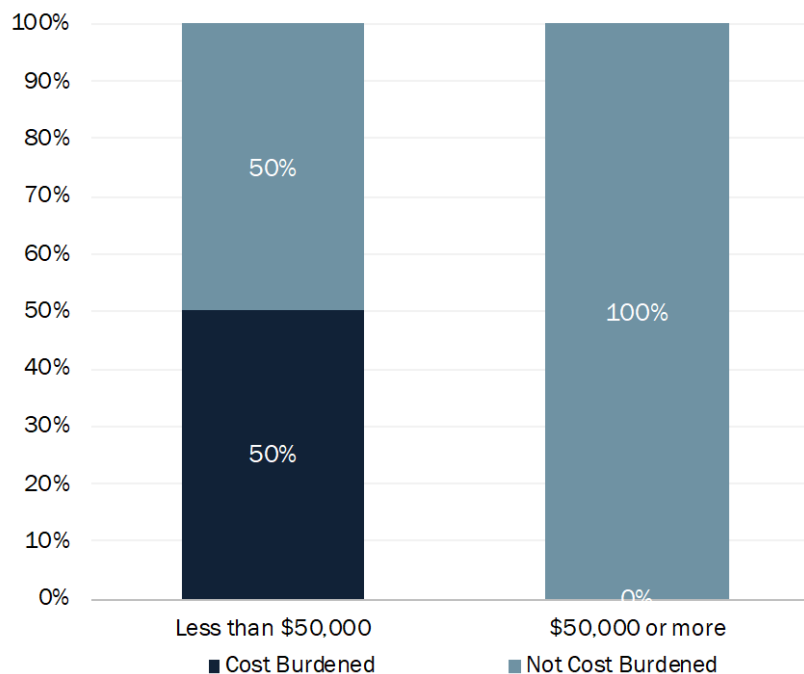


During the 2013–2017 period, all owner households without a mortgage and earning \$50,000 or more per year were not cost burdened.

About 50% of owner householders without a mortgage and earning less than \$50,000 were cost burdened.

Exhibit 70. Cost-Burdened Owner Households without a Mortgage by Household Income, Troutdale, 2013–2017

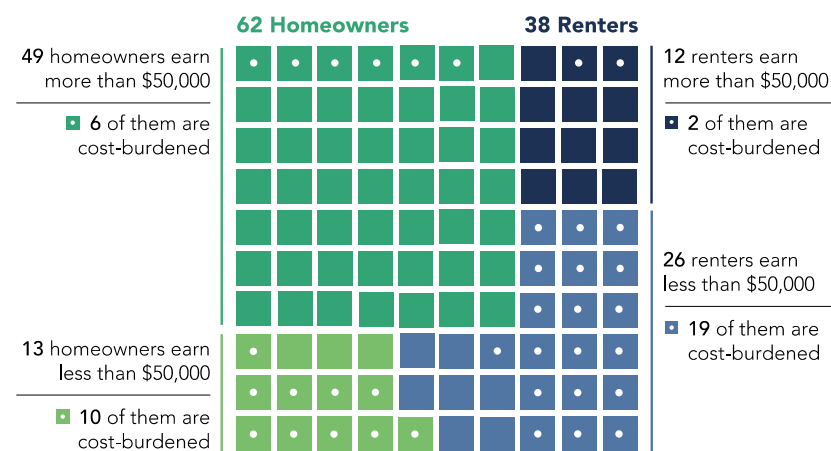
Source: U.S. Census Bureau, 2013–2017 ACS Table B25074.



If all of Troutdale's households were 100 residents, 26 households would be renters earning \$50,000 or less per year; 19 of these households (73%) would be cost burdened.

Exhibit 71. Illustration of Cost Burden: If All of Troutdale'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 analysis of housing and transportation cost burden.

Residents in the Gresham, Wood Village, Fairview, and Troutdale region spend approximately 44% of their household income on housing and transportation costs.

Compared to the Metro Region, Gresham, Wood Village, Fairview, and Troutdale residents spend about 5 percentage points more on housing and transportation costs.

Using Metro's definition for cost burdened, about 19% of households in Gresham, Wood Village, Fairview, and Troutdale are forecast to be cost burdened by 2035, four percentage points higher than the Metro region.

Exhibit 72. Average Cost of Transportation and Housing as a Percent of Income, Gresham, Wood Village, Fairview, and Troutdale, and the Metro Region, 2010

Source: 2014 Metro Urban Growth Report, Appendix 12.

2010	44%	39%
	\$1,747 per month Gresham, Wood Village, Fairview, and Troutdale	\$2,300 per month Metro UGB

Exhibit 73. Percent of Households with Housing and Transportation Cost Burden, Gresham, Wood Village, Fairview, and Troutdale, and the Metro Region, 2010

Source: 2015 Metro Urban Growth Report, Appendix 12.

2010	23%	17%
	11,661 households Gresham, Wood Village, Fairview, and Troutdale	104,100 households Metro UGB

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 nondiscretionary 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 nondiscretionary 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 they 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 two-bedroom apartment in Multnomah County was \$1,441 in fiscal year 2019.

Exhibit 74. HUD Fair Market Rent (FMR) by Unit Type, Multnomah County, Fiscal Year 2019

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

\$1,131	\$1,234	\$1,441	\$2,084	\$2,531
Studio	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom

A household must earn at least \$27.71 per hour to afford a two-bedroom unit at Fair Market Rent (\$1,441) in Multnomah County.

