Sherwood Housing Needs Analysis 2015 to 2035

Draft Report

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Cogan Owens Greene &

City of Sherwood

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Executive Summary

This is an executive summary of the findings of the Sherwood Housing Needs Analysis for the 2015 to 2035 period. The housing needs analysis provides Sherwood with a factual basis to support future planning efforts related to housing, including Pre-Concept Planning for Sherwood West, and prepares to update and revise the City's Comprehensive Plan policies

The housing needs analysis is intended to comply with requirements of statewide planning policies that govern planning for housing and residential development, Goal 10, it's implementing Metropolitan Housing Rule (OAR 660-007), and Metro's 2040 Functional Growth Management Plan. Taken together, the City's primary obligations from Goal 10 are to (1) designate land in a way that 50% of new housing could be either multifamily or single-family attached housing (e.g., townhouses); (2) achieve an average density of six dwelling units per net acre; and (3) provide enough land to accommodate forecasted housing needs for the next 20 years. Sherwood is able to meet these requirements and can accommodate most of the new housing forecast, as described in this summary.

How has Sherwood's Population Changed in Recent Years?

The basis for the housing needs analysis is an understanding of the demographic characteristics of Sherwood's residents.[1]

Sherwood's population grew relatively fast in recent years. Sherwood's population increased from 3,000 people in 1990 to nearly 18,600 people in 2013, averaging 8% annual growth. Sherwood's fastest period of growth was during the 1990s, consistent with statewide trends. Since 2000, Sherwood grew by 6,600 people, at an average rate of nearly 3.5% per year. For comparison, Washington County grew at 2.5% annually between 1990-2013 and the Portland Region grew at 1.6% per year.

Sherwood's population is aging. People aged 45 years and older were the fastest growing age group in Sherwood between 2000 and 2010, consistent with state and national trends. By 2035, people 60 years and older will account for 24% of the population in Washington County (up from 18% in 2015) and 25% in the Portland Region (up from 19% in 2015). It is reasonable

[1] The majority of data quoted in this analysis is from the U.S. Census American Community survey, with population data from the Population Research Center at Portland State University and development data from the City's Building Permit database.

to assume that the share of people 60 years and older will grow relatively quickly in Sherwood as well.

Sherwood is attracting younger people and more households with children. In 2010, the median age in Sherwood was 34.3 years old, compared to Washington County's median age of 35.3 years and the State median of 38.4. Sherwood has a larger share of households with children (47% of households), compared with Washington County (33%) or the Portland Region (29%). The Millennial generation—people born roughly between 1980 to 2000—are the largest age group in Oregon and will account for the majority of household growth in Sherwood over the next 20 years.

Sherwood's population is becoming more ethnically diverse. About 6% of Sherwood's population is Latino, an increase from 4.7% in 2000. In comparison to Washington County and the Portland Region, Sherwood is less ethnically diverse. In the 2009-2013 period, 16% of Washington County residents, and 12% Portland Region residents, were Latino.

What Factors May Affect Future Growth in Sherwood?

If these trends continue, population will result in changes in the types of housing demanded or "needed" in Sherwood in the future.

The aging of the population is likely to result in increased demand for smaller single-family housing, multifamily housing, and housing for seniors. People over 65 years old will make a variety of housing choices, including: remaining in their homes as long as they are able, downsizing to smaller single-family homes (detached and attached) or multifamily units, or moving into group housing (such as assisted living facilities or nursing homes) as they continue to age.

The growth of younger and diversified households is likely to result in increased demand for a wider variety of affordable housing appropriate for families with children, such as small single-family housing, townhouses, duplexes, and multifamily housing. If Sherwood continues to attract young residents, then it will continue to have demand for housing for families, especially housing affordable to younger families with moderate incomes. Growth in this population will result in growth in demand for both

ownership and rental opportunities, with an emphasis on housing that is comparatively affordable.[2]

Changes in commuting patterns could affect future growth in Sherwood. Sherwood is part of a complex, interconnected regional economy. Demand for housing by workers at businesses in Sherwood may change with significant fluctuations in fuel and commuting costs, as well as substantial decreases in the capacity of highways to accommodate commuting.

Sherwood households have relatively high income, which affects the type of housing that is affordable. Income is a key determinant of housing choice. Sherwood's median household income ($78,400) was more than 20% higher than Washington County's median household income ($64,200). In addition, Sherwood had a smaller share of population below the federal poverty line (7.6%) than the averages of Washington County (11.4%) and the Portland Region (13.9%).

What Are the Characteristics of Sherwood's Housing Market?

The existing housing stock in Sherwood, homeownership patterns, and existing housing costs will shape changes in Sherwood's housing market in the future.

Sherwood's housing stock is predominantly single-family detached. About 75% of Sherwood's housing stock is single-family detached, 8% is single-family attached (such as townhomes), and 18% is multifamily (such as duplexes or apartments). Sixty-nine percent of new housing permitted in Sherwood between 2000 and 2014 was single-family detached housing.

Almost three quarters of Sherwood's residents own their homes. Homeownership rates in Sherwood are above Washington County (54%), the Portland Region (60%), and Oregon (62%) averages.

Homeownership costs increased in Sherwood, consistent with national trends. Median sales prices for homes in Sherwood increased by about 30% between 2004 and 2014, from about $245,000 to $316,5000. The median home value in Sherwood is 3.8 times the median household income, up from 2.9 times the median household income in 2000.

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[2] The housing needs analysis assumes that housing is affordable if housing costs are less than 30% of a household's gross income. For a household earning $6,500 (the median household income in Sherwood), monthly housing costs of less than $1,960 are considered affordable.

Housing sales prices are higher in Sherwood than the regional averages. As of January 2015, median sales price in Sherwood was $316,500, which is higher than the Washington County ($281,700), the Portland MSA ($269,900), and Oregon ($237,300) median sales prices. Median sales prices were higher in Sherwood than in other Portland westside communities such as Tigard, Tualatin, and Beaverton, but lower than Wilsonville or West Linn.

Rental costs are higher overall in Sherwood than the regional averages. The median rent in Sherwood was $1,064, compared to Washington County's average of $852. On a per-square-foot basis, Sherwood/Tigard/Tualatin's rents ($1.13 per square foot) were lower than the Portland Metro area's average of $1.22 per square foot.

More than one-third of Sherwood's households have housing affordability problems. Thirty-eight percent of Sherwood's households were cost-burdened (i.e., paid more than 30% of their income on rent or homeownership costs). Renters were more likely to be cost-burdened (40% of renters were cost-burdened), compared to homeowners (35% were cost-burdened) in Sherwood. These levels of cost burden are consistent with regional averages. In Washington County in the 2009-2013 period, 38% of households were cost burdened, compared to 41% in the Portland Region.

Future housing affordability will depend on the relationship between income and housing price. The key question is whether housing prices will continue to outpace income growth. Answering this question is difficult because of the complexity of the factors that affect both income growth and housing prices. It is clear, however, that Sherwood will need a wider variety of housing, especially housing affordable to low- and moderate-income households.

How Much Housing Growth is Forecast, and Can that Growth be Accommodated within Sherwood?

The housing needs analysis in this report is based on Metro's coordinated forecast of household growth in Sherwood. The forecast includes growth in both areas within the city limits, as well as areas currently outside the city limits that the City expects to annex for residential uses (most notably the Brookman area).

Sherwood is forecast to add 1,156 new households between 2015 and 2035. Of these, 606 new households are inside the existing city limits; 550 new households are outside the current city limits in the Brookman Area.

Sherwood's land base can accommodate the entire forecast for growth. Vacant and partially vacant land in the Sherwood Planning Area has capacity to accommodate 1,281 new dwelling units. Compared to demand, Sherwood has a small surplus of residential land.

Sherwood will need to annex the Brookman Area to accommodate the forecast for growth. If Sherwood does not annex the Brookman Area, the city's options for accommodating future growth will be limited to growing within the existing city limits or to growing in a different area, such as Sherwood West. The availability of other areas to accommodate growth, including Sherwood West, will depend on changes to the Metro urban growth boundary and theses changes typically take years to make.

What if Sherwood Grows Faster?

The forecast for growth in Sherwood is considerably below historical growth rates. Metro's forecast for new housing in Sherwood shows that households will grow at less than 1% per year. In comparison, Sherwood's population grew at 3.4% per year between 2000 and 2013 and 8% per year between 1990 and 2013. If Sherwood grows faster than Metro's forecast during the 2015 to 2035 period, then Sherwood will not have sufficient land to accommodate growth.

At faster growth rates, Sherwood's land base has enough capacity for several years of growth. At growth rates between 2% to 4% of growth annually, land inside the Sherwood city limits can accommodate two to five years of growth. With capacity in the Brookman Area, Sherwood can accommodate four to ten years of growth at these growth rates.

Additional housing growth in Sherwood depends the availability of development-ready land. The amount of growth likely to happen in Sherwood is largely dependent on when the Brookman Area is annexed,

when the Sherwood West area is brought into the City and annexed, and when urban services (such as roads, water, and sanitary sewer) are developed in each area.

WHAT ARE THE IMPLICATIONS FOR SHERWOOD'S HOUSING POLICIES?

To provide adequate land supply, Sherwood voters will need to approve/annex the Brookman area. If voters continue to reject the Brookman annexation, Sherwood as a community will either be unable to accommodate expected growth or will need to identify an alternative (more politically acceptable) area for growth. Sherwood West is just one of these possibilities. Another alternative would be to develop the existing vacant lands at higher densities than what they are zoned.

Sherwood will need Sherwood West to accommodate future growth beyond the existing city limits and Brookman area. The growth rate of Metro's forecast for household growth (0.7% average annual growth) is considerably lower than the City's historical population growth rate over the last two decades (8% average annual growth). Metro's forecast only includes growth that can be accommodated within the Sherwood city limits and Brookman. Given the limited supply of buildable land within Sherwood, it is likely that the City's residential growth will slow until Sherwood West is made development-ready.

Sherwood has a relatively limited supply of land for moderate- and higher-density multifamily housing. The limited supply of land in these zones is a barrier to development of townhouses and multifamily housing, which are needed to meet housing demand resulting from growth of people over 65, young families, and moderate-income households.

The results of the Housing Needs Analysis highlight questions for the update of the City's Comprehensive Plan and the Pre-Concept Planning of Sherwood West.

- Providing housing opportunities for first time home buyers and community elders (who prefer to age in place or downsize their housing) will require a wider range of housing types. Examples of these housing types include: single family homes on smaller lots, clustered housing, cottages or townhomes, duplexes, tri-plexes, four-plexes, garden apartments, or mid-rise apartments. Where should Sherwood consider providing a wider range of housing types? What types of housing should Sherwood plan for?
- Changes in demographics and income for Sherwood and regional residents will require accommodating a wider range of housing types. How many of Sherwood's needed units should the city plan to

accommodate within the city limits? How much of Sherwood's needed units should be accommodated in the Brookman Area and in Sherwood West?

- What design features and greenspaces would be important to consider for new housing?
- What other design standards would be needed to "keep Sherwood Sherwood"?

1 Introduction

This report presents the Sherwood Housing Needs Analysis 2015 to 2035. The housing needs analysis provides Sherwood with a factual basis to support future planning efforts related to housing, including Pre-Concept Planning for Sherwood West, and prepares to update and revise the City's Comprehensive Plan policies.

It is intended to comply with statewide planning policies that govern planning for housing and residential development, Goal 10, OAR 660-007, and Metro's Functional Growth Management Plan. The methods used for this study generally follow the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

This report provides Sherwood with a factual basis to support future planning efforts related to housing and options for addressing unmet housing needs. It provides specific analysis that is required for a jurisdiction in Oregon to comply with state policies.

BACKGROUND

Sherwood is located at the southwestern edge of the Portland metropolitan urban growth boundary (UGB). Over the 2000 to 2014 period, Sherwood had a substantial amount of residential growth. Residential development included all of the different housing types with single family detached housing concentrated in the 2000 to 2005 period. In part due to this growth and limited land supply for new homes, Sherwood is embarking on a Pre-Concept Plan for the Sherwood West urban reserve. Concurrently, the City is updating its factual basis for an eventual update of its Comprehensive Plan.

This housing needs analysis provides a factual basis to inform both an update of the residential Comprehensive Plan polices and the Pre-Concept Plan for Sherwood West. This analysis provides:

- Information about the characteristics of Sherwood's housing market, in the context of Washington County, the Portland metropolitan region, and Oregon,
- Information about the types and density of housing developed since 2000, changes in homeownership patterns,
- Changes in housing cost and affordability, and other housing market characteristics; and
- A forecast of residential growth in Sherwood for the 2015 to 2035 period.

As required by OAR 660-024, this forecast is based on Metro's household forecast and demographics and economic trends that will affect housing demand over the next 20 years.

ORGANIZATION OF THE REPORT

The main body of this report presents a summary of key data and analysis used in the housing needs analysis. The appendices present detailed tables and charts for the housing needs analysis. This document is organized as follows:

- **Chapter 2. Historical and Recent Development Trends** presents a high-level summary of residential development in Sherwood.
- **Chapter 3. Housing Demand and Need** presents a housing needs analysis consistent with requirements in the Planning for Residential Growth Workbook. Detailed tables and charts supporting the demographic and other information discussed in Chapter 4 is presented in Appendix B.
- **Chapter 4. Residential Land Sufficiency** estimates the residential land sufficiency in Sherwood needed to accommodate expected growth over the planning period.
- **Appendix A. Residential Buildable Land Inventory Report**
- **Appendix B. Trends Affecting Housing Need in Sherwood**

FRAMEWORK FOR A HOUSING NEEDS ANALYSIS

People view homes and communities in a wide range of ways. Economists view housing as a bundle of services for which people are willing to pay. Shelter is one service, but housing typically also includes:

- Proximity to other attractions (job, shopping, recreation),
- Amenities (type and quality of fixtures and appliances, landscaping, views), prestige, and
- Access to public services (quality of schools).

Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make tradeoffs. What individuals can purchase for their money is influenced by individuals' life circumstances as well as economic forces and government policy. Among households and income levels, preferences vary. Attributes homebuyers and renters seek are a function of many factors that may include income, age of household head, number of people and children in the household, number of workers and job locations, educational opportunities, number of automobiles, neighborhood amenities and so on.

Thus, the housing choices of individual households are influenced in complex ways by dozens of factors; and the housing market in the Portland Region, Washington County, and Sherwood is 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 Sherwood between 2015 and 2035.

The complex nature of the housing market was demonstrated by the unprecedented boom and bust during the past decade. This complexity does not eliminate the need for some type of forecast of future housing demand and need and the 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 begin our housing analysis with a framework for thinking about housing and residential markets, and how public policy affects those markets.

OREGON HOUSING POLICY

Statewide planning Goal 10

Sherwood's primarily obligations under Goal 10 are to:

- Designate land in a way that 50% of new housing could be either multifamily or single-family attached housing (e.g., townhouses)
- Provide opportunities to achieve an average density of six dwelling units per net acre
- Provide opportunities for development of needed housing types: single-family detached, single--family attached, and multifamily housing.

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).[3] Jurisdictions located in the Metro UGB are also required to comply with Metropolitan Housing in OAR 660-007 and Title 7 of Metro's Urban Growth Management Functional Plan in the Metro Code (3.07 Title 7).

Goal 10 requires incorporated cities to complete an inventory of buildable residential lands and to encourage the availability of adequate numbers of housing units in price and rent ranges commensurate with the financial capabilities of its households.

Goal 10 defines needed housing types as "housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels." ORS 197.303 defines needed housing types:

(a) Housing that includes, but is not limited to, attached and detached single-family housing and multiple family housing for both owner and renter occupancy;

(b) Government assisted housing;[4]

(c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490; and

(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.

[3] ORS 197.296 only applies to cities with populations over 25,000.

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

In summary, Sherwood 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.

The Metropolitan Housing Rule

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

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

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

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

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

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

OAR 660-007-0035 sets specific density targets for cities in the Metro UGB. Sherwood average density target is six dwelling units per net buildable acre.[5]

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

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

Metro's *2013 Compliance Report* concludes that Sherwood is in compliance for the City's Title 1 responsibilities.