Exhibit 75. Affordable Housing Wage, Multnomah County, Fiscal Year 2019

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

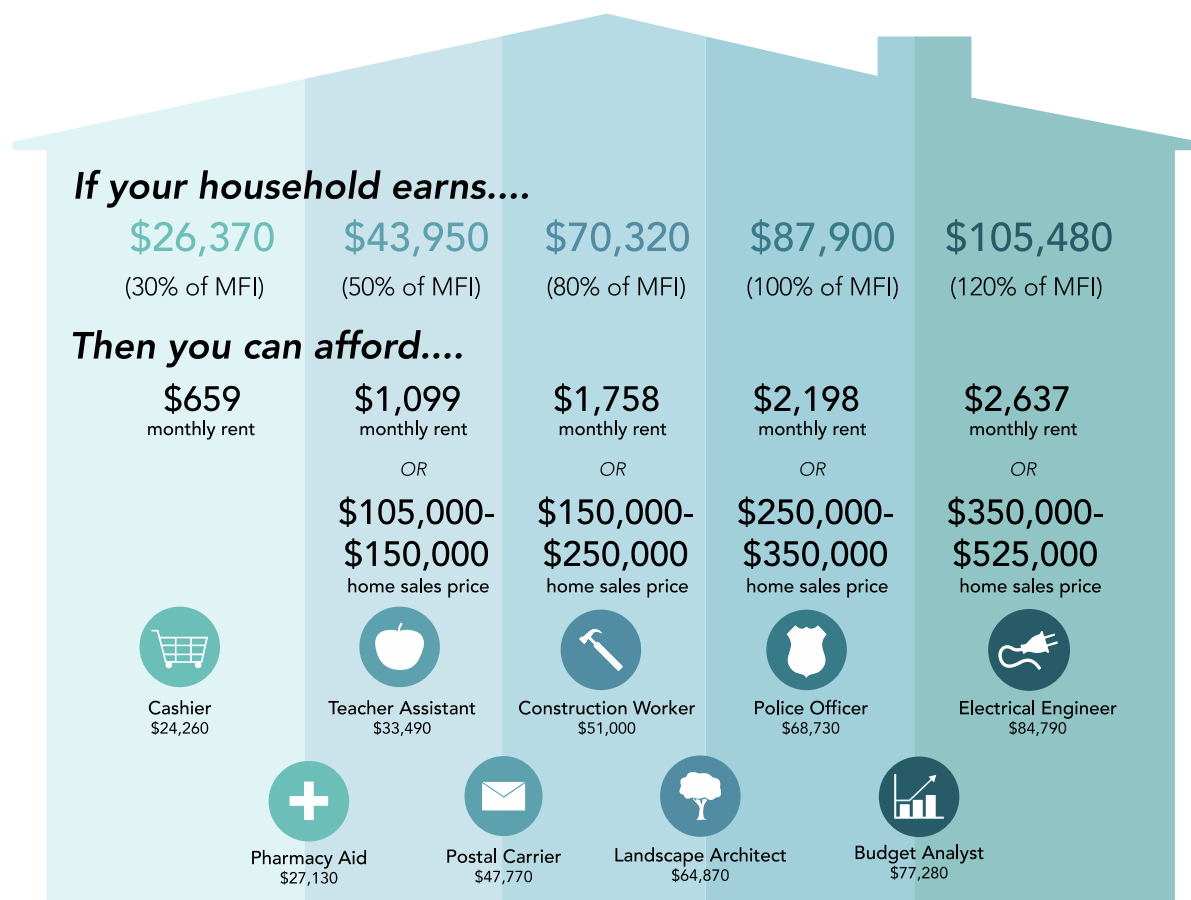
\$27.71 per hour

Affordable housing wage for two-bedroom unit in Multnomah County

Exhibit 76 shows housing affordability by median family income (MFI). A household of four people earning 100% of median family income in Multnomah County (about \$87,900 per year)⁴¹ can afford a monthly rent of about \$2,198, or a home roughly valued between \$250,000 and \$350,000.

Exhibit 76. Financially Attainable Housing, by Median Family Income (MFI) for a Family of Four for Multnomah County (\$87,900), Troutdale, 2018

Source: U.S. Department of Housing and Urban Development, Multnomah County, Fiscal Year 2019. Bureau of Labor Services, 2017, for Portland MSA.



⁴¹ The median family income is for the Portland-Vancouver-Hillsboro metropolitan area. It includes Multnomah, Washington, and Clackamas Counties in Oregon and Clark County in Washington.

Exhibit 77 shows the percentage and number of households in Troutdale by the MFI categories shown in Exhibit 76.

About 32% of Troutdale's households had incomes less than \$43,950 (50% MFI) and cannot afford a two-bedroom apartment at Multnomah County's Fair Market Rent (FMR) of \$1,441.

Exhibit 77. Share of Households, by Median Family Income (MFI) for Multnomah County (\$87,900), Troutdale, 2018

Source: U.S. Department of Housing and Urban Development, Multnomah County, Fiscal Year 2019; U.S. Census Bureau, 2013–2017 ACS Table 19001.

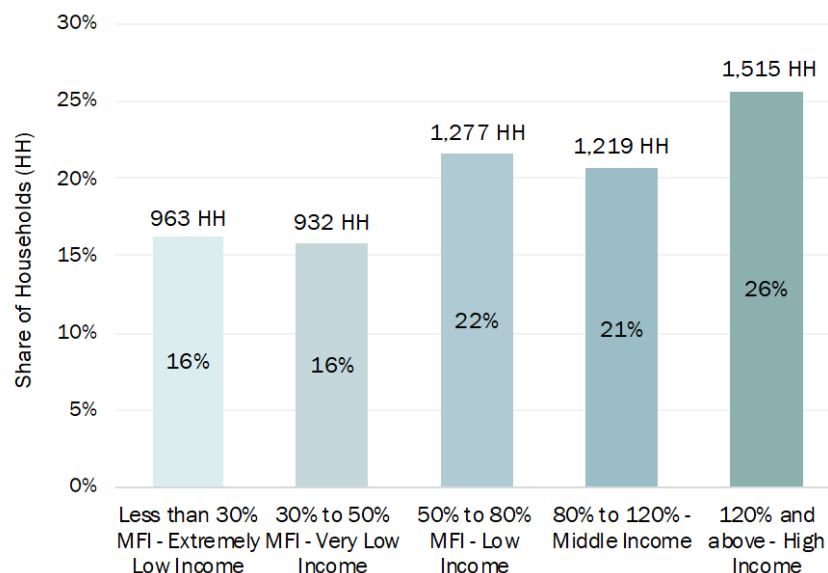


Exhibit 78 illustrates the types of financially attainable housing by income level in Multnomah County. Generally speaking, lower-income households will be renters occupying existing housing. Newly built housing will be a combination of renters (most likely in multifamily housing) and homeowners. The 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 78. Types of Financially Attainable Housing by Median Family Income (MFI) for Multnomah County (\$87,900), Troutdale, 2018

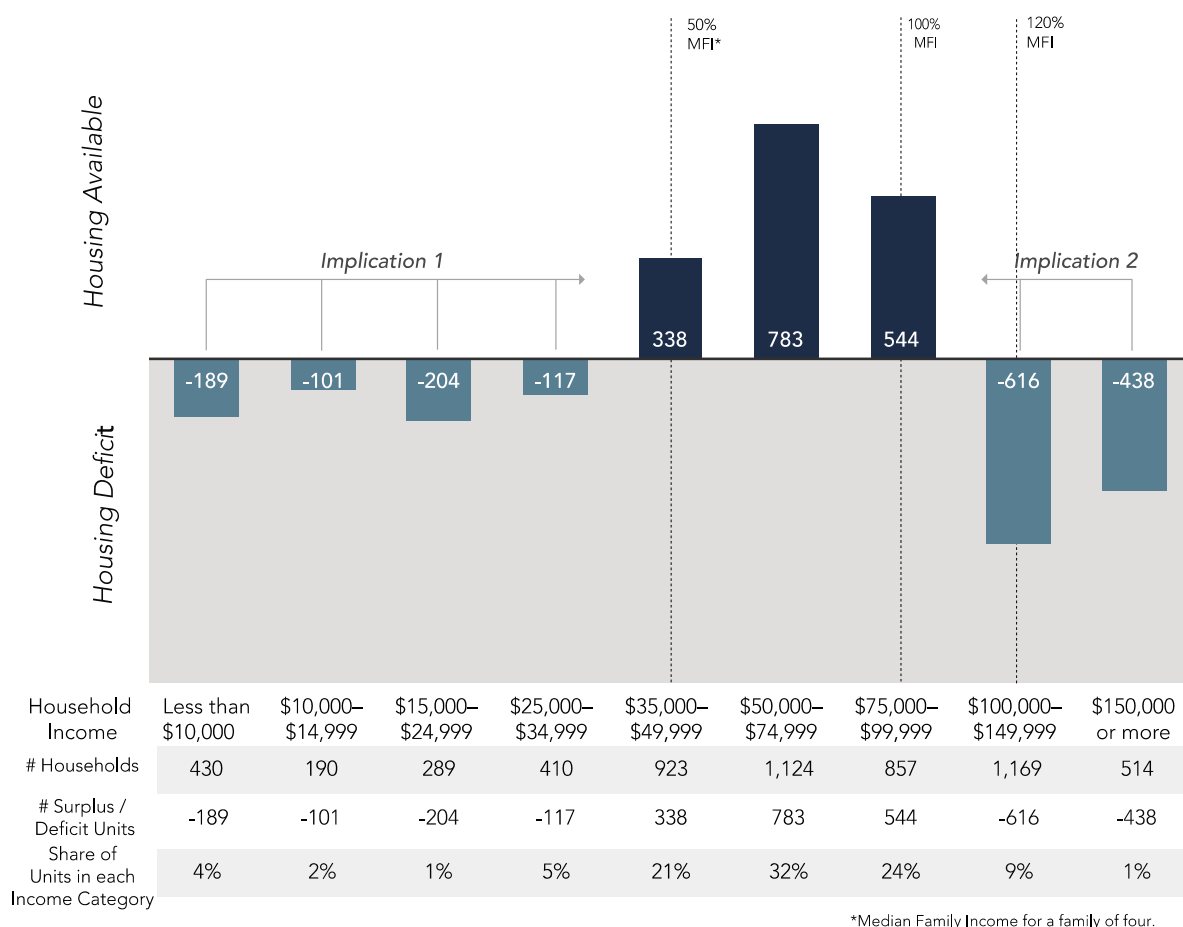
Source: U.S. Department of Housing and Urban Development, Multnomah County, Fiscal Year 2019.



Exhibit 79 compares the number of households by income with the number of units affordable to those households in Troutdale. Troutdale currently has a deficit of housing affordable to households earning less than \$35,000. The types of housing that Troutdale 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). Troutdale also shows a need for higher-amenity housing types for households earning more than \$100,000 per year or more. Higher-amenity housing types include single-family detached housing, single-family attached housing (e.g., townhomes and row houses), and higher-end multifamily products (including condominiums).

Exhibit 79. Affordable Housing Costs and Units by Income Level, Troutdale, 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.



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.

Summary of the Factors Affecting Troutdale'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. On average, people in that age group will also have 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."⁴² Thus, simply looking at the long wave of demographic trends can provide good information for estimating future housing demand.

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 Troutdale over the next 20 years:

- **Growth in housing will be driven by growth in households.** The number of households in Troutdale's city limits is forecast to grow from 5,824 households to 6,544 households, an increase of 720 households between 2020 and 2040.⁴³
- **Housing affordability is a growing challenge in Troutdale.** It is a challenge in most of the region in general, and Troutdale is affected by these regional trends. Troutdale is, along with Gresham, where some of the relatively affordable housing is located within the Portland region. As a result, Troutdale has a higher concentration of lower-income households than more affluent communities in the Portland region. Even so, housing prices are increasing faster than incomes in Troutdale and across the Portland region, which is consistent with state and national challenges. About 22% of the City's housing stock (22%) is multifamily housing, but over half of renter households are cost

⁴² See *Planning for Residential Growth: A Workbook for Oregon's Urban Areas* (June 1997).

⁴³ This forecast is based on Metro's 2040 *Population Distributed Forecast* (2016) for Troutdale from 2015 (extrapolated to 2020) to 2040 period, shown in Exhibit 27.

burdened. Troutdale'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 Troutdale'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 Troutdale 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., duplexes 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 Troutdale's housing market, however, will depend on market demand for these types of housing in Multnomah County. Troutdale is starting to see development of more multifamily and attached single-family housing, as illustrated by the ongoing development shown in Exhibit 1.

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

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

- *The Baby Boomer's population is continuing to age.* By 2040, people 60 years and older will account for 22% of the population in Multnomah County (up from 19% in 2020). The changes that affect Troutdale'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 Troutdale.