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 *2013 Compliance Report* concludes that Sherwood is in compliance for the City's Title 1 responsibilities.

Title 7: Housing Choice

Metro's *2013 Compliance Report* concludes that Sherwood is in compliance for the City's Title 7 responsibilities.

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

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

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

Metro's *2013 Compliance Report* concludes that Sherwood 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.

Metro's *2013 Compliance Report* concludes that Sherwood is in compliance for the City's Title 11 responsibilities.

In addition, the City needs to comply with the Fair Housing Act, administered by the U.S. Department of Housing and Urban Service (HUD). Complying with this Act requires meeting the Affirmatively Furthering Fair Housing (AFFH) goal of the Fair Housing Act. The City must comply with these regulations to qualify for federal grant funds for housing.

2 Historical and Recent Development Trends

Analysis of historical development trends in Sherwood provides insights into how the local housing market functions. The intent of the analysis is to understand how local market dynamics may affect future housing—particularly the mix and density of housing by type. The housing mix and density by type are also key variables in forecasting future land need. The specific steps are described in Task 2 of the DLCD *Planning for Residential Lands* Workbook:

1. Determine the time period for which the data must be gathered.
2. Identify types of housing to address (at a minimum, all needed housing types identified in ORS 197.303).
3. Evaluate permit/subdivision data to calculate the actual mix, average actual gross density, and average actual net density of all housing types.

The period used in the analysis of housing density and mix is 2000 to 2014, which includes both times of high housing production and times of low housing production. The reasons for choosing this period were:

(1) The 2000 to 2014 period includes more than one economic cycle, with extreme highs and extreme lows in the housing market and

(2) Data prior to 2005 was less easily available and obtaining and compiling data for 2000 to 2004 was difficult to acquire.

The housing needs analysis presents information about residential development by housing types. 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:

- **Single-family detached:** single-family detached units and manufactured homes on lots and in mobile home parks.
- **Single-family attached:** all structures with a common wall where each dwelling unit occupies a separate lot, such as row houses or townhouses.
- **Multifamily**: all attached structures other than single-family detached units, manufactured units, or single-family attached units. Multifamily units include duplexes, tri-plexes, quad-plexes, and structures with more than five units (such as apartments).

The reason for choosing these categories of housing type for the analysis is that they meet the requirements definition of needed housing types in ORS 197.303.[6]

In general, this report uses data from the 2009-2013 American Community Survey (ACS) for Sherwood, as described in Appendix B. Where information is available, we report information from the 2010 Decennial Census. This section summarizes historical and recent development trends, described in detail in Appendix B.

The primary geographies used throughout this report are:

- **Sherwood.** This generally refers to the Sherwood city limits. Census data for Sherwood uses this geography.
- **Sherwood Planning Area.** This is the Sherwood city limits and land that is within the Metro urban growth boundary but outside of the Sherwood city limits, primarily the Brookman Area.
- **Sherwood West.** The urban reserve to the west of Sherwood that may be brought into the Metro urban growth boundary when needed regionally and determined beneficial locally. Of note, Sherwood is a voter-approved annexation community. All lands annexed to the City must be approved by a majority vote of registered voters.

Residential development trends[7]

Three-quarters of Sherwood's housing is single-family detached housing.

Single-family detached housing makes up the largest share of Sherwood's housing stock (Figure B- 1**).** Currently:

- Single-family detached housing accounts for about 75% of Sherwood's housing stock.
- Single-family attached housing accounts for about 8% of Sherwood's housing stock.
- Multifamily housing accounts for about 18% of Sherwood's housing stock.

[6] The analysis of development in Sherwood attempts to separate single-family detached and single-family attached housing. However, the City's building permit system does not distinguish between these two types of housing. City staff manually identified single-family attached housing where there was a concentration of it developed (i.e., a development of townhouses). City staff were unable to identify small-scale single-family attached development that was scattered throughout the city.

[7] Except where otherwise noted, data in this section is from the U.S. Decennial Census (for 2010 data) or the U.S. Census's American Community Survey for 2009-2013.

Over the 2000-2014 period, 69% of new housing permitted by Sherwood was single-family detached housing.

The majority of housing developed in Sherwood between 2000 and 2014 was single-family detached housing (Table B- 1 **and** Figure B- 2**).**[8]

- Over the 2000 to 2014 period, Sherwood issued permits for nearly 2,225 dwellings, with about 148 units permitted each year.
- Sixty-nine percent of new housing permitted in Sherwood between 2000 and 2014 was single-family. Roughly 1,721 single-family dwelling units were permitted over the 15-year period.
- Nine percent of the building permits issued in Sherwood over 2000 to 2014 were single-family attached (i.e., townhouses) and 23% were for multifamily housing.
- The majority of new housing in Sherwood was built between 2000 and 2006, before development decreased with the national housing crisis.
- The majority of new multifamily housing in Sherwood was permitted in 2006, 2009, and 2014. The majority of new single-family attached housing was permitted in 2004 and 2005.

Almost three quarters of Sherwood's residents own their homes (Figure B- 3**,** Figure B- 4**, and** Figure B- 5**).** Homeownership rates in Sherwood are above Washington County and Oregon's averages.

- Homeownership rates declined slightly over the last decade. Roughly 79% of housing in Sherwood was owner-occupied in 2000 compared to about 75% in 2010.
- Most owner-occupied housing is single-family detached, about 89%.
- Renter-occupied housing is a mixture of multifamily (57%), single-family detached (35%), and single-family attached (9%).

Sherwood's vacancy rate is lower than Multnomah, Washington, and Clackamas counties, and lower than the State average (Table B- 2 **and** Figure B- 6**).**

- In 2010, Sherwood's vacancy rate (3.9%) was below that of Multnomah (6.2%), Washington (5.4%), and Clackamas (7.1%) counties, and lower than Oregon's (9.3%).
- The vacancy rates for apartments in the Tigard/Tualatin/Sherwood area varied from a high of 5.8% in Spring 2010 to a low of 2.6% in Fall 2013 and were within 1% of the vacancy rate for the Portland/Vancouver metro area.[9]

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[8] Building permit data is from the City of Sherwood Building Permit Database.

[9] Multifamily NW Apartment Reports, Spring 2010 – Fall 2014.

Sherwood's residential development between 2000 and 2014 averaged 8.2 dwelling units per net acre, above the State's requirement in OAR 660-007 for six dwelling units per net acre (Table B- 3 Table B-4**).**[10]

- Average density in Sherwood was 8.2 dwelling units per net acre over the 2000 to 2014 period.
- Density was lowest in the Very Low Density Residential Zone (2.9 dwelling units per net acre) and Medium Density Residential Low Zone (6.1 dwelling units per net acre).
- Density was highest in Office Commercial (24.4 dwelling units per net acre) and High Density Residential (19.1 dwelling units per net acre).

[10] City of Sherwood Building Permit Database.

3 Housing Need in Sherwood

This chapter presents the analysis of housing needs in Sherwood over the 2015 to 2035 period. Estimates of needed units by structure type and by density range follows.

Chapter 1 described the framework for conducting a housing "needs" analysis. The specific steps in conducting a housing needs analysis are:

1. Project 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, 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. Estimate the number of additional needed units by structure type.
6. Determine the needed density ranges for each plan designation and the average needed net density for all structure types.

This chapter presents information for these steps for Sherwood's housing needs analysis.

Projection of New Housing Units Needed in the Next 20 Years

The housing needs analysis in this report is based on the Metroscope forecast of household growth in Sherwood over the next 25 years.

As required by OAR 660-024, the housing needs analysis in this report is based on a coordinated forecast from Metro (the November 2012 "Gamma" forecast), which is a necessary prerequisite to estimate housing needs. The projection of household growth includes areas currently within the city limits, as well as areas currently outside the city limits that the City expects will someday be annexed for residential uses (most notably the Brookman area). We call these areas combined the "Sherwood planning area."

While the housing needs analysis presents information for Sherwood West, this area is currently outside of the regional UGB. Housing need in Sherwood West is not considered part of Sherwood's overall housing need for the purposes of this study. The information in this report, however, can inform the ongoing Pre-Concept Planning for Sherwood West.

The housing needs analysis focuses on housing growth in Sherwood over the 2015 to 2035 period.

The forecast shows that Sherwood will add 1,156 new households over the 20-year period.

Table B-6 in Appendix B presents Metro's forecast for housing in Sherwood for the 2010 to 2035 period. Table 1 presents ECONorthwest's extrapolation of Metro's forecast for Sherwood to the 2015 to 2035 period. Table 1 shows that **the Sherwood planning area is expected to add 1,156 new households between 2015 and 2035. Regional models and informed projections suggest just over 600 (**606) new households will be accommodated inside the existing city limits. Approximately 550 new households are expected to be accommodated outside the current city limits in the Brookman Area.

Table 1. Extrapolated Metro forecast for household growth, Sherwood planning area, 2015 to 2035

	Households			
Year	Sherwood City Limits	Brookman Area	Sherwood Planning Area	Sherwood West
2015	6,663	101	6,764	270
2035	7,269	651	7,920	5,114
Change 2010 to 2035				
Households	606	550	1,156	4,844
Percent	9%	545%	17%	1794%
AAGR	0.4%	9.8%	0.8%	15.8%

Source: Metro Gamma Forecast, November 2012
Extrapolation from the 2010 forecast (the base year in the Metro forecast) to 2015 (not shown in Metro's forecast) by ECONorthwest

DEMOGRAPHIC AND SOCIOECONOMIC FACTORS AFFECTING HOUSING CHOICE

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

The Factors that Affect Housing Choice

The factors that have the largest impact on a household's housing choice are: age of the householder, household size and composition, and income.

Analysts typically describe housing demand as the preferences for different types of housing (i.e., 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).

Metro, the agency responsible for regional planning within the Portland metropolitan UGB, uses a decision support tool called Metroscope to model changes in measures of economic, demographic, land use, and transportation activity. Metroscope includes a residential location model, which projects the locations of future households based on factors such as land availability and capacity, cost of development, changes in demographics, changes in employment, and changes in transportation and transit infrastructure. The housing needs analysis in this report is based on the Metroscope forecast of household growth in Sherwood over the next 25 years.

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.[11]

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

The Case for Multi-family Housing. Urban Land Institute. 2003

E. Zietz. *Multi-family Housing: A Review of Theory and Evidence.* Journal of Real Estate Research, Volume 25, Number 2. 2003.

C. Rombouts. *Changing Demographics of Homebuyers and Renters.* Multi-family Trends. Winter 2004.

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

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

M. Riche. *The Implications of Changing U.S. Demographics for Housing Choice and Location in Cities.* The Brookings Institution Center on Urban and Metropolitan Policy. March 2001.

- **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.
- **Size of household** is the number of people living in the household. Younger and older people are more likely to live in single-person households. People in their middle years are more likely to live in multiple person households (often with children).
- **Income** is the household income. Income is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family detached, duplex, or a building with more than five units) and to household tenure (e.g., rent or own).

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

National housing trends

Appendix B presents a full review of national housing trends. This brief summary builds on previous work by ECONorthwest, Urban Land Institute (ULI) reports, and conclusions from *The State of the Nation's Housing, 2014* report from the Joint Center for Housing Studies of Harvard University. The Harvard report summarizes the national housing outlook as follows:

> "With promising increases in home construction, sales, and prices, the housing market gained steam in early 2013. But when interest rates notched up at mid-year, momentum slowed. This moderation is likely to persist until job growth manages to lift household incomes. Even amid a broader recovery, though, many hard-hit communities still struggle and millions of households continue to pay excessive shares of income for housing."

Several challenges to a strong domestic housing market remain. Demand for housing is closely tied to jobs and incomes, which are taking longer to recover than in previous cycles. While trending downward, the number of underwater homeowners, delinquent loans, and vacancies remains high. *The State of the Nation's Housing* report projects that it will take several years for market conditions to return to normal and, until then, the housing recovery will likely unfold at a moderate pace.

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

National housing market trends include: [12]

- **Post-recession recovery slows down**. Despite strong growth in the housing market in 2012 and the first half of 2013, by the first quarter of 2014, housing starts and existing home sales were both down by 3% from the same time a year before, while existing home sales were down 7% from the year before. Increases in mortgage interest rates and meager job growth contributed to the stall in the housing market.
- **Continued declines in homeownership**. After 13 successive years of increases, the national homeownership rate declined each year from 2005 to 2013, and is currently at about 65%. The Urban Land Institute projects that homeownership will continue to decline to somewhere in the low 60% range.

In 2012, more than one-third of households across the US had housing affordability problems, with the lowest income households having the most difficulty finding affordable housing.

- **Housing affordability**. In 2012, more than one-third of American households spent more than 30% of income on housing. Low-income households face an especially dire hurdle to afford housing. Among those earning less than $15,000, more than 80% paid over 30% of their income and almost 70% of households paid more than half of their income. For households earning $15,000 to $29,000, more than 60% were cost burdened, with about 30% paying more than half of their income on housing.

Since 1990, the average size of new dwelling units increased both for single-family and multifamily housing. At the same time, the average lot size for new housing decreased.

- **Changes in housing characteristics**. National trends show that the size of single-family and multifamily units, and the number of household amenities (e.g., fireplace or two or more bathrooms) has increased since the early 1990s. Between 1990 and 2013 the median size of new single-family dwellings increased 25% nationally from 1,905 square feet to 2,384 square feet and 18% in the western region from 1,985 square feet to 2,359 square feet. Moreover, the percentage of units smaller than 1,400 square feet nationally decreased from 15% in 1999 to 8% in 2013. The percentage of units greater than 3,000 square feet increased from 17% in 1999 to 29% of new one-family homes completed in 2013. In addition to larger homes, a move towards smaller lot sizes is seen nationally. Between 2009 and 2013, the percentage of lots less than 7,000 square feet increased from 26% of lots to 30% of lots. Similarly, in the western region, the share of lots less than 7,000 square feet increased from 43% to 48% of lots.

[12] 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 2013," (2) Urban Land Institute, "2011 Emerging Trends in Real Estate," and (3) the U.S. Census.

- **Long-term growth and housing demand**. The Joint Center for Housing Studies forecasts that demand for new homes could total as many as 13.2 million units nationally between 2015 and 2025. Much of the demand will come from Baby Boomers, Millennials,[13] and immigrants.

Future housing preferences will be affected by demographic changes, such as the aging of the Baby Boomers, growing housing demand from Millennials, and growth of foreign-born immigrants.

- **Changes in housing preference**. Housing preference will be affected by changes in demographics, most notably the aging of the Baby Boomers, housing demand from the Millennials, and growth of foreign-born immigrants. Baby Boomers' housing choices will affect housing preference and homeownership, with some boomers likely to stay in their home as long as they are able and some preferring other housing products, such as multifamily housing or age-restricted housing developments.

  In the near-term, Millennials and new immigrants may increase demand for rental units. The long-term housing preference of Millennials and new immigrants is uncertain. They may have different housing preferences as a result of the current housing market turmoil and may prefer smaller, owner-occupied units or rental units. On the other hand, their housing preferences may be similar to the Baby Boomers, with a preference for larger units with more amenities. Recent surveys about housing preference suggest that Millennials want affordable single-family homes in areas that that offer transportation alternatives to cars, such as suburbs or small cities with walkable neighborhoods. [14]

[13] Millennials are, broadly speaking, the children of Baby Boomers, born from the early 1980's through the early 2000's.

[14] The American Planning Association, "Investing in Place; Two generations' view on the future of communities." 2014. "Survey Says: Home Trends and Buyer Preferences," National Association of Home Builders International Builders Show, accessed January, 2015, http://www.buildersshow.com/Search/isesProgram.aspx?id=17889&fromGSA=1. "Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows," Transportation for America, accessed January 2015, http://t4america.org/wp-content/uploads/2014/04/Press-Release_Millennials-Survey-Results-FINAL-with-embargo.pdf.