- *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 Troutdale, as many Millennials prefer to live in more urban environments.⁴⁴ The decline in homeownership among the Millennial generation has more to do with financial barriers rather than the preference to rent.⁴⁵
- *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 the Latinx population in the western United States is likely to be higher. The Latinx population currently accounts for about 14% of Troutdale'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, growth in this group will also drive demand for affordable housing, both for ownership and renting.⁴⁶

⁴⁴ Choi, Hyun June; Zhu, Jun; Goodman, Laurie; Ganesh, Bhargavi; Storchak, 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

⁴⁵ *Ibid.*

⁴⁶ 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 income 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.

In summary, an aging population, increasing housing costs (although lower than the region), housing affordability concerns for Millennials and the Latinx population, and other variables are factors that support the 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 of Millennials and the Latinx population will drive demand for affordable housing types, including demand for affordable single-family units (many of which may be ownership units), affordable multifamily units (many of which may be rental units), and 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 a 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.

5. Housing Need in Troutdale

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 Troutdale over the 20-year planning period, (2) information about Troutdale's housing market relative to Multnomah County and the Portland region, and (3) the demographic composition of Troutdale's existing population and expected long-term changes in the demographics of Multnomah 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 Troutdale is based on Metro's 2040 Household Distributed Forecast, 2016 and Metro's 2040 TAZ Forecast for households, 2015. Troutdale city limits will grow from 5,824 households in 2020⁴⁷ to 6,544 households in 2040, an increase of 720 households.⁴⁸

To accommodate new households, Exhibit 80 shows that Troutdale will have demand for 720 new dwelling units over the 20-year period, with an annual average of 36 dwelling units.

Exhibit 80. Forecast of Demand for New Dwelling Units, Troutdale City Limits, 2020 to 2040

Source: Metro's 2040 Household Distributed Forecast, July 12, 2016. Calculations by ECONorthwest. Note: DU is dwelling unit.

	New DU City Limits
Household Forecast 2020	5,824
Household Forecast 2040	6,544
Total New Dwelling Units (2020-2040)	720
Annual Average of New Dwelling Units	36

⁴⁷ Metro's 2040 Household Distributed Forecast shows that in 2015, the Troutdale city limits had 5,657 households. The Metro forecast shows Troutdale growing to 6,544 households in 2040, an average annual growth rate of 0.58% for the 25-year period. Using this growth rate, ECONorthwest extrapolated the forecast to 2020 (5,824 households).

⁴⁸ This forecast is based on Troutdale city limits' official household forecast from Metro for the 2020 to 2040 period.

Housing Units Needed Over the Next 20 Years

Exhibit 80 presents a forecast of new housing in Troutdale 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 Troutdale.

Exhibit 81 shows that over the next 20-years, the need for new housing developed in Troutdale will generally include a wider range of housing types across the affordability spectrum. This conclusion is consistent with housing need 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.

- Troutdale's housing mix is predominately single-family detached and multifamily. In the 2013–2017 period, 72% of Troutdale's housing was single-family detached, 22% 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 Troutdale) suggest increases in demand for single-family attached housing and multifamily housing. The key demographic trends that will affect Troutdale's future housing needs are the aging of Baby Boomers, household formation of Millennial households, and growth of Latinx households.
- Troutdale households have incomes higher than those for the Portland region. Troutdale's median household income was \$66,224 about \$5,855 higher than Multnomah County's median.
- Approximately 38% of Troutdale households earn less than \$50,000 per year, compared to 42% in Multnomah County and 37% in the Portland region.
- About 38% of Troutdale's households are cost burdened (paying 30% or more of their household income on housing costs), compared to 37% of households in the Portland region and 40% in Multnomah County.⁴⁹ About 58% of Troutdale's renters are cost burdened and about 26% of Troutdale's homeowners are cost burdened.
- About 38% of Troutdale's households are renters, 57% of whom live in multifamily housing. Median rents in Troutdale are \$1,077 per month, compared to the \$1,094 median rent for Multnomah County as a whole.

A household earning 50% of Troutdale's median household income (\$43,950) could afford about \$1,099 per month in rent. A household with a median income in Troutdale (\$87,900) could afford \$2,198 rent per month, compared with the median gross rent of \$1,077. About 22% of Troutdale's housing stock is multifamily, compared to 35% of the

⁴⁹ 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 in the Portland region. This relatively small amount of multifamily housing limits opportunities for people to rent housing in Troutdale.

- Troutdale needs more affordable housing types for homeowners and renters. A household earning 100% of Troutdale’s median family income of \$87,900 could afford about \$2,198 per month in rent, compared with the median gross rent of about \$1,077. This household could afford to own a home roughly valued at \$307,650, which is less than the median home sales price of about \$355,000 in Troutdale.

While a household could begin to afford Troutdale median rents at about 50% of Troutdale’s median family income, the rates of cost burden among renters suggest that Troutdale does not have a sufficient number of affordable rental units. A household can start to afford median home sales prices at about 80% of Troutdale’s median household income.

These factors suggest that Troutdale needs a broader range of housing types with a wider range of price points than are currently available in Troutdale’s housing stock. This includes providing opportunity for the 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).

Exhibit 81 shows the forecast for housing growth in the Troutdale city limits during the 2020 to 2040 period. The projection is based on the following assumptions:

- Troutdale’s official forecast for population growth shows that the city will add 720 households over the 20-year period. Exhibit 81 shows Metro’s forecast for growth of 720 new dwelling units over the 20-year planning period.
- The assumptions about the mix of housing in Exhibit 81 are consistent with the requirements of OAR 660-007⁵⁰:
 - **About 50% of new housing will be single-family detached**, a category which includes manufactured housing. In 2013–2017, 72% of Troutdale’s housing was single-family detached.
 - **Nearly 15% of new housing will be single-family attached**. In 2013–2017, 6% of Troutdale’s housing was single-family attached.
 - **About 17% of new housing will be duplexes, triplexes, or quadplexes**. In 2013–2017, 4% of Troutdale’s housing was multifamily with less than 5 units.
 - **About 18% of new housing will be multifamily (5+ units)**. In 2013–2017, 18% of Troutdale’s housing was multifamily with more than 5 units.

⁵⁰ 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.”

Troutdale will have demand for 720 new dwelling units over the 20-year period, 50% of which will be single-family detached housing.