State Trends

Oregon's *2011-2015 Consolidated Plan* includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide.[15] The plan concludes that "Oregon's changing population demographics are having a significant impact on its housing market." It identified the following population and demographic trends that influence housing need statewide. Oregon is:

- Facing housing cost increases due to higher unemployment and lower wages, as compared to the nation.
- Since 2005, is experiencing higher foreclosure rates compared with the previous two decades.
- Losing federal subsidies on about 8% of federally-subsidized Section 8 housing units.
- Losing housing value throughout the State.
- Losing manufactured housing parks, with a 25% decrease in the number of manufactured home parks between 2003 and 2010.
- Increasingly older, more diverse, and has less affluent households.[16]

Regional and Local Demographic Trends

Sherwood has a growing population (Table B- 5**).** Sherwood's growing population will drive future demand for Sherwood over the planning period.

- Sherwood grew by more than 15,000 people, a 501% increase in population, at an average annual rate of 8.1% over the 1990 to 2013 period. [17]
- Sherwood grew at a faster rate than the nation as a whole (1.0% per year), Oregon (1.4% per year), and the Portland Region (1.6%) over this period.
- Metro forecasts that the number of households in the Sherwood Planning Area will grow by about 1,156 households over the 2015-2035 period, at an average annual growth rate of 0.8%. About 600 new households will be within Sherwood's existing city limits and about 550 will be in the Brookman Area, an area that has not yet annexed into Sherwood. [18]

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[15] http://www.ohcs.oregon.gov/OHCS/HRS_Consolidated_Plan_5yearplan.shtml

[16] State of Oregon *Consolidated Plan 2011 to 2015*. http://www.oregon.gov/ohcs/hd/hrs/consplan/2011_2015_consolidated_plan.pdf

[17] 2013 Population Estimates in Oregon come from Portland State University's Population Research Center.

[18] Metro Gama Forecast, November 2012.

- Metro forecasts that Sherwood West, an area that is adjacent to Sherwood but currently outside of the Metro Urban Growth Boundary, will grow by 4,844 households. Growth in Sherwood West will not begin until the area is included in the Metro UGB and annexed into Sherwood.
- Metro's forecast of household growth considers residential capacity within Sherwood's city limits to accommodate growth. Much of Sherwood's future growth depends on bringing new land into the city limits, including the Brookman Area and Sherwood West.

The growth of younger and diversified households will result in increased demand for a wider variety of affordable housing appropriate for families with children, such as small single-family housing, townhouses, duplexes, and multifamily housing.

Sherwood's population is younger than the state, on average (Table B- 7**,** Table B- 8**, and** Figure B- 8**).** Sherwood has a larger share of people younger than 30 years of age, and a relatively small share of people over 50 years. If Sherwood continues to attract young residents, then it will continue to have demand for housing for families, especially housing affordable to younger families with moderate incomes. Recent studies suggest that growth in younger residents (e.g., Millennials) will result in increased demand for both affordable single-family detached housing, as well as increased demand for affordable townhouses and multifamily housing. Growth in this population will result in growth in demand for both ownership and rental opportunities, with an emphasis on housing that is comparatively affordable.

- In 2010, the median age in Sherwood was 34.3 years old, compared to the State median of 38.4.
- A higher percentage of Sherwood's population is younger than 30 years (44%) compared to the state as a whole (39%). Furthermore, a smaller share of Sherwood's population is younger than 50 years (21%), compared to the state as a whole (34%).

The aging of the population will result in increased demand for smaller single-family housing, multifamily housing, and housing for seniors.

Sherwood's population is growing older (Figure B- 9**).** Although Sherwood has a smaller share of people over 50 years old than the State average, Sherwood's population is growing older, consistent with State and national trends. Demand for housing for retirees will grow over the planning period, as the Baby Boomers continue to age and retire. However, Sherwood's demand for housing for seniors may grow at a slower rate than across the State.

Growth of seniors will have the biggest impacts on demand for new housing through demand for housing types specific to seniors, such as assisted living facilities or age-restricted developments. These households will make a variety of housing choices, including: remaining in their homes as long as they are able, downsizing to smaller single-family homes (detached and attached) or multifamily units, or moving into group housing (such as assisted living facilities or nursing homes), as their health fails.

- The fastest-growing age group over the 2000 to 2010 period in Sherwood was people aged 45 years and older, with the most growth in the number of people aged 45 to 64.

- In Sherwood, people aged 45 to 64 grew by 102%, from 1,936 to 3,917 people between 2000 and 2010.
- By 2035, people 60 years and older will account for 24% of the population in Washington County (up from 18% in 2015). The percent of total population in each age group younger than 60 years old will decrease. The age distribution in the Portland Region will change in a similar pattern.[19]
- Given the growth of people 45 years and older in Sherwood and the forecast for growth of people 60 years and older between 2015-2035 in Washington County and the Portland Region, it is reasonable to expect that Sherwood will have growth in the senior population.

Sherwood is becoming more ethnically diverse (Figure B- 10**).** Growth in Hispanic and Latino population will affect Sherwood's housing needs in a variety of ways. Growth in first and, to a lesser extent, second and third-generation Hispanic and Latino immigrants tend to increase demand for larger dwelling units to accommodate the on average larger household sizes for these households. Households for Hispanic and Latino immigrants are more likely to include multiple generations, requiring more space than smaller household sizes. As Hispanic and Latino households integrate over generations, household size typically decreases and housing needs become similar to housing needs for all households.

Growth in Hispanic and Latino 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.

- Sherwood's Hispanic and Latino population grew by 99% from 2000 to the 2009-2013 period, from 557 to 1,107 people, increasing its share of the population from 4.7% to 6.0%.
- Nonetheless, Sherwood's percentage of Hispanic or Latino population remains below that of the state as a whole. In the 2009-2013 period, Hispanic and Latino population accounted for 12% of the state's population, compared to Sherwood's average of 6.0%.

Sherwood's household size is larger than State averages (Table B- 9**).** The larger household size is indicative of a larger share of households with children or multigenerational households.

- Sherwood's average household size was 2.89 persons per household, compared with the regional average of 2.54 persons per household, and the state average of 2.49 persons per household.

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[19] Demographic forecast for Washington County by the Oregon Office of Economic Analysis.

- The size of households in Sherwood grew from 2000 to the 2009-2013 period (2.77 to 2.89). Over the same period, the average household size in the Portland Region rose slightly from 2.53 to 2.54, while the State's average fell from 2.51 to 2.49.

Sherwood has a relatively high share of households with children (Figure B-11**).** Households with children are more likely to prefer single-family detached housing, if it is relatively affordable.

- Sherwood has a larger share of households with children (47%) than the State average (27%), the Portland Region (29%), or Washington County (33%).
- In the 2009-2013 period, Sherwood had a smaller share of single-person households (19%) than the regional average (29%).
- In the 2009-2013 period, Sherwood had a smaller share of non-family households (23%) than the regional average (38%).

Sherwood is part of a complex, interconnected regional economy (Figure B- 12**,** Table B- 11**, and** Table B- 12**).** Most people working at businesses in Sherwood do not live in Sherwood. Demand for housing by workers at businesses in Sherwood may change with fluctuations in fuel and commuting costs, as well as the capacity of highways to accommodate commuting. [20]

- Commuting is typical throughout the region: 91% of Sherwood's working residents commuted outside the city, and about 85% of those who work in the city live outside the city itself.

Summary of the Implications of Demographic and Socioeconomic Trends on Housing Choice

The purpose of the analysis thus far has been to provide background on the kinds of factors that influence housing choice, and in doing so, to convey why the number and interrelationships among those factors ensure that generalizations about housing choice are difficult and prone to inaccuracies.

There is no question that age affects housing type and tenure. Mobility is substantially higher for people aged 20 to 34. People in that age group will also have, on average, less income than people who are older. They are less likely to have children. All of 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 illustrate what more detailed research has shown and what most people understand intuitively: life cycle and housing choice interact in ways that are

[20] US Census Bureau, LED on the Map, http://lehdmap3.did.census.gov/themap3/.

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; 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), the "empty nesters."[21] Thus, simply looking at the long wave of demographic trends can provide good information for estimating future housing demand.

Thus, 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 Sherwood over the next 20 years:

- **Growth in housing will be driven by growth in population.** Between 2000 and the 2009-2013 period, the number of housing units in Sherwood increased by 47% from about 4,500 to 6,600 (Figure B- 4), while its population grew by roughly 55% from 11,963 to 18,575 from 2000 to 2013 (Table B- 5).[22]
- **On average, future housing will look a lot like past housing.** That is the assumption that underlies any trend forecast, and one that allows some quantification of the composition of demand for new housing. As a first approximation, the next three to five years of residential growth will look a lot like the last three to five years.
- **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.

  Key demographic trends that will affect Sherwood's future housing needs are: (1) the aging of the Baby Boomers, (2) aging of the Millennials, (3) growth of family households, and (4) continued growth in Hispanic and Latino population.

  - *The Baby Boomer's population is continuing to age.* By 2035, people 60 years and older will account for 24% of the population in Washington County (up from 18% in 2015). The changes that affect Sherwood's housing demand as the population ages are that household sizes decrease and homeownership rates decrease.

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

[22] 2013 Population Estimates come from come from the Portland State University Population Research Center's Annual Population Estimates.

- *Millennials will continue to age.* By 2035, Millennials will be roughly between about 35 years old to 55 years old. As they age, generally speaking, their household sizes will increase and homeownership rates will peak by about age 55. Between 2015 and 2035, Millennials will be a key driver in demand for housing for families with children.
- *Growth of households with children.* Sherwood has an unusually high percentage of households with children, compared to the regional averages. If Sherwood continues to attract families with children, demand for housing for families, such as affordable single-family detached or townhouses, will increase.
- *Hispanic and Latino population will continue to grow.* The U.S. Census projects that by about 2040, Hispanic and Latino population will account for more than one-quarter of the nation's population. The share of Hispanic and Latino population in the western U.S. is likely to be higher. Growth in Hispanic and Latino population will drive demand for housing for families with children. Given the lower income for Hispanic and Latino households,[23] growth in this group will also drive demand for affordable housing, both for ownership and renters.

In summary, an aging population, increasing housing costs, housing affordability concerns for Millennials and the Hispanic and Latino populations, and other variables are factors that support the conclusion of smaller and less expensive units and a broader array of housing choices.

Millennials and immigrants will drive demand for affordable housing types, including demand for small, affordable single-family units (many of which may be ownership units) and for affordable multifamily units (many of which may be rental units).

- **No amount of analysis is likely to make the distant future any more 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

[23] The following article describes household income trends for Hispanic and Latino families, including differences in income levels for first, second, and third generation households. In short, Hispanic and Latino households have lower median income than the national averages. First and second generation Hispanic and Latino households have median incomes below the average for all Hispanic and Latino households.

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

three (or at most five) years out as highly speculative. At one year, one is protected from being disastrously wrong by the shear inertia of the economic machine. But a variety of factors or events could cause growth forecasts to be substantially different.

Regional and Local Trends in Housing Costs and Affordability

Sherwood's income is higher than state averages (Figure B- 19**).** Income is a key determinant of housing affordability. Since 2000, Sherwood's income has decreased (in inflation-adjusted dollars), consistent with state trends.

- Sherwood's median household income ($78,400) was about 55% higher than the state median ($50,229) in the 2009-2013 period.
- Inflation-adjusted income for households in Sherwood decreased by about 10% from about $87,500 in 2000 to $78,400 (in 2013 dollars) from 2000 to the 2009-2013 period. This is consistent with state and regional trends.
- Poverty rates increased in Sherwood from 2.7% of the population below poverty in 2000 to 7.6% in 2010. The increase is consistent with state and regional trends.
- Sherwood had a smaller share of population below the federal poverty line in the 2009-2013 period (7.6%) than the state average (16.2 %).

Housing costs in Sherwood increased by 30% since 2000.

Sales prices in Sherwood are higher than the regional averages.

Homeownership costs have increased in Sherwood (Figure B- 13**,** Figure B- 14**,** Figure B- 15 **and** Figure B- 16**).** Sales prices for single-family housing increased over the period from 2004 to 2014, consistent with national trends. While housing prices peaked in 2007, before falling during the recession, sales prices grew by about 30% from 2004 to 2014.

The increases in housing costs have made Sherwood less affordable than most other communities on the southwest side of Portland.

- Median sales prices for homes in Sherwood increased by about 30% between 2004 and 2014, from about $245,000 to $318,000.[24]
- As of January 2015, median sales prices in Sherwood were about $316,500, higher than in Washington County ($281,700), the Portland MSA ($269,900), and Oregon ($237,300). Median sales prices were higher in Sherwood than in other Portland westside communities such as

[24] Recent median home sale price, including price per square foot, comes from Zillow Real Estate Research.

Tigard, Tualatin, and Beaverton but lower than Wilsonville or West Linn.

- Prices per square foot rose in Sherwood from $130 per square foot in October 2004 about $170 dollars in October 2014, comparable to the price in Washington County and the Portland Region (both about $170). The cost of housing per square foot was comparable in Sherwood to other cities on the southwest side of Portland, such as Tigard, Tualatin, Beaverton, and Wilsonville.
- The sales price data suggest that, overall, owner-occupied housing being produced in Sherwood was more expensive because it is larger than housing built in other cities in the southwestern Portland area.
- The ratio of home value to income increased by 32% from 2000 to 2009-2013. In 2000, the median home value was 2.9 times the median household income. By 2009-2013, the median home value was 3.8 times the median household income. In comparison, in 2009-2013, the typical value of an owner-occupied house in Washington County was 4.4 times the median income and the state average was 4.74 times the median income.

Rental costs are about 25% higher than the regional average.

Rental costs are higher in Sherwood than the average in Washington County, with a slightly lower rental cost on a cost per square foot basis (Table B- 14**, and** Figure B- 17 **and** Figure B- 18**).**

- The median contract rent in Sherwood in the 2009-2013 period was $1,064, compared to Washington County's average of $852.
- Average rent in the Tigard/Tualatin/Sherwood area submarket was $1.13 per square foot in Fall 2014, lower than the regional average of $1.22 per square foot. Between Spring 2010 and Spring 2013, average rent in Tigard/Tualatin/Sherwood area increased by 38%, consistent with the regional increase of 36%.

More than one-third of Sherwood's households have housing affordability problems, similar to regional averages.

More than one-third of Sherwood's households have housing affordability problems (Figure B- 20 **and** Figure B- 21**).**

- Thirty-eight percent of Sherwood's households were cost burdened (i.e., paid more than 30% of their income on rent or homeownership costs) in the 2009-2013 period. This is consistent with the state averages.
- Roughly 40% of Sherwood's renter households were cost burdened in the 2009-2013 period. About one-fifth of renters were severely cost burdened (i.e., pay more than 50% of their income on rent).
  - About 35% of Sherwood's homeowners were cost burdened in the 2009-2013 period. Only about 1% of homeowners were severely cost burdened (i.e., paid more than 50% of their income on homeownership costs).

Future housing affordability will depend on the relationship between income and housing price. The key question, which is difficult to answer when based on historical data, is whether housing prices will continue to outpace income growth.

FORECAST OF HOUSING BY TYPE AND DENSITY OF HOUSING

Table 2 shows the forecast of needed housing units in Sherwood based on the total estimate of housing need shown in Table 1. The forecast in Table 2 assumes: that the forecast for new housing will be: 50% single-family detached, 10% single-family attached, and 40% multifamily. This forecast is consistent with the requirements of OAR 660-007-0035.

The forecast shows increased demand for lower-cost housing types such as single-family attached and multifamily units, which meets the needs resulting in the changing demographics in Sherwood and the Portland region. The changes in demographics are the aging of the Baby Boomers, growth in Millennial households, and increases in ethnic diversity. The previous section described these trends and the implications for housing need in Sherwood.

Table 2. Forecast of needed housing units by mix, Sherwood planning area, 2015-2035

Housing Type	New Dwelling Units (DU)	Percent
Single-family detached	578	50%
Single-family attached	116	10%
Multifamily	462	40%
Total	**1,156**	

Source: ECONorthwest

The assumed housing mix meets the requirement of OAR 660-007-0030 to "designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing."

The needed density in Sherwood is consistent with the densities achieved in residential zones Sherwood over the 2000-2014 period (Table B-4). These densities are:

- Very Low Density Residential (VLDR): 2.9 dwelling units per net acre
- Low Density Residential (LDR): 6.5 dwelling units per net acre[25]
- Medium Density Residential – Low (MDRL): 6.1 dwelling units per net acre

[25] The historical density achieved in LDR, 6.5 dwelling units per acre, is higher than the maximum allowable density in LDR, 5 dwelling units per net acre. This fact can be explained in large part by the fact that 60% of new development in LDR was part of a Planned Unit Development (PUD), which averaged 7.6 dwelling units per acre.

- Medium Density Residential – High (MDRH): 7.7 dwelling units per net acre
- High Density Residential (HDR): 19.1 dwelling units per net acre

These densities, when applied to Sherwood's supply of buildable land in the capacity analysis (Table 6) results in an overall density of 7.3 dwelling units per net acre. This housing density meets the requirements of OAR 660-007-0035 to "provide for an overall density of six or more dwelling units per net buildable acre."

Table 3 allocates the needed housing units to Sherwood's zones. The allocation is based on allowed uses in Sherwood's zoning code, historical development trends, and Sherwood's inventory of vacant buildable residential land.

Table 3. Allocation of needed housing units to zones, Sherwood planning area, 2015-2035

	Zone					
	Very Low Density Residential	Low Density Residential	Medium Density Residential-Low	Medium Density Residential-High	High Density Residential	Total
Dwelling Units						
Single-family detached	63	121	301	81	12	578
Single-family attached	-	-	-	70	46	116
Multifamily	-	-	58	160	244	462
Total	63	121	359	311	302	1,156
Percent of Units						
Single-family detached	5%	10%	26%	7%	1%	50%
Single-family attached	0%	0%	0%	6%	4%	10%
Multifamily	0%	0%	5%	14%	21%	40%
Total	5%	10%	31%	27%	26%	100%

Source: ECONorthwest

Needed housing by income level

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

The analysis in Table 4 based on American Community Survey data about income levels in Sherwood, using income information shown in Table B- 17. Income is categorized into market segments consistent with HUD income level categories, using the Portland Region's 2014 Median Family Income (MFI) of $69,400. Table 4 is based on current household income distribution, assuming approximately that the same percentage of households will be in each market segment in the future.

Based on Sherwood's current household income distribution, Table 4 shows that about 31% of households in Sherwood have incomes below 80% of the MFI.

These households will need a range of housing, such as lower-cost single-family detached housing, townhouses, manufactured homes, or multifamily housing. These households will predominantly be renters. Sixty-nine percent of households have incomes above 80% of MFI. These households will be a mix of owners and renters. Their housing needs will include single-family detached, townhouses, and multifamily housing.

Growth in lower-income demographic groups, such as the Millennials, or in Baby Boomers who want to downsize their homes, may increase demand for smaller single-family detached houses, townhouses, and multifamily housing.

Table 4. Estimate of needed new dwelling units by income level, Sherwood, 2015-2035

Market Segment by Income	Income Range	Number of households	Percent of Households	Attainable		
				Owner-occupied	Renter-occupied	
High (120% or more of MFI)	$83,280 or more	485	42%	All housing types; higher prices	All housing types; higher prices	
Upper Middle (80%-120% of MFI)	$55,520 to $83,280	312	27%	All housing types; lower values	All housing types; lower values	Primarily New Housing
Lower Middle (50%-80% of MFI)	$34,700 to $55,520	155	13%	Single-family attached; condominiums; duplexes; manufactured on lots	Single-family attached; detatched; manufactured on lots; apartments	Primarily Used Housing
Lower (30%-50% of less of MFI)	$20,820 to $34,700	78	7%	Manufactured in parks	Apartments; manufactured in parks; duplexes	
Very Low (Less than 30% of MFI)	Less than $20,820	126	11%	None	Apartments; new and used government assisted housing	

Source: ECONorthwest
MFI is Median Family Income

Need for government assisted and manufactured housing

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

- **Government-assisted housing.** Government subsidies can apply to all housing types (e.g., single family detached, apartments, etc.) Sherwood allows development of government-assisted housing in all Residential zones, with the same development standards for market-rate housing. This analysis assumes that Sherwood will continue to allow government-assisted housing in all its Residential zones. Because government-assisted housing is similar in character to other housing (with the exception of the subsidies), it is not necessary to develop separate forecasts for government-assisted housing.
- **Manufactured housing on lots.** Sherwood allows manufactured housing in all residential zones as a permitted use. As manufactured homes are allowed as a permitted use in all zones, it is not necessary to develop separate forecasts for manufactured housing on lots.
- **Manufactured housing in parks (**Table B- 13**).** 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. According to the Oregon Housing and Community Services' Manufactured Dwelling Park Directory,[26] Sherwood has four manufactured dwelling parks:
    - Carriage Park Estates with 58 spaces, all occupied
    - Crown Court with 14 spaces, except for one vacancy
    - Orland Villa with 24 spaces, all occupied
    - Smith Farm Estates with 90 spaces, all occupied

  ORS 197.480(2) requires Sherwood 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.

    - Table 1 shows that the Sherwood planning area will grow by 1,156 dwelling units over the 2015 to 2035 period.

[26] Oregon Housing and Community Services, Oregon Manufactured Dwelling Park Directory, http://o.hcs.state.or.us/MDPCRParks/ParkDirQuery.jsp

- Analysis of housing affordability (in Table 4) shows that about 18% of Sherwood's new households will be low income, earning 50% or less of the County's median family income. One type of housing affordable to these households is manufactured housing.
- Manufactured housing in parks accounts for about 2.4% (258 dwelling units) of Sherwood's current housing stock, according to 2009-2013 Census data.
- National, state, and regional trends during the 2000 to 2010 period showed that manufactured housing parks were closing, rather than being created. For example, between 2003 and 2010, Oregon had a statewide decrease of 25% in the number of manufactured home parks. The trend of closing of manufactured housing parks slowed during the housing recession but is likely to increase as housing prices and land prices increase.
- The longer-term trend for closing manufactured home parks is the result of 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 lower-cost affordable housing options, especially for affordable home ownership. The trend in closure of manufactured home parks increases the shortage of manufactured home park spaces. Without some form of public investment to encourage continued operation of existing manufactured home parks and construction of new manufactured home parks, this shortage will continue.

  Table 4 shows that the households most likely to live in manufactured homes in parks are those with incomes between $20,820 and $34,700 (30 to 50% of median family income). Assuming that about 1.5% to 2.5% of Sherwood's new households (1,156 new dwellings) choose to live in manufactured housing parks, the City may need 20 to 34 new manufactured home spaces. At an average of 8 dwelling units per net acre, this results in demand for 2.5 to 4.2 acres of land.

  The City allows development of manufactured housing parks in MDRL zones, where the City has 66 vacant suitable buildable acres of land. Development of a new manufactured home park in Sherwood over the planning period seems unlikely. The land needed for development of a manufactured housing park is part of the forecast in Table 2.

4 Residential Land Sufficiency

This chapter presents an evaluation of the sufficiency of vacant residential land in Sherwood to accommodate expected residential growth over the 2015 to 2035 period. This chapter includes an estimate of residential development capacity (measured in new dwelling units) and an estimate of Sherwood's ability to accommodate needed new housing units for the 2015 to 2035 period. The chapter also includes conclusions and recommendations based on the results of the housing needs analysis.

Residential Buildable Land

Table 5 presents the City's inventory of buildable land. The buildable lands inventory is based on City of Sherwood and Metro GIS data. Appendix A presents a complete description of the methodology used to develop the buildable lands inventory. The key assumptions in the inventory are:

- **Vacant land** was defined as land that is fully vacant (as determined by Metro's Regional Land Information System (RLIS) GIS data and local data), or tax lots that are at least 95% vacant, or tax lots that have less than 2,000 square feet developed, with development covering less than 10% of the entire lot.
- **Unbuildable land** was removed from the inventory, including land with: public tax exemptions (i.e., land owned by the city or state), schools, churches, and other tax-exempt social organizations, private streets, rail properties, parks, and tax lots that do not meet the City's requirements for infill development.
- **Environmental resources and constraints** were deducted from the inventory of vacant land, including floodways and slopes over 25%.
- **Future rights-of-way** were accounted for based on lot sizes, with tax lots larger than one acre assumed to have 18.5% of land set aside for future rights-of-way.

Table 5 shows that Sherwood has 175 net acres of suitable buildable residential land. Fifty-five percent of Sherwood's vacant land (96 acres) is within the city limits and 45% (79 acres) is within the Brookman Area or other unincorporated areas within the current Urban Growth Boundary.

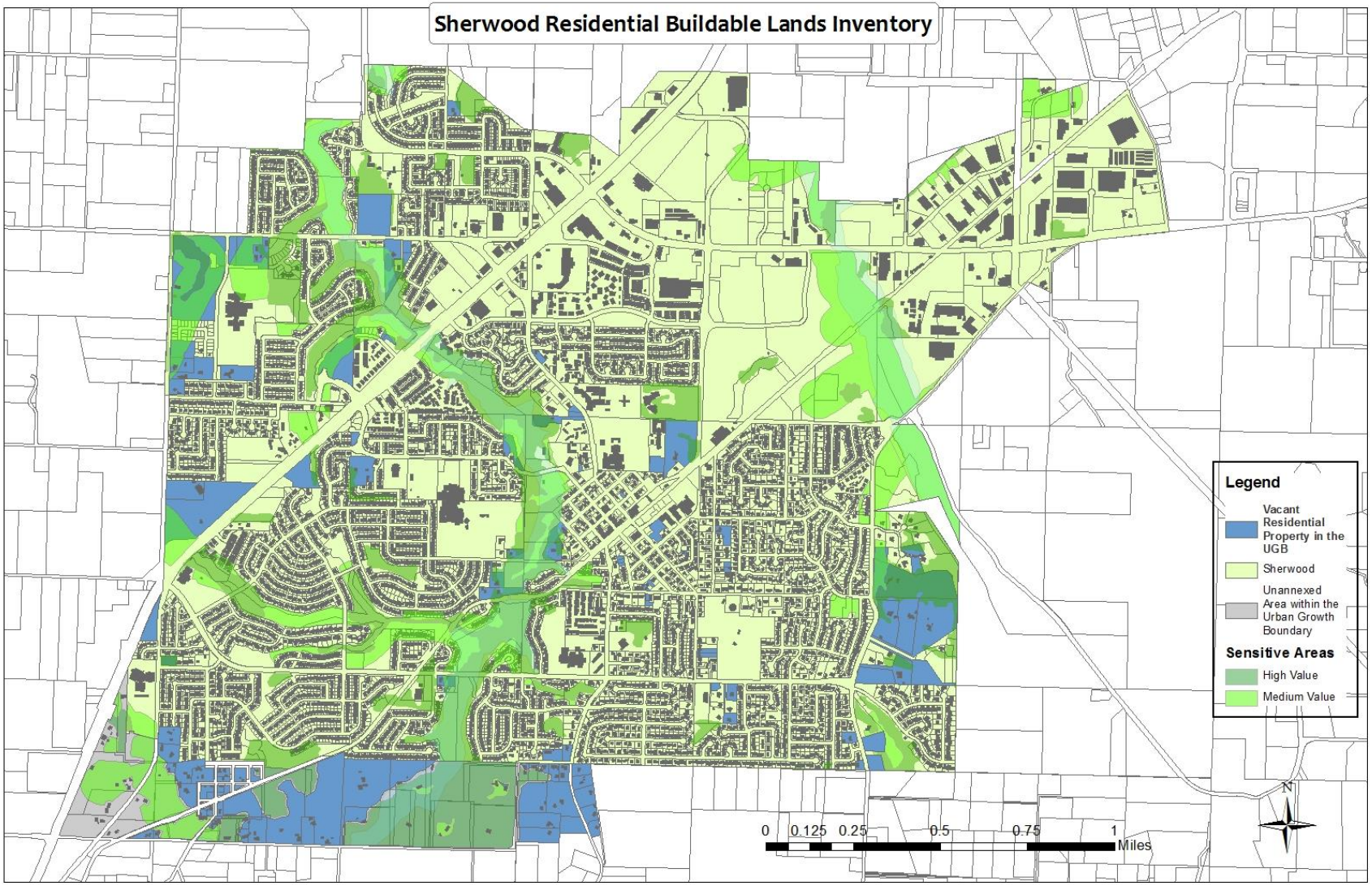
Table 5. Inventory of suitable buildable residential land, net acres, Sherwood city limits and areas within the UGB, 2014

Zone	Gross Acres	Percent of Total
Land within City Limits		
Very Low Density Residential (VLDR)	24	14%
Very Low Density Residential Planned Unit Development (VLDR-PUD)	1	1%
Low Density Residential (LDR)	22	13%
Medium Density Residential-Low (MDRL)	14	8%
Medium Density Residential-High (MDRH)	21	12%
High Density Residential (HDR)	14	8%
Subtotal	**96**	**55%**
Brookman and Other Unincorporated Areas		
Very Low Density Residential (VLDR)	1	1%
Medium Density Residential-Low (MDRL)	52	30%
Medium Density Residential-High (MDRH)	8	4%
Medium Density Residential- Low/High* (MDRL/H)	15	8%
High Density Residential (HDR)	3	2%
Subtotal	**79**	**45%**
Total	**175**	**100%**

Source: City of Sherwood
*Note: There is one lot split between MDRL and MDRH.

Map 1 shows the inventory of vacant and partially vacant land in Sherwood.

Map 1. Inventory of suitable buildable residential land, net acres, Sherwood city limits and areas within the UGB, 2014



Source: City of Sherwood

RESIDENTIAL DEVELOPMENT CAPACITY

This section presents a summary of the analysis used to estimate Sherwood's residential development capacity.

The capacity analysis estimates the number of new dwelling units that can be accommodated on Sherwood's residential land supply.[27] The capacity analysis evaluates ways that vacant suitable residential land may build out by applying different assumptions.

In short, land capacity is a function of buildable land, housing mix (as determined by plan designation or zoning), and density. The basic form of any method to estimate capacity requires (1) an estimate of *buildable* land, and (2) assumptions about density. The arithmetic is straightforward:

Buildable Land (ac) * Density (du/ac) = Capacity (in dwelling units)

For example:

100 acres * 8 du/ac = 800 dwelling units of capacity

The example is a simplification of the method, which skips some of the nuances that can be incorporated into a detailed capacity analysis such as variations in densities and housing mix among different Comprehensive Plan Designations.

Capacity analysis results

The capacity analysis estimates the development potential of vacant residential land to accommodate new housing based a range of density assumptions by zoning designation. Table 6 shows the capacity of Sherwood's residential land based on the buildable vacant and partially vacant land in Sherwood and a range of potential density assumptions.

The analysis of capacity in Table 6 is meant to illustrate the potential capacity of Sherwood's land based on current development policies and on historical development densities. Table 6 shows development capacity using: (1) the minimum allowable densities and (2) the maximum allowable densities (ensuring that lots meet the minimum lot size requirements. Table 6 also shows capacity based on historical densities.

[27] In this report, the term "capacity analysis" is used as shorthand for estimating how many new dwelling units the vacant residential land in the UGB is likely to accommodate.

- **Buildable Acres.** The Buildable Lands Inventory identified 175 net acres of vacant and partially vacant land, with 96 acres within Sherwood's city limits and 79 acres in the Brookman and other unincorporated areas within the Metro UGB.
- **Capacity based on Zoning: Minimum Densities.** The analysis considered the capacity of Sherwood's land based on minimum densities in Sherwood's zoning code. This analysis shows that Sherwood has capacity of 940 new dwelling units at 5.4 dwelling units per net acre based on minimum zoning in all districts.
- **Capacity based on Zoning: Maximum Densities and Minimum Lot Sizes.** The analysis considered the capacity of Sherwood's land based on maximum densities in Sherwood's zoning code and the minimum lot size. This analysis was developed based on parcel-specific data. The amount of buildable land was identified in each parcel and the potential capacity was evaluated based on development standards in Sherwood's zoning code.