Exhibit 81. Forecast of Demand for New Dwelling Units, Troutdale City Limits, 2020 to 2040

Source: Calculations by ECONorthwest.

Variable	Mix of New Dwelling Units (2020-2040)
Needed new dwelling units (2020-2040)	720
Dwelling units by structure type	
Single-family detached	
Percent single-family detached DU	50%
equals Total new single-family detached DU	360
Single-family attached	
Percent single-family attached DU	15%
equals Total new single-family attached DU	108
Duplex, Triplex, Quadplex	
Percent duplex, triplex, quadplex	17%
Total new duplex, triplex, quadplex	122
Multifamily (5+ units)	
Percent multifamily (5+ units)	18%
Total new multifamily (5+ units)	130
equals Total new dwelling units (2020-2040)	720

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 82 allocates needed housing to plan designations in Troutdale. The allocation is based, in part, on the types of housing allowed in the zoning designations in each plan designation.

Exhibit 82 shows:

- **Low-density (including LDR in the Urban Planning Area)** 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-density** land will accommodate single-family detached, single-family attached, and all types of multifamily housing.
- **High-density** land will accommodate all types of housing, with a larger proportion of multifamily housing types.
- **Commercial (CBD zone)** land will accommodate all types of housing, with a larger proportion of multifamily housing types.

Exhibit 82. Allocation of Needed Housing by Housing Type and Plan Designation, Troutdale City Limits, 2020 to 2040

Source: ECONorthwest.

Housing Type	Residential Plan Designations					Total
	Low Density	Medium Density	High Density	UPA LDR	Commercial	
Dwelling Units						
Single-family detached	122	115	30	88	5	360
Single-family attached	12	50	32	7	7	108
Duplex, triplex, quadplex	8	24	73	3	14	122
Multifamily (5+ units)	0	14	88	0	28	130
Total	142	203	223	98	54	720
Percent of Units						
Single-family detached	17%	16%	4%	12%	1%	50%
Single-family attached	2%	7%	4%	1%	1%	15%
Duplex, triplex, quadplex	1%	3%	10%	0%	2%	17%
Multifamily (5+ units)	0%	2%	12%	0%	4%	18%
Total	20%	28%	31%	14%	8%	100%

Exhibit 83 presents assumptions about future housing density based on historical densities in Troutdale shown in Exhibit 14. Exhibit 83 converts between net acres and gross acres⁵¹ to account for land needed for rights-of-way by plan designation in Troutdale, based on Metro's methodology of existing rights-of-way.⁵²

- **Low-density residential:**⁵³ Average density in this plan designation was historically 5.1 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 and 1.0 acres the future density will be 4.6 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 4.2 dwelling units per gross acre.
- **Medium-density residential:** Average density in this plan designation was historically 11.1 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 and 1.0 acres the future density will be 10.0 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 9.1 dwelling units per gross acre.

⁵¹ Per OAR 660-024-0010(6), 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.

⁵² 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.

⁵³ Land in the Urban Planning Area with a low-density residential plan designation is assumed to have the same densities as other land in the low-density plan designation in Troutdale.

- **High-density residential:** Average density in this plan designation was historically 15.3 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 13.8 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 12.5 dwelling units per gross acre.
- **Commercial:** Average density in this plan designation was historically 18.6 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 16.8 dwelling units per gross acre, and for lots larger than 1.0 acres the future density will be 15.2 dwelling units per gross acre.

Exhibit 83. Assumed Future Density of Housing Built in the Troutdale City Limits, 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 Residential	5.1	0%	5.1	5.1	10%	4.6	5.1	18.5%	4.2
Medium Density Residential	11.1	0%	11.1	11.1	10%	10.0	11.1	18.5%	9.1
High Density Residential	15.3	0%	15.3	15.3	10%	13.8	15.3	18.5%	12.5
Urban Planning Area LDR	5.1	0%	5.1	5.1	10%	4.6	5.1	18.5%	4.2
Commercial	18.6	0%	18.6	18.6	10%	16.8	18.6	18.5%	15.2

Needed Housing by Income Level

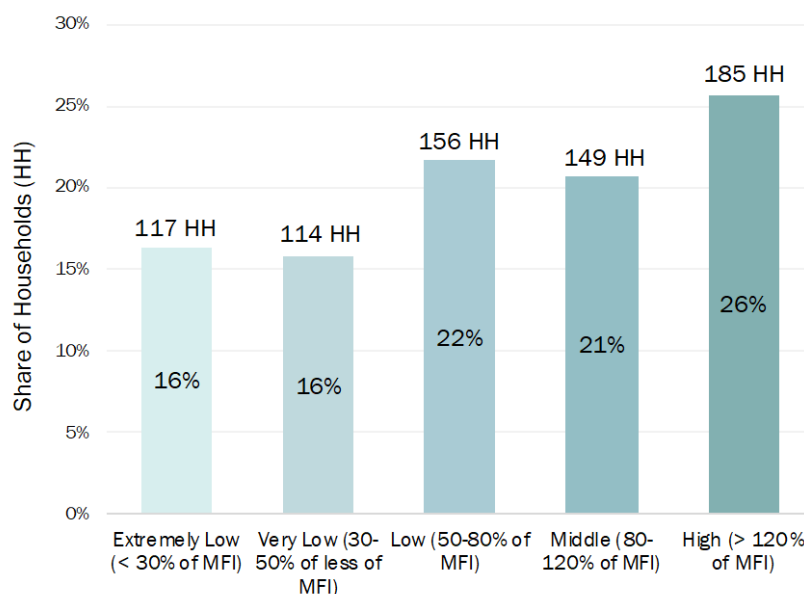
The next step in the Housing Needs Analysis is to develop an estimate of need for housing by income and housing type. This analysis requires an estimate of the income distribution of current and future households in the community. Estimates presented in this section are based on (1) secondary data from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

The analysis in Exhibit 84 is based on American Community Survey data about income levels for existing households in Troutdale. Income is categorized into market segments consistent with HUD income level categories, using Multnomah County's 2019 median family income (MFI) of \$87,900. 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 Troutdale's future households are forecast to be extremely or very-low income and about one quarter are forecast to have high incomes.