  The maximum capacity estimate estimates the capacity of Sherwood's land based on the maximum density allowed by zone by parcel, assuming that each parcel of buildable land meets the minimum lot size of the zone it is in.

  Table 6 shows that Sherwood's buildable land has capacity to accommodate 1,510 new dwelling units under these assumptions. This estimate results in an overall average of 8.6 dwelling units per net acre. About 44% of Sherwood's development capacity is in the Brookman area and other unincorporated areas within the Metro UGB.
- **Historical Development Densities.** The analysis considered the capacity of Sherwood's land based on historical development density by zone. In this analysis, we applied the historical density to the total vacant land in each zone to estimate the number of dwelling units that could be accommodated.

  Table 6 shows that Sherwood's buildable land has capacity to accommodate 1,286 new dwelling units based on historical development densities. This estimate results in an overall average of 7.3 dwelling units per net acre. About 44% of Sherwood's development capacity is in the Brookman area and other unincorporated areas within the Metro UGB.

Table 6. Range of capacity estimates, Sherwood vacant and partially vacant land, gross acres and gross densities, 2015

		Capacity based on Zoning: Minimum Densities		Capacity based on Zoning: Maximum Densities and Minium Lot Sizes		Capacity based on Historical Development Densities		Difference in Capacity between Maximum Densities and Historical Densitites	
Zone	Buildable Acres	Dwelling units	Derived Density	Dwelling units	Derived Density	Density Assumption	Dwelling units	Difference in Dwelling Units	Difference in Density
Land within City Limits									
VLDR	24	19	0.8	94	3.9	2.9	69	25	1.0
VLDR_PUD	1	-	-	4	3.8	2.9	3	1	0.9
LDR	22	71	3.2	113	5.1	6.5	144	(31)	(1.4)
MDRL	14	75	5.2	112	7.8	6.1	88	24	1.7
MDRH	21	111	5.3	223	10.7	7.7	161	62	3.0
HDR	14	224	16.0	303	21.7	19.1	266	37	2.6
Subtotal	96	500	5.2	849	8.8		731	118	8.8
Brookman and Other Unincorporated Areas									
VLDR	1	2	1.6	4	3.2	2.9	3	1	0.3
MDRL	52	275	5.3	401	7.7	6.1	317	84	1.6
MDRH	8	36	4.7	62	8.1	7.7	58	4	0.4
MDRL/H*	15	78	5.3	117	8.0	8.0	117	-	-
HDR	3	49	15.4	70	22.1	19.1	60	10	3.0
Subtotal	79	440	5.6	661	8.4		555	106	8.4
Total	175	940	5.4	1,510	8.6	7.3	1,286	224	1.3

Source: Sherwood buildable lands inventory; Sherwood zoning code; Analysis of historical development densities; and Analysis by ECONorthwest

Table 6 compares the difference in the capacity estimates for the "maximum density (and minimum lot size) capacity" estimate and the "historical development density" estimate. Table 6 shows that the capacity estimate based on historical development densities results in 224 fewer dwelling units than the capacity based on maximum densities. The average density using the historical development densities is 1.3 dwelling units per acre lower than the maximum density analysis.

This difference shows that development in Sherwood is generally occurring at lower than the maximum allowed densities, showing underbuild in Sherwood. Further analysis shows that residential development between 2000 and 2014 occurred at between 70% to 80% of the maximum allowable densities. The exception is Low Density Residential, where development occurred at higher than allowable densities approximately 60% of LDR development between 2000 and 2014 was in Planned Unit Developments – neighborhoods that were approved to provide a more compact development option.

Underbuild is expected as a result of development constraints that lower development capacity, such as slopes. In addition, parcel configuration contributes to underbuild, with parcels that are oddly shaped or have more land than the minimum requirement but not enough for additional housing.

Table 6 demonstrates that development in Sherwood occurred at considerably higher densities than the minimum allowable densities in each zone.

Based on the analysis in Table 6, we conclude that **both the maximum density (and minimum lot size) and the historical development density estimates**

exceed the State requirement (OAR 660-007-0035(2)) to "provide for an overall density of six or more dwelling units per net buildable acre." The estimate results in an average density of between 7.3 to 8.6 dwelling units per net acre.

The conclusion of the housing needed analysis is that Sherwood's historical densities meet Sherwood's future housing needs.

In addition to the capacity shown in Table 6, Sherwood could have additional residential development capacity resulting in development of housing in commercial zones and from redevelopment of residential properties with existing development (where redevelopment results in a net increase in the number of dwelling units on the property).

About 9% of Sherwood's residential development over the 2000 to 2014 period occurred in commercial zones. It is reasonable to assume that some residential development over the next 20 years would occur in commercial zones, as long as housing is considered a secondary use to the commercial use, as required by Sherwood's development code.

Sherwood has limited opportunities for redevelopment because much of Sherwood's housing stock was developed over the last two decades. In addition, residential land in Sherwood is parcelized and meeting existing density requirements in areas with existing development would be difficult.

RESIDENTIAL LAND SUFFICIENCY

The last step in the analysis of the sufficiency of residential land within Sherwood is to compare the demand for land by zone (Table 3) with the capacity of land by zone based on historical development densities (Table 6). Table 7 shows that Sherwood has a small surplus of capacity in each zone.

Table 7. Comparison of capacity of existing residential land with demand for new dwelling units, dwelling units, Sherwood planning area, 2015-2035

Zone	Capacity (Needed Densities)	Housing Demand	Capacity *minus* Demand
Very Low Density Residential	76	63	13
Low Density Residential	144	121	23
Medium Density Residential-Low	416	359	57
Medium Density Residential-High	318	311	7
High Density Residential	327	302	25
Total	**1,281**	**1,156**	**125**

Source: ECONorthwest
Note: DU is dwelling unit.

POTENTIAL GROWTH IN SHERWOOD WEST

Development capacity in Sherwood West will vary from 3,300 to 6,500 dwelling units. The Pre-Concept Plan will begin to identify housing types and development scenarios that fit with the community's vision for Sherwood West and that are possible, given likely development and infrastructure costs

The Pre-Concept Planning work for Sherwood West is ongoing. The results of the Pre-Concept Planning work and later concept and master planning phases will determine more precisely the type and amount of housing in Sherwood West. Table 8 presents estimates of capacity in Sherwood West based on a range of density assumptions, from an average of 6.0 to 12.0 dwelling units per acre. The purpose of the information in Table 8 is to provide some idea of potential development capacity in Sherwood West. Additional information will be developed through the Pre-Concept Planning process.

Table 8. Potential residential development capacity, Sherwood West

	Dwelling Units	Notes
Estimate of Buildable Land		
Gross Acres	670	
Net Acres	546	We assumed an average net-to-gross factor of 18.5% for rights-of-way, regardless of parcel size.
Potential Capacity based on Density Assumptions		
Required average from OAR 660-007 - 6 DU/net acre	3,276	Under this assumption, Sherwood West would be primarily built-out with single-family detached housing. Given Sherwood's historical development densities and the City's requirement to provide opportunity that half of new development is single-family attached and multifamily, this density seems too low for Sherwood West. Issues related to costs of services and development density will be discussed in the pre-concept planning process (and again in the concept planning process) may indicate that this density assumption is too low to support development costs for Sherwood West.
Historical Development Density* - 7.8 DU/net acre	4,259	Issues related to costs of services and development density will be discussed in the pre-concept planning process (and again in the concept planning process) may indicate that this density assumption is too low to support development costs for Sherwood West.
10 DU/net acre	5,460	Metro's forecast for capacity in Sherwood West (4,844) would be accommodated at an average of 10 dwelling units per acre, with some additional capacity for other development.
12 DU/net acre	6,552	

Source: Buildable Lands Estimate from OTAK and analysis by ECONorthwest
*Note: Historical Development Density includes only development in residential zones over the 2000-2014 period.

CONCLUSIONS AND RECOMMENDATIONS

The key findings and recommendations from the housing needs analysis are as follows:

Sherwood is able to accommodate the forecast for growth within the Sherwood Planning Area.

- **Sherwood is able to meet state requirements.** The City's primarily obligations are to (1) designate land in a way that 50% of new housing could be either multifamily or single-family attached housing (e.g., townhouses); (2) achieve an average density of six dwelling units per net acre; and (3) provide enough land to accommodate forecasted housing needs for the next 20 years. Put another way, the City is required to plan that 50% of their new housing will be multifamily or single-family attached housing (e.g., townhouses), with all housing at an average density of 6 dwelling units per net acre. Sherwood is able to meet these requirements and can accommodate the forecast for new housing.
- **Sherwood is meeting its obligation to plan for needed housing types for households at all income levels.** Sherwood's residential development policies include those that allow for development of a range of housing types (e.g., duplexes, manufactured housing, and apartments) and that allow government-subsidized housing. This conclusion is supported by the fact that Metro's 2013 *Compliance Report* concluded that Sherwood was in compliance with Metro Functional Plan and Title 7 (Housing Choice). Sherwood will have an ongoing need for providing affordable housing to lower-income households.

If the Brookman Area is not annexed, Sherwood will either unable to accommodate expected growth or will need to identify an alternative area for growth.

- **To provide adequate supply, Sherwood voters will need to approve/annex the Brookman area.** Sherwood will need to annex the Brookman area in order to accommodate the City's forecast of residential growth. If voters continue to reject the Brookman annexation, Sherwood as a community will either be unable to accommodate expected growth or will need to identify an alternative (more politically acceptable) area for growth. Sherwood West is just one of these possibilities. A first step would be appealing for inclusion into the Metropolitan Urban Growth Boundary. These processes can take several years.
- **Sherwood will need Sherwood West to accommodate future growth beyond the existing city limits and Brookman Area.** The growth rate of Metro's forecast for household growth (0.7% average annual growth) is considerably lower than the City's historical population growth rate over the last two decades (8% average annual growth). Metro's forecast only includes growth that can be accommodated with the Sherwood Planning area, which does not include Sherwood West.

Sherwood's fast growth during the last two decades was driven by historically fast in-migration in to the Portland region, a trend that Metro's forecast shows slowing, and the availability of vacant buildable residential land in Sherwood.

Sherwood will need Sherwood West to accommodate future growth beyond the existing city limits and Brookman Area.

Given the limited supply of buildable land within Sherwood, it is likely that the City's residential growth will slow, especially if Sherwood West is not brought into the Metro UGB in the earlier part of the 20-year planning period. It is likely that Sherwood's future growth over the 2015-2035 period would be considerably slower than its historical growth rate, if for no other fact than it is mathematically more difficult to maintain a high growth rate with a larger population. In addition, Sherwood's fast growth during the last two decades was driven by historically fast in-migration in to the Portland region, a trend that Metro's forecast shows slowing, and the availability of vacant buildable residential land in Sherwood.

- **Sherwood has a relatively limited supply of land for moderate- and higher-density multifamily housing.** Sherwood has 41 vacant acres of MDRH land and 17 acres of HDR land. If the City wants more multifamily housing growth in core areas of Sherwood, the City should evaluate whether to make policy changes that either increase the capacity of MDRH and HDR land or designate more land for these uses. Some specific considerations:
  - MDRH allows up to 11 dwelling units per acre. However the lot development requirements[28] for multifamily make it difficult to achieve the maximum development density. The City should evaluate the implications of changing MDRH development standards to allow densities of at least 11 dwelling units per acre or a moderate increase in the maximum allowable densities in MDRH.
  - The City's supply of HDR land is very limited, with 17 vacant acres of HDR. As part of the Comprehensive Plan update, the City may choose to evaluate opportunities to upzone land to HDR, to allow more multifamily land in areas such as centers or along transportation corridors.
  - Sherwood's development code does not provide opportunities for development of housing at moderate multifamily densities of 11.1 to 16.7 dwelling units per acre, the gap in densities between MDRH and HDR. As part of the Comprehensive Plan update, the City may choose to evaluate the need for a zone that allows development in this density, which might include townhouses and moderate-sized apartment or condominium buildings.
  - About 9% of Sherwood's residential development over the 2000 to 2014 period occurred in commercial zones, such as Office Commercial and

Sherwood's development code does not provide opportunities for development of housing at moderate multifamily densities between 11 to 16 dwelling units per acre.

Providing opportunities for housing in these densities may address may provide opportunities for development of a wider range of affordable housing types.

[28] Sherwood has an 8,000 square foot minimum lot size for the first two multifamily units, with a requirement for 3,200 additional square feet for each multifamily unit beyond the first two units.

Mixed-use Commercial and Condo. Sherwood may be able to accommodate additional multifamily residential development in these zones. The City may choose to evaluate and identify opportunities for additional multifamily development in commercial zones, as part of the Comprehensive Plan update.

- **Sherwood should monitor residential development.** City may wish to develop a monitoring program that will allow Sherwood to understand how fast land is developing. The monitoring program will inform Metro's UGB planning process by providing more detailed information about housing growth and development capacity in Sherwood. This information can help City staff and decision-makers make the case to Metro staff and decision-makers about the need for residential expansion areas. We recommend using the following metrics to monitor residential growth:
  - **Population.** The City already routinely monitors population growth by using the annual population estimates prepared by the Center for Population Research at Portland State University.
  - **Building permits.** The Housing Needs Analysis included a review of building permits by dwelling type, plan designation, zone, and net density. Because the City collects most of the data used in the analysis of historical development density, we recommend that city staff update this analysis on an annual basis.
  - **Subdivision and partition activity.** This metric is intended to measure the rate and density of land divisions in Sherwood. Specific data to include with subdivision and partition activity are the area of the parent lot, the area in child lots, the number of child lots, the average size or density of lots, and the area in dedicated right-of-way.
  - **Land consumption.** This metric relates closely to the building permit data. The building permit data should include tax lot identifiers for each permit. The City should match each permit to data in the buildable lands inventory and report how much land is being used by plan designation, zone, and land classification (e.g., vacant, redevelopable, infill, etc.). Additionally, we recommend the City map the location of development on an annual basis.

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Appendix A. Appendix A. Residential Buildable Lands Inventory

This appendix presents the methodology used to develop the buildable lands inventory and the results of the buildable lands inventory. The information in this appendix was developed by City of Sherwood staff.[29]

METHODOLOGY

Definitions used in the inventory

Vacant land

- Any tax lot that is fully vacant as determined by RLIS GIS Data[30], aerial photography, field checks and local records.
- Tax lots that are at least 95% vacant are considered vacant land.
- Tax lots that are less than 2,000 sq. feet developed AND developed part is under 10% of entire lot

Developed land

- Part vacant/part developed tax lots are considered developed and will be treated in the redevelopment filter

Steps in developing the buildable land inventory

Step 1: Inventory and map fully vacant residential lands

a. Sort City tax lot data by zoning designation within the City boundary.

The residential zones including any planned unit development overlay utilized within this study include:

- Very Low Density Residential (VLDR)
- Low Density Residential (LDR)
- Medium Density Residential Low (MDRL)
- Medium Density Residential High (MDRH)
- High Density Residential (HDR)

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[29] Michelle Miller, AICP, Senior Planner at the City of Sherwood developed the buildable lands inventory.

[30] Metro's Data Resource Center collaborates with local partners to develop and deliver the Regional Land Information System (RLIS) – more than 100 layers of spatial data that supports strategic decision-making for governments, businesses and organizations across the region.

b. Identify parcels that are fully vacant.

1. Remove developed parcels using most recent Metro's RLIS GIS data.
2. Planning staff review based on current aerial photography, field checks, and local records

Step 2: Subtract unbuildable acres

a. Remove tax lots that d/n have potential to provide residential growth.

1. Tax exempt with property codes for City, State, Federal and Native American designations
2. Schools
3. Churches and social organizations-based solely on tax exempt codes
4. Private streets
5. Rail properties
6. Tax lots under the minimum lot size of the zone or 4,250 sq. ft. for residential land due to infill standards
7. Parks

b. Calculate deductions for environmental resources[31].