Exhibit 84. Future (New) Households, by Median Family Income (MFI) for Multnomah County (\$87,900), Troutdale City Limits, 2019

Source: U.S. Department of Housing and Urban Development, Multnomah County, 2019. 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 require 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.). Troutdale allows development of government-assisted housing in all residential plan designations, with the same development standards for market-rate housing. This analysis assumes that Troutdale 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 the development of farmworker housing in all residential plan designations, with the same development standards as market-rate housing. This analysis assumes that Troutdale 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.** Troutdale allows manufactured homes on lots in low-density and medium-density residential zones.
- **Manufactured housing in parks.** Troutdale allows manufactured homes in parks in medium-density residential zones. According to the Oregon Housing and Community Services' Manufactured Dwelling Park Directory,⁵⁴ Troutdale has six manufactured home parks with 367 spaces.
- ORS 197.480(2) requires Troutdale 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 80 shows that Troutdale will grow by 720 dwelling units over the 2020 to 2040 period.
 - Analysis of housing affordability shows that about 32% of Troutdale'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.

⁵⁴ 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 8% (about 367 dwelling units) of Troutdale’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 \$26,370 and \$43,950 (30% to 50% of MFI), which include 16% of Troutdale’s households. However, households in other income categories may live in manufactured homes in parks.

Manufactured home park development is an allowed use in the medium-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 fifteen years, demonstrate that the development of new manufactured home parks or subdivisions in Troutdale is unlikely.

Our conclusion from this analysis is that the development of new manufactured home parks or subdivisions in Troutdale 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 Troutdale 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 twenty years (or longer), one or more of Troutdale’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,⁵⁵ 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

⁵⁵ ORS 90.645 regulates rules about closure of manufactured dwelling parks. Before a park closure, the landlord must give at least one year’s notice of park closure and must pay the tenant between \$5,000 and \$9,000 for each manufactured dwelling park space, in addition to not charging tenants for demolition costs of abandoned manufactured homes.

development to allow for the development of new, relatively affordable housing (i.e., housing affordable to households earning less than 80% of MFI, 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 the 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 Troutdale

This chapter presents an evaluation of the sufficiency of vacant residential land in Troutdale 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 Troutdale'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) provided 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,"⁵⁶ can be used to evaluate different ways that vacant residential land may build out by applying different assumptions.

⁵⁶ 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." However, that phrase is 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.

Troutdale 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 83.

Exhibit 86 shows that Troutdale city limit's (Exhibit 85) buildable land has capacity to accommodate approximately **1,093 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.
- **Needed densities.** The capacity analysis assumes development will occur at assumed future densities. Those densities were derived from the densities shown in Exhibit 83.
- **Average net density.** Exhibit 85 shows capacity and densities in gross acres. OAR 660-007 requires that Troutdale provide opportunity for development of housing at an overall average density of eight dwelling units per net acre. The average net density of dwelling units in Exhibit 85 is approximately 9.4 dwelling units per net acres and 7.9 dwelling units per gross acre.

Exhibit 85. Estimate of Residential Capacity on Unconstrained Vacant and Partially Vacant Buildable Land, Troutdale 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 Residential	2	5.1	10	2	4.6	10	39	4.2	164	43	184
Medium Density Residential	0	11.1	5	2	10.0	17	26	9.1	236	28	258
High Density Residential	2	15.3	28	1	13.8	11	23	12.5	282	25	321
Urban Planning Area LDR	0	5.1	-	0	4.6	-	29	4.2	120	29	120
Commercial	1	18.6	22	2	16.8	38	10	15.2	150	13	210
Total	6	-	65	7	-	76	126	-	952	139	1,093

Residential Land Sufficiency

The next step in the analysis of the sufficiency of residential land within Troutdale is to compare the demand for housing by plan designation (Exhibit 82) with the capacity of land by plan designation (Exhibit 85).

Exhibit 86 shows that Troutdale has sufficient land to accommodate development in all residential plan designations, with a surplus capacity of 41 units in low density, 56 units in medium density, 98 units in high density, 22 units in low density of the Urban Planning Area, and 54 units in commercial zones that allow residential use.

Exhibit 86. Comparison of Capacity of Existing Residential Land with Demand for New Dwelling Units and Land Surplus or Deficit, Troutdale City Limits, 2020 to 2040

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

Residential Plan Designations	Capacity (Buildable Acres)	Capacity (Dwelling Units)	Demand for New Housing	Remaining Capacity (Supply minus Demand)	Land Surplus or (Deficit) Gross Acres
Low Density Residential	43	184	142	42	8
Medium Density Residential	28	258	203	55	5
High Density Residential	25	321	223	98	6
Urban Planning Area LDR	29	120	98	22	4
Commercial	13	210	54	156	8
Total	139	1,093	720	373	32

Troutdale's surplus of low-density residential capacity (42 dwelling units) means that the City has an approximate surplus of eight gross acres of low-density land (at 5.1 dwelling units per gross acre). Troutdale's surplus of medium-density residential capacity (55 dwelling units) means that the City has an approximate surplus of five gross acres of medium-density land (at 11.1 dwelling units per gross acre). Troutdale's surplus of high-density residential capacity (98 dwelling units) means that the City has an approximate surplus of six gross acres of high-density land (at 18.6 dwelling units per gross acre).

Conclusions

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

- **Growth in housing will be driven by growth in households. The number of** households in Troutdale's city limits is forecast to grow from 5,824 households to 6,544 households, an increase of 720 households between 2020 and 2040.
- **To accommodate households in Troutdale city limits, Troutdale is planning for 720 new dwelling units.** To accommodate the 720 dwelling units over the 20-year planning period, Troutdale will average 36 new dwelling units annually.
- **Troutdale will plan for more single-family attached and multifamily dwelling units in the future to meet the city's housing needs.** Historically, about 72% of Troutdale's housing was single-family detached. New housing in Troutdale is forecast to be 50% single-family detached, 15% single-family attached, and 35% multifamily.
 - The factors driving the shift in types of housing needed in Troutdale 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.
 - Troutdale'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 38% of Troutdale's households have affordability problems, including a cost-burden (or severe cost burden) rate of 58% 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, 231 of the forecasted new households will have incomes of \$43,950 (in 2019 dollars) or less (50% of MFI income or less). These households cannot afford market-rate housing without government subsidy. Another 156 new households will have incomes between \$43,950 and \$70,320 (50% to 80% of MFI). These households will all need access to affordable housing, such as the housing types described above.
- **Ongoing development could meet a substantial amount of Troutdale's housing needs and the forecast for growth.** Exhibit 1 shows that there are nearly 350 multifamily and single-family attached units currently under construction or expected to complete construction by 2020. This number of new units both accommodates nearly half of the forecast of new units in Exhibit 81 (720 new units) but also the forecast of new multifamily and single-family attached units (a total of 360 new units). In addition,

Troutdale is in preapplication review discussions with developers for an additional 280 units of multifamily housing, about 110 units of which would be income restricted.

- **Troutdale 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, Troutdale will need to:
 - Allow duplexes on any lot where single-family detached housing is allowed in residential zones.
 - Allow triplexes and quadplexes as a permitted use in the following zones: R-20, R-10, R-7, and R-5. The City can identify areas within these zones to allow these housing types.
 - Allow cottage-cluster housing as a permitted use in the following zones: R-20, R-10, R-7, R-5, and R-4 zones. The City can identify areas within these zones to allow this housing types.
 - Allow Single-family attached housing as a permitted use in the R-20 zone. The City can identify areas within these zones to allow this housing types.
- **Troutdale has unmet need for affordable housing.** About 38% of Troutdale’s households are cost burdened, with 55% of renters cost burdened and 26% of owners cost burdened. Troutdale’s level of cost burden is similar to other communities in Multnomah County. Troutdale’s unmet housing needs include:
 - *Renter housing.* The average asking rent for multifamily housing in Troutdale in 2013 was about \$1,250, which is affordable to households earning about 60% of the median family income (about \$53,000). About one-third of Troutdale’s households have incomes below this level and cannot afford the average rent. As shown in the rates of cost burden, many of these renter households are cost burdened. A small portion of this unmet housing need can be met through the anticipated development of 110 units of income-restricted affordable housing, as mentioned in Chapter 1. Troutdale will continue to have unmet renter housing needs, both for existing households and for new households.
 - *Owner-occupied housing.* The median home sales price in 2019 was about \$355,000, which is affordable to households earning about 120% of the median family income (about \$105,000). About one-quarter of Troutdale’s households have incomes below this level. While Troutdale is one of the more affordable cities for homeownership in the Portland region, households at middle incomes (between \$53,000 to \$105,000) are less able to afford housing in Troutdale. One way to increase the supply of affordable owner-occupied housing is to increase opportunities for development of the middle-income housing described above.

- **Commuting patterns in Troutdale indicate an imbalance of available housing and employment.** This trend is not unique to Troutdale, as many cities located within the Portland region have a large share of residents commuting out of the city for work, as well as workers who reside elsewhere. While there are many reasons people may choose to live and work in different locations, the lack of housing affordable at income levels that align with wages at jobs in Troutdale also contributes to this commuting trend. To begin to address this issue, Troutdale can align its updated housing policies with related economic development policies that focus on balancing available housing with jobs. In its review of economic development policies, Troutdale may want to consider policies to support the attraction of jobs with wages sufficient to afford rental and ownership housing in Troutdale.

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

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. The steps and substeps 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 Troutdale 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 Troutdale includes all residential land designated in the comprehensive plans within city limits and designated planning areas. ECONorthwest used the Metro BLI tax lot shapefile as the basis for this analysis.

Inventory Steps

The BLI consisted of several steps:

1. Generating UGB "land base"
2. Classifying land by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

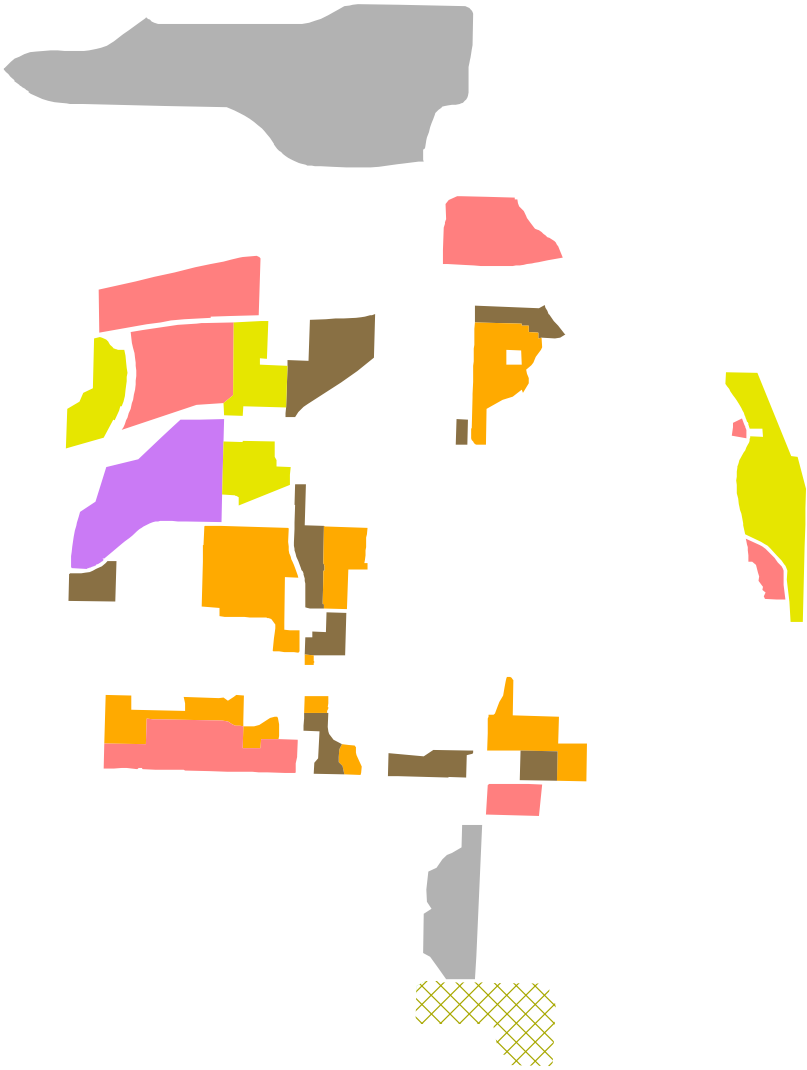
Step 1: Generate “land base.”