1. Remove Floodways-100% removed
2. Recognize environmental constraints such as slopes over 25 % and constrained areas as defined by Cities and Counties under Metro Functional Plan Title 13-Riparian Corridors (Class I and II) and Upland Wildlife Habitat (Class A and B) -100%
3. By assumption, allow one dwelling unit per residentially zoned tax lot if environmental encumbrances would limit development such that by internal calculations no dwelling units would otherwise be permitted..

c. Calculate for future streets. [32]

This methodology sets aside a portion of the vacant land supply (not redevelopment supply) in order to accommodate future streets and sidewalks. This assumption is calculated on a per tax lot basis.

1. Tax lots less than 3/8 acre assume 0% set aside future streets.33

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[31] Environmental resources are considered to include Title 3, Title 13 FEMA floodway and slopes over 25 %.

[32] The BLI accounts for future streets on a tax lot by tax lot basis. The buildable area of each tax lot is reduced based on individual tax lot size.

[33] The basis for these net street deduction ratios derive from previous research completed by the Data Resource Center and local jurisdictions for the 2002 UGR.

2. Tax lots between 3/8 acre and 1 acre assume a 10% set aside for future streets
3. Tax lots greater than an acre assume an 18.5% set aside for future streets
4. Industrial zoning assumes a 10% set aside regardless of size.

Step 3: Inventory and map re-developable lands

a. **Definition:**
Re-developable: applies to lots that are classified as developed that are now likely to redevelop or during the 20-year planning period**.**

b. Query performed that identifies previously developed lots that have potential to redevelop over time due to the relationship between the size of the lot and the value of improvements.

1. Sites between .26-.54 acres with improvements less than $ 50 K
2. Sites over .55 acres with improvement between $50,001-100 K
3. Sites over 1 acre with improvement values between $ 100,001-150 K
4. Results of this query include land that is wholly re-developable, meaning existing improvements would be replaced, and land that is partially vacant, meaning the lot could be divided to allow for additional development.

Step 4: Planning staff review of draft map-(Investigative step)

a. **Remove under construction or pending construction as of October 1, 2014**
b. **Added back and redefined areas of special concern (Areas like Brookman for example)**[34]
c. **Review and add City owned properties that are developable and not held for public purpose**
d. **For parcels zoned MDRH and HDR determine densities based on location and likelihood that parcel will develop with multifamily or single-family dwelling units and base densities on minimum lot size for single-family and maximum density for multifamily.**
e. **Re-developable or partially vacant sites that include:**
    - Properties currently for sale
    - Lots that are more than twice the minimum lot size required to support the number of existing dwelling units including tax lots that have land division potential
    - Sites that should have been identified as partially vacant but not caught earlier
    - Lands with single-family development zoned for multifamily development

[34] Assume Brookman Concept Plan Zoning

f. Remove from Map and defined the following as Not Likely to Redevelop

- Sites occupied by active religious institutions
- Sites with known deed restrictions
- Sites currently under development
- Sites occupied by utility infrastructure
- Commercially zoned land greater than ½ mile from either residential or town center lots-most likely won't be mixed use with residential

g. Redevelop Strike Price Analysis

- Perform on all tax lots planned for residential and commercial development, to identify Multifamily and Commercial sites with a market redevelopment strike price of less than $10 per square foot.[35]

$$\text{Strike Price} = \frac{\text{(Improvement value + land value)}}{\text{Total Sq. Ft of lot}}$$

h. Identify possible rezone properties that would either be added or subtracted from the inventory over time.

[35] This formula is part of the draft proposed Metro methodology for identifying sites zoned for Multifamily and Mixed Use Development that are likely to redevelop. $10/sq.ft. is the estimated threshold for the market supporting redevelopment of suburban sites that are zoned for multifamily development.

RESULTS OF THE BUILDABLE LANDS INVENTORY

Table A- 1 presents the City's inventory of buildable land. The buildable lands inventory is based on City of Sherwood and Metro GIS data. Table A- 1 shows that Sherwood has 175 net acres of suitable buildable residential land. Fifty-five percent of Sherwood's vacant land (96 acres) is within the city limits and 45% (79 acres) is within the Brookman Area or other unincorporated areas within the current Urban Growth Boundary.

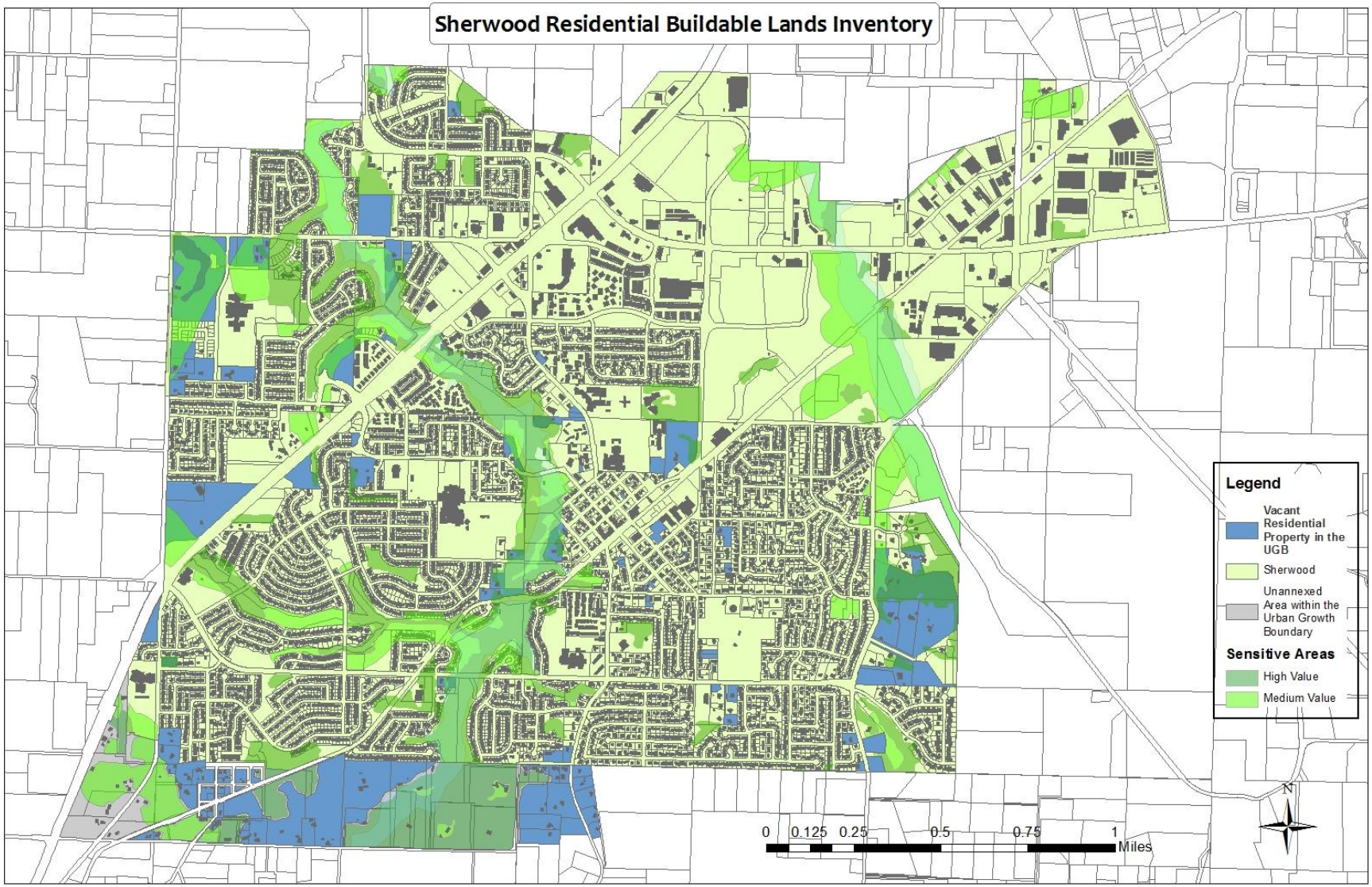
Table A- 1. Inventory of suitable buildable residential land, net acres, Sherwood city limits and areas within the UGB, 2014

Zone	Gross Acres	Percent of Total
Land within City Limits		
Very Low Density Residential (VLDR)	24	14%
Very Low Density Residential Planned Unit Development (VLDR-PUD)	1	1%
Low Density Residential (LDR)	22	13%
Medium Density Residential-Low (MDRL)	14	8%
Medium Density Residential-High (MDRH)	21	12%
High Density Residential (HDR)	14	8%
Subtotal	96	55%
Brookman and Other Unincorporated Areas		
Very Low Density Residential (VLDR)	1	1%
Medium Density Residential-Low (MDRL)	52	30%
Medium Density Residential-High (MDRH)	8	4%
Medium Density Residential- Low/High* (MDRL/H)	15	8%
High Density Residential (HDR)	3	2%
Subtotal	79	45%
Total	175	100%

Source: City of Sherwood
*Note: There is one lot split between MDRL and MDRH.

Map A-1 shows vacant and partially vacant land in Sherwood.

Map A-1. Inventory of suitable buildable residential land, net acres, Sherwood city limits and areas within the UGB, 2014



Source: City of Sherwood

Appendix B. Trends Affecting Housing Need in Sherwood

Historical and Recent Development Trends

Analysis of historical development trends in Sherwood provides insights into how the local housing market functions. The intent of the analysis is to understand how local market dynamics may affect future housing—particularly the mix and density of housing by type. The housing mix and density by type are also key variables in forecasting future land need. The specific steps are described in Task 2 of the DLCD *Planning for Residential Lands* Workbook:

- Determine the time period for which the data must be gathered.
- Identify types of housing to address (at a minimum, all needed housing types identified in ORS 197.303).
- Evaluate permit/subdivision data to calculate the actual mix, average actual gross density, and average actual net density of all housing types.

The period used in the analysis of housing density and mix is 2000 to 2014, which includes both times of high housing production and times of low housing production. This reasons for choosing this period were: (1) the 2000 to 2014 period includes more than one economic cycle, with extreme highs and extreme lows in the housing market and (2) data prior to 2005 was less easily available and obtaining data for 2000 to 2004 required a considerable amount of work by City staff to compile the data.

The housing needs analysis presents information about residential development by housing types. 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:

- **Single-family detached:** single-family detached units and manufactured homes on lots and in mobile home parks.
- **Single-family attached:** all structures with a common wall where each dwelling unit occupies a separate lot, such as row houses or townhouses.

Multifamily: all attached structures other than single-family detached units, manufactured units, or single-family attached units.

These categories of housing type were chosen for the analysis because they meet the requirements of needed housing types in ORS 197.303.[36]

Data used in this analysis

Throughout this analysis, we use data from multiple well-recognized and reliable data sources. One of the key sources for data about housing and household data is the U.S. Census. This report primarily uses data from two Census sources:

- 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 the 2010 Decennial Census, it 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 1990, 2000, and 2010.

- The **American Community Survey (ACS)**, which is completed every year and is a sample of households in the U.S. The 2009-2013 ACS sampled about 16.2 million households, or about 2.8% of the households in the nation. The ACS collects detailed information about households, such as 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.

In general, this report uses data from the 2009-2013 ACS for Sherwood. Where information is available, we report information from the 2010 Decennial Census.

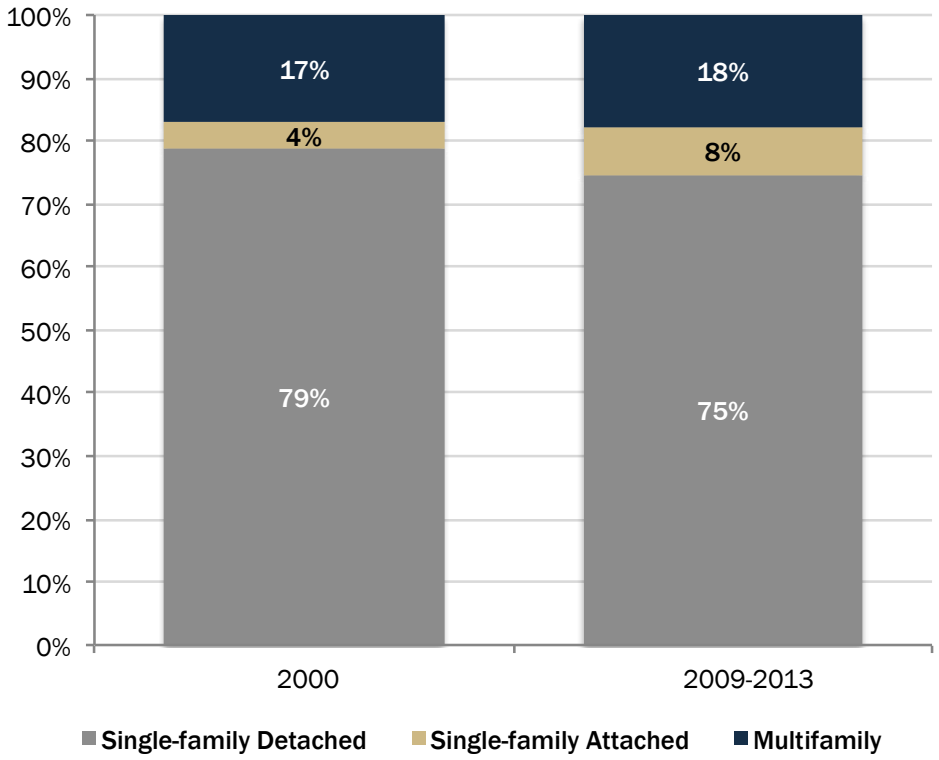
Trends in housing mix in Sherwood

According to the American Community Survey, Sherwood had more than 6,500 housing units in the 2009-2013 period. Figure B- 1 shows that Sherwood's

[36] The analysis of development in Sherwood attempts to separate single-family detached and single-family attached housing. However, the City's building permit system does not distinguish between these two types of housing. City staff manually identified single-family attached housing that was developed with a concentration of single-family attached housing. City staff were unable to identify small-scale, single-family attached development scattered throughout the city.

housing stock is predominantly single-family detached housing. In 2000, 79% of Sherwood's housing stock was single-family detached and 77% was single-family detached in 2009-2013. The share of multifamily units increased from 17% of Sherwood's housing stock in 2000 to 18% in 2009-2013.

Figure B- 1. Mix of Housing Types, Sherwood, 2000 to 2009-2013



Source: U.S. Census 2000 SF3 Table H030, American Community Survey 2009-2013, Table B25024.

Table B- 1 and Figure B- 2 show that the mix of housing developed over the 2000 to 2014 period was predominantly single-family housing (including single-family detached, single-family attached, and manufactured housing), accompanied by intermittent growth in multifamily.

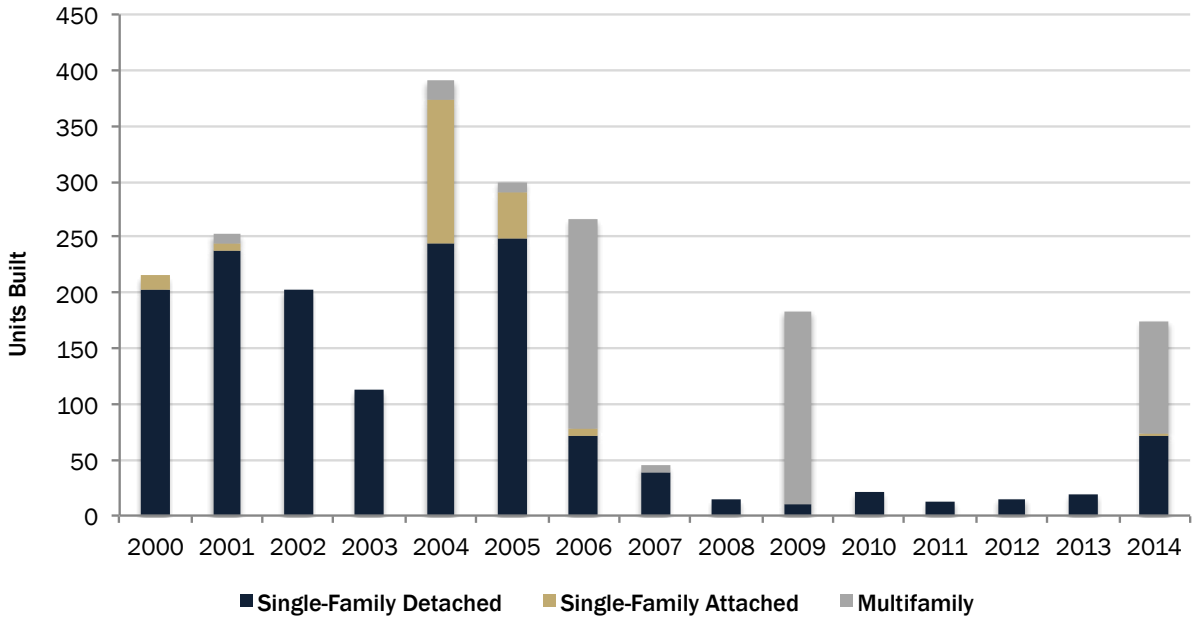
Over the entire 2000 to 2014 period, Sherwood issued permits for nearly 2,225 dwelling units, with about 148 permits issued per year. About 69% of dwellings permitted were single-family detached, 9% were single-family attached, and 23% were multifamily.

Table B- 1. Building permits by type of unit, Sherwood, 2000-2014

Housing Type	New Units Permitted	Average of New Units Permitted Annually	Mix of New Units
Single-Family Detached	1,525	102	69%
Single-Family Attached	196	13	9%
Multifamily	504	34	23%
Total	2,225	148	100%

Source: City of Sherwood Building Permit Database.
Notes: Single-Family Detached includes manufactured housing.

Figure B- 2. Building permits by type of unit, Sherwood, 2000 to 2014

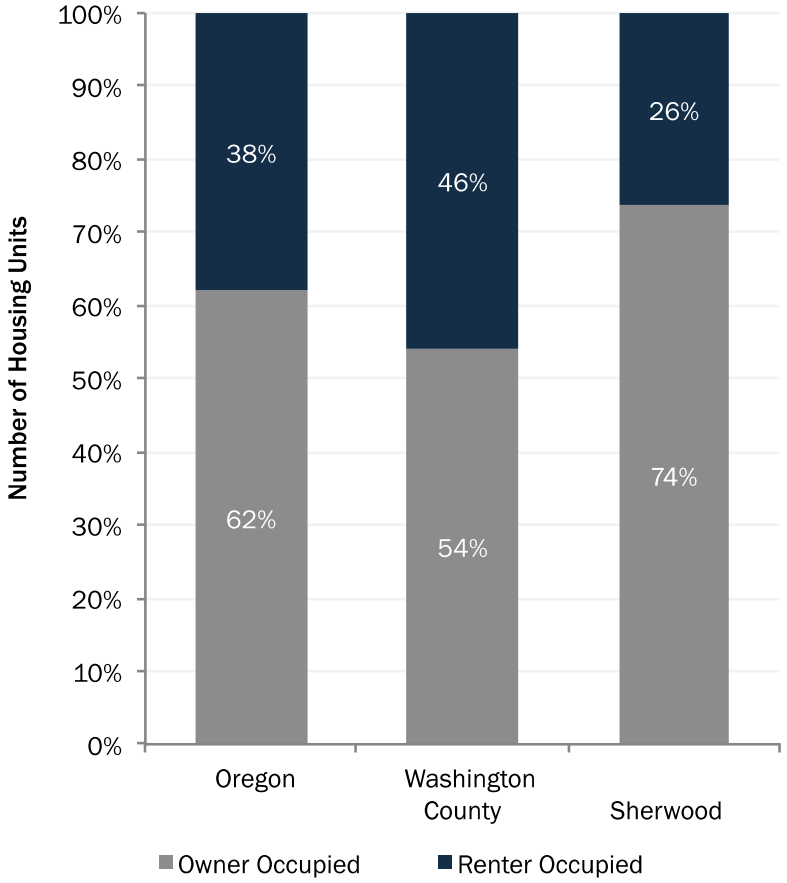


Source: City of Sherwood Building Permit Database.
Notes: Single-Family Detached includes manufactured housing.

Trends in Tenure

Figure B- 3 shows housing tenure in Oregon, Washington County, and Sherwood for the 2009-2013 period. Sherwood has a higher rate of ownership (74%) than the county (54%) and the state (62%).

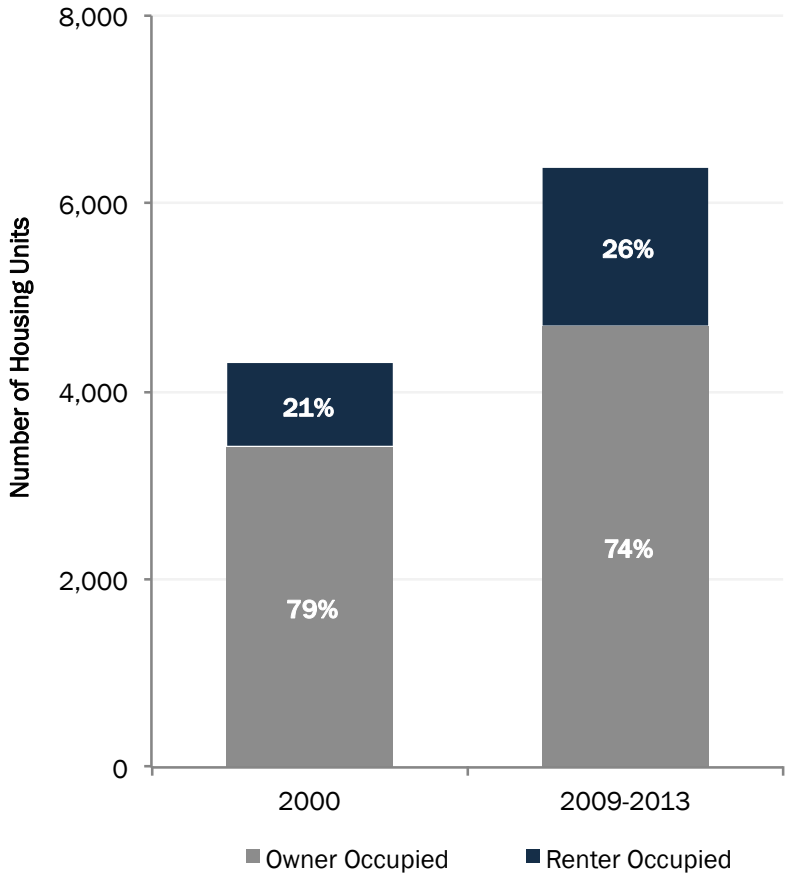
Figure B- 3. Housing Tenure, Oregon, Washington County, Sherwood, 2009-2013



Source: American Community Survey 2009-2013, Table B25003.

Figure B- 4 shows change in tenure (owner versus renter-occupied housing units) for the City of Sherwood over the 2000 to 2009-2013 period. The overall homeownership rate declined, from 79% to 74% between 2000 to 2009-2013, while renting increased by 5%. This change is consistent with national and statewide trends in homeownership.

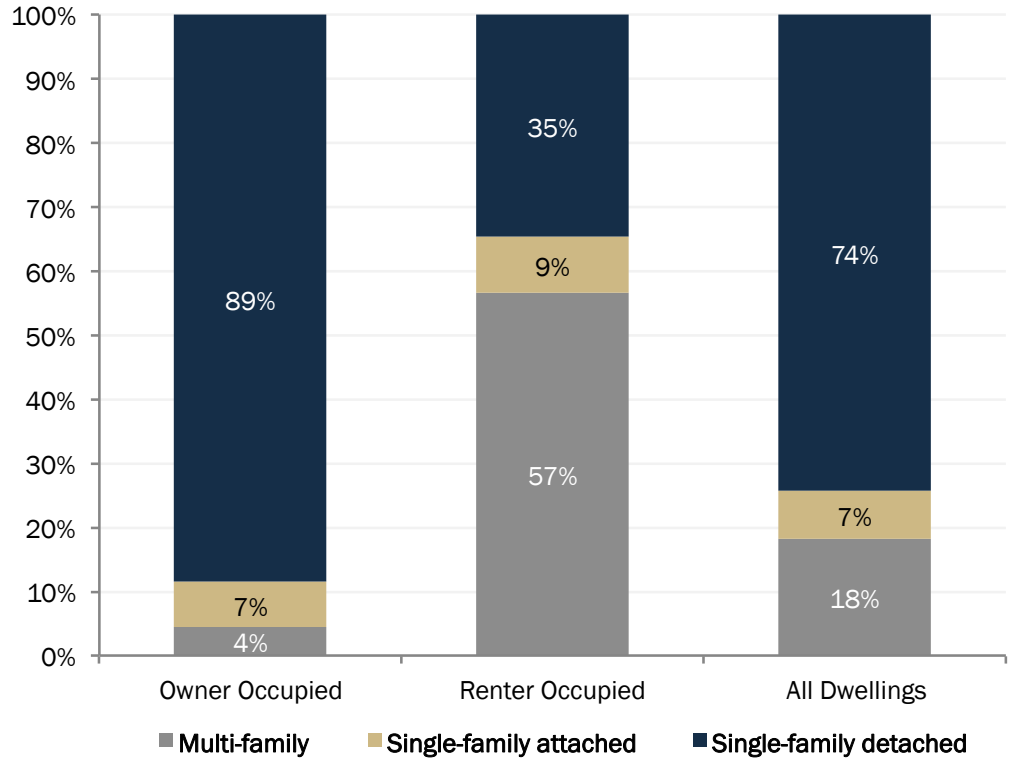
Figure B- 4. Tenure, occupied units, Sherwood, 2000 to 2009-2013



Source: U.S. Census 2000 SF3 Table H032, American Community Survey 2009-2013 Table B25003.

Figure B- 5 shows the types of dwelling in Sherwood in 2009-2013 by tenure (owner/renter-occupied). The results indicate that in Sherwood, single-family housing types are most frequently owner-occupied (70% of all housing is single-family, owner-occupied housing) and multifamily housing is most frequently renter-occupied (15% of all housing is multifamily renter-occupied housing).

Figure B- 5. Housing units by type and tenure, Sherwood, 2009-2013



Source: American Community Survey 2009-2013 Table B25032.

Housing Vacancy Rates

Table B- 2 shows vacancy rates in Oregon, Multnomah, Washington, and Clackamas counties, and Sherwood between 2000 and 2009-2013. Vacancy rates increased in in Oregon, and Clackamas counties, but fell in Multnomah and Washington counties, and in Sherwood. As the 2009-2013 period, Sherwood had a relatively low vacancy rate (2.7%) compared to the regional counties, whose rates ranged from 5.5% to 7.0%, and to Oregon (9.6%).

Table B- 2. Housing vacancy rate, Oregon, Multnomah, Washington and Clackamas Counties, and Sherwood, 2000 to 2009-2013

	Oregon	Multnomah County	Washington County	Clackamas County	Sherwood
2000	8.2%	6.4%	5.7%	5.5%	3.6%
2009 - 2013	9.6%	5.9%	5.5%	7.0%	2.7%
Change 2000 to 2009-2013	17.1%	-7.5%	-3.6%	28.3%	-24.7%

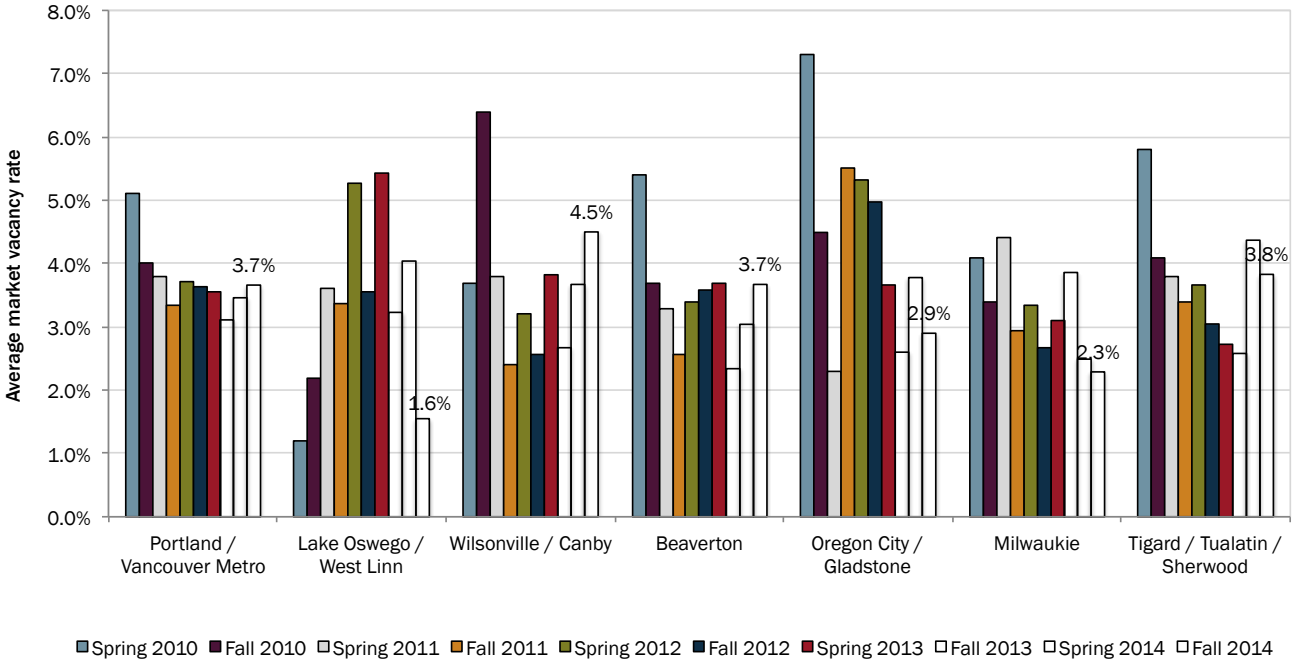
Source: U.S. Census 2000 SF1 Table H003, American Community Survey 2009-2013 Table B25002.

Multifamily NW tracks trends in the Portland area rental market and publishes a semi-annual report. Figure B- 6 shows average market vacancy rates for apartments for the Portland/Vancouver region and selected submarkets in the south-central Portland Region. The vacancy rates in the

Tigard/Tualatin/Sherwood area varied from a high of 5.8% in Spring 2010 to a low of 2.6% in Fall 2013. The vacancy rate in this area was within 1% (above or below) the vacancy rate for the Portland /Vancouver metro area. According to the Fall 2014 Apartment Report, the vacancy rate for apartments in the Tigard/Tualatin/Sherwood area was 3.8%, slightly higher than the regional average of 3.7%.

Multifamily vacancy rates vary, in part, as a result of building new multifamily developments. When a new multifamily development comes on the market, it may take months (or longer) for the new units to be absorbed into the housing market through rental of new units. During this absorption period, the vacancy rate will generally increase for multifamily housing.

Figure B- 6. Average market vacancy rates for apartments, Portland/Vancouver Metro area and selected submarkets, 2010-2014



Multifamily NW Apartment Reports, Spring 2010 – Fall 2014.

Density

Housing density is the density of housing by structure type, expressed in dwelling units per net or gross acre.[37] The U.S. Census does not track residential development density.

This study analyzes housing density based on new residential development within Sherwood between 2000 and 2014, similar to the analysis of achieved mix. The analysis of housing density uses data from the City of Sherwood's building permits database.

Table B- 3 shows that development that was permitted between 2000 and 2014 achieved overall average densities of 8.2 dwelling units per net acre. The majority of permitted housing was single-family detached housing, which averaged 6.5 dwelling units per net acre. Multifamily housing achieved an average of 20.5 and single-family attached achieved and average of 17.9 dwelling units per net acre.

Table B- 3. Estimated density by type of unit, net acres, Sherwood, 2000-2014

Housing Type	New and Existing Units	Acres	Density (dwelling unit per acre)
Single-Family Detached	1,641	251	6.5
Single-Family Attached	196	11	17.9
Multifamily	504	25	20.5
Total	2,341	286	8.2

Source: City of Sherwood Building Permit Database.
Note: Single-Family Detached includes manufactured housing
Note: The number of new single-family detached housing is higher in Table B- 3 than in Table B- 1 because Table B- 3 includes 116 existing manufactured dwellings in manufactured housing parks. These dwellings were included as part of the density calculation to correctly calculate the densities of manufactured housing in the manufactured housing parks with one or more newly permitted dwellings over the 2000 to 2014 period.

Table B-4 shows an analysis of residential development density (dwelling units per net acre) over the 15-year period for Sherwood by zoning designation. Table B-4 shows:

- Ninety-two percent of residential development was in residential zones, which had an overall density of 7.8 dwelling units per net acre.
- Density in residential zones varied from 2.9 dwelling units per net acre in the Very Low Density Residential zone to 19.1 dwelling units per net acre in the High Density Residential zone.

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

- Density in the Low Density Residential zone averaged 6.5 dwelling units per net acre. Development in Planned Unit Developments (PUD) in this zone achieved an average of 7.6 dwelling units per net acre, which explains the relatively high density in this zone.
- Density in Commercial and Mixed-Use zones averaged 15.6 dwelling units per net acre.

Table B-4. Housing density by Zone, net acres, Sherwood, 2000 to 2014

Zone	New and Existing Units	Acres	Density (dwelling unit per acre)
Residential Zones			
Very Low Density Residential	53	18	2.9
Low Density Residential	807	124	6.5
PUD	487	64	7.6
Non-PUD	320	59	5.4
Medium Density Residential-High	301	39	7.7
Medium Density Residential-Low	368	60	6.1
High Density Residential	605	32	19.1
Residential subtotal	2,134	273	7.8
Commercial and Mixed Use Zones			
Office Commercial	150	6	24.4
Mixed-use Commercial and Condo	55	7	7.9
Retail Commercial	2	0	17.4
Commercial subtotal	207	13	15.6
Total	**2,341**	**286**	**8.2**

Source: City of Sherwood Building Permit Database

NATIONAL HOUSING TRENDS

The overview of national, state, and local housing trends builds from previous work by ECONorthwest, Urban Land Institute (ULI) reports, and conclusions from *The State of the Nation's Housing, 2014* report from the Joint Center for Housing Studies at Harvard University.[38] The Harvard report summarizes the national housing outlook as follows:

> "With promising increases in home construction, sales, and prices, the housing market gained steam in early 2013. But when interest rates notched up at mid-year, momentum slowed. This moderation is likely to persist until job growth manages to lift household incomes. Even amid a broader recovery, though, many hard-hit communities still struggle and millions of households continue to pay excessive shares of income for housing."

Several challenges to a strong domestic housing market remain. Demand for housing follows trends in jobs and incomes, which are taking longer to recover than in previous cycles. While trending downward, the numbers of underwater homeowners, delinquent loans, and vacancies remain high. *The State of the Nation's Housing* report projects that it will take several years for market conditions to return to normal and, until then, the housing recovery will likely unfold at a moderate pace.

Trends in housing development

The single-family housing market began strong in 2013, but by the arrival of 2014, housing starts were down 3% and new home sales had fallen 7% from the year before. The *State of the Nation's Housing Report* attributes most of the decline to increases in mortgage interest rates and meager improvements in employment and wages.

Thirty-year mortgage interest rose in 2014, bucking a downward trend. After falling to a low of around 3.4% in 2013, rates rose to around 5% in 2014. The rise of mortgage interest rates increased the cost of investment in a home and contributed to the fall in the rate of housing starts. In addition to the rise of mortgage interest rates, "steady but unspectacular job growth" presented a fundamental obstacle to the housing market's progress, according to the report. Employment grew, but slowly, and incomes continued to fall. As long as job and wage growth remain slow, potential homebuyers will not create sufficient demand for robust growth in the housing market.

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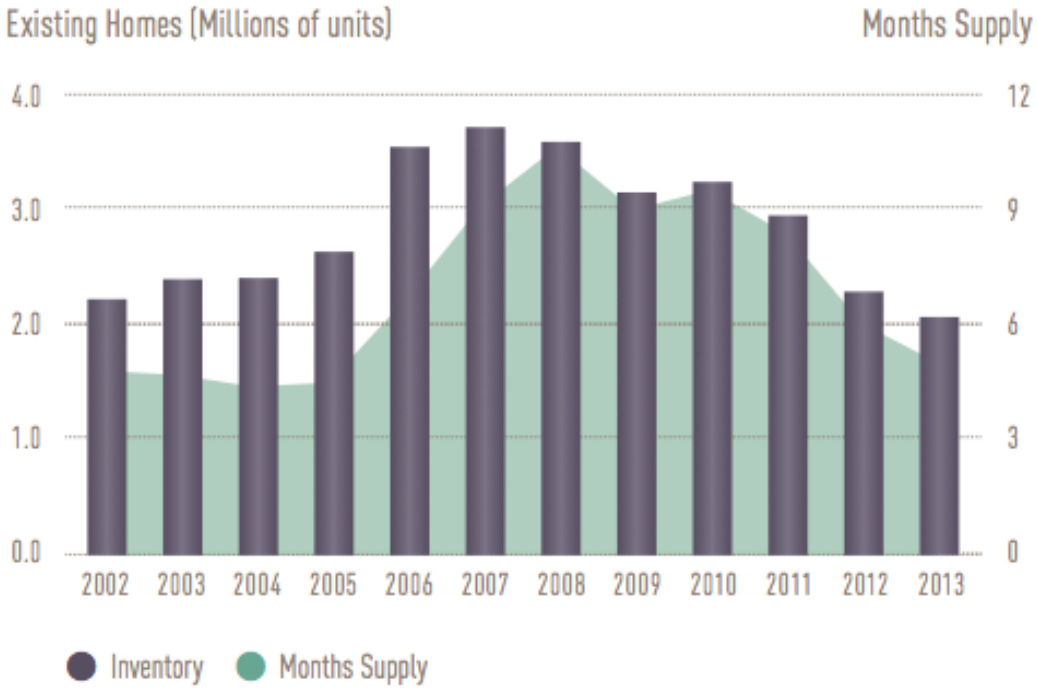
[38] The State of the Nation's Housing, Harvard University, 2014, accessed January 2014. http://www.jchs.harvard.edu/research/state_nations_housing

Other recent trends in the housing market included: home inventories remained low (homes now spend less than six months on the market), investors purchased fewer distressed properties, the renter market grew, and a larger share of young people chose to live with their parents.

Supplies of existing homes for sale remained low in 2013, which may reflect the unwillingness or inability of owners to sell at current prices (Figure A- 1). As home prices return to levels that are more acceptable to sellers, more homes will go on the market.

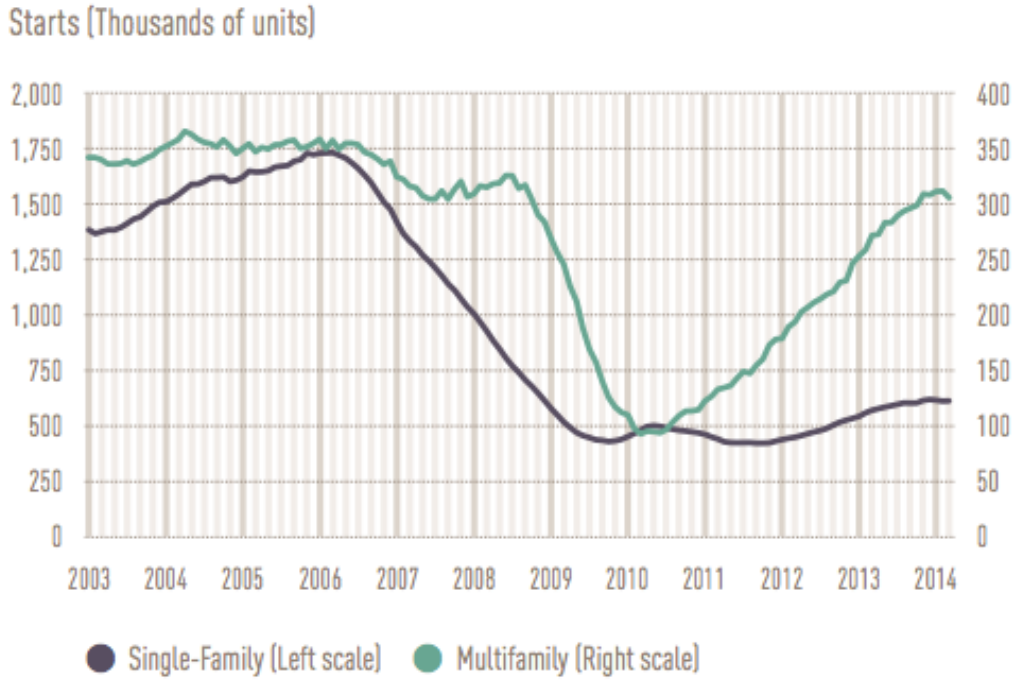
Figure A- 1. Inventories of Homes for Sale Against Months Supply, 2002-2013



Source: The State of The Nation's Housing, 2014, The Joint Center for Housing Studies of Harvard University, p. 10. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/sonhr14-color-full.pdf.

Multifamily home construction continued robust growth for a third consecutive year. Multifamily starts increased 25% to over 300,000 in 2013, approaching pre-recession levels of around 350,000. In contrast to strong multifamily housing growth, single-family home starts grew slowly, at only about 15%, well below pre-recession levels of production: less than 620,000 starts in 2013, compared to over 1.5 million in 2006. These growth trends are shown in Figure A- 2.

Figure A- 2. Housing Starts, 2003-2014

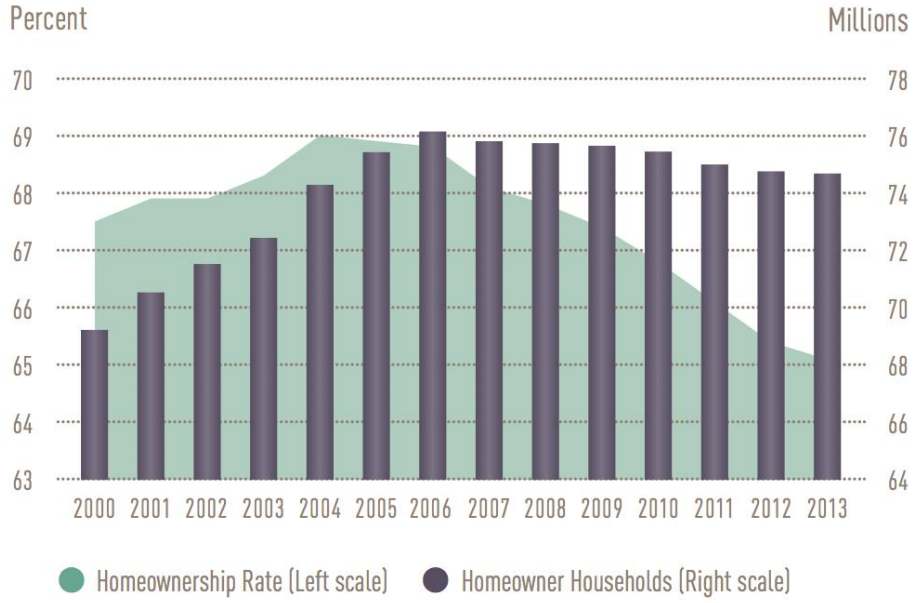


Source: The State of The Nation's Housing, 2014, The Joint Center for Housing Studies of Harvard University, p. 10. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/sonhr14-color-full.pdf.

Long run trends in home ownership and demand

The housing market downturn and foreclosure crisis had an immediate and potentially lasting impact on homeownership. After 13 successive years of increases, the national homeownership rate declined each year from 2005 to 2013, and is currently at approximately 65%. However, while the rate declined again in 2013, it was the smallest drop since 2008. As seen in Figure A- 3, the US homeownership rate fell only 0.3 percentage points.

Figure A- 3. Homeownership Rates and the Number of Homeowner Households, 2000-2013



Source: The State of The Nation's Housing, 2014, The Joint Center for Housing Studies of Harvard University, p. 10. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/sonhr14-color-full.pdf.

The long-term market outlook shows that homeownership is still the preferred tenure. While further homeownership gains are likely during the next decade, they are not assured. Additional increases depend, in part, on the effect of foreclosures on potential owner's ability to purchase homes in the future, as well as whether the conditions that have led to homeownership growth can be sustained.

The Joint Center for Housing Studies indicates that demand for new homes could total as many as 13 million units nationally between 2015 and 2025. The location of these homes may differ from recent trends, which favored lower-density development on the urban fringe and suburban areas. The Urban Land Institute identifies the markets that have the most growth potential as "global gateway, 24-hour markets," which are primary coastal cities with international airport hubs (e.g., Washington D.C., New York City, San Francisco, or Seattle). Development in these areas may be nearer city centers, with denser infill types of development.[39]

The Joint Center for Housing Studies also indicates that demand for higher density housing types exists among certain demographics. They conclude that

[39] Urban Land Institute, "2011 Emerging Trends in Real Estate" and "2012 Emerging Trends in Real Estate"

because of persistent income disparities, as well as the movement of the Millennials into young adulthood, housing demand may shift away from single-family detached homes toward more affordable multifamily apartments, town homes, and manufactured homes.

Home rental trends

Nationally, the rental market continues to grow. In 2013, the number of households living in rental units increased by half a million, marking the ninth consecutive year of expansion. In addition to growth in rentals in 2013, the million-plus annual increases observed in 2011 and 2012 puts current growth rates on pace to easily surpass the record 5.1 million gain in the 2000s.

Rental markets across the country have been tightening, pushing up rents across the majority of markets. Rental vacancy rates also continued to drop in 2013, both nationwide and in most metros. The US rental vacancy rate stood at 8.3% in 2013 and, while this is the lowest level observed since 2001, this was still high relative to the 7.6% averaged in the 1990s.

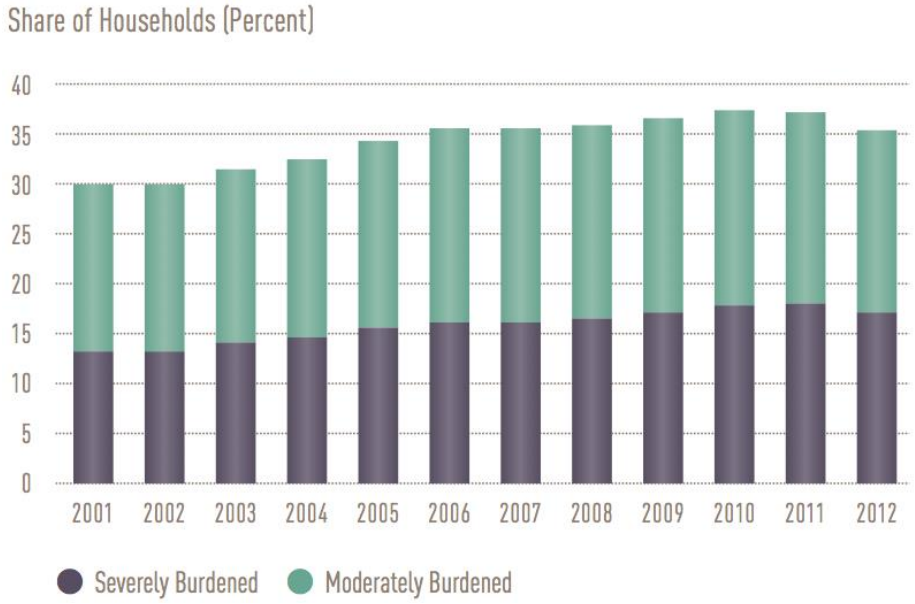
Over the longer term, the Joint Center for Housing expects demand