Per Goal 10, this involves selecting all of the tax lots with residential and other nonemployment plan designations where residential uses are planned for and allowed by the implementing zones. The City provided ECONorthwest (ECO) with their comprehensive plan GIS files and indicated what designations should be included within the inventory.

Exhibit 87 (on the following page) shows comprehensive plan designations for the City of Troutdale. This BLI includes lands in the low-density residential, medium-density residential, high-density residential, Urban Planning Area low-density residential designations, as well as commercial zones CBD, MO/H, and NC.

Exhibit 87. Comprehensive Plan Designations, Troutdale City Limits, 2019

of Troutdale



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: <ol style="list-style-type: none">1) Fully vacant based on Metro aerial photo2) Tax lots with less than 2,000 square feet developed, and developed area is less than 10% of lot3) 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 semipublic 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 semipublic organizations and properties with conservation easements. These lands are identified using 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

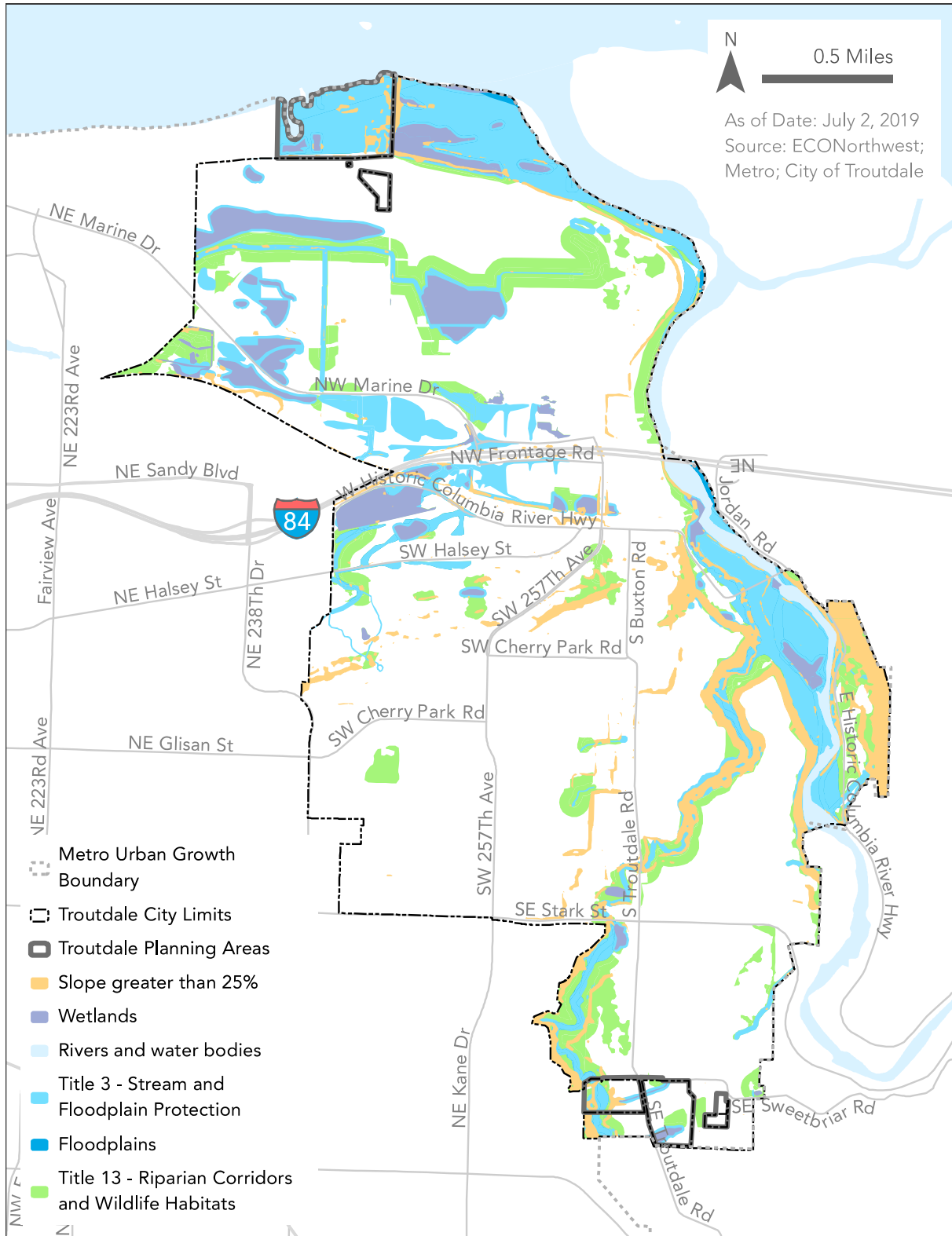
Consistent with OAR 660-008-0005(2) guidance on residential buildable lands inventories, ECO deducted certain lands with development constraints from vacant lands. We used some of the constraints established in Metro's methodology, with modifications to fit local considerations in Troutdale. These constraints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

Constraint	Statutory Authority	Threshold
Goal 5 Natural Resource Constraints		
Riparian Corridors and Habitat (Title 13)	OAR 660-008-0005(2)	Regionally Significant Riparian & Upland Wildlife habitat, Habitats of Concern, and impact areas
Wetlands		
Natural Hazard Constraints		
100-Year Floodplain	OAR 660-008-0005(2)	Lands within FEMA FIRM 100-year floodplain
Stream and Floodplain Protection (Title 3)	OAR 660-015-0000(5)	Areas protected by the stream and floodplain plan
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 twenty-year planning period.

Exhibit 88 maps the development constraints used for the residential BLI.

Exhibit 88. Development Constraints, Troutdale City Limits, 2019



Step 4: Verification

ECO used a multistep 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 Troutdale Residential BLI includes all residential land designated in the Comprehensive Plan within the Troutdale city limits. From a practical perspective, this means that ECONorthwest inventoried all lands within tax lots identified by Metro that fall within the Troutdale city limits. The inventory then builds from the tax lot-level database to estimate buildable land by plan designation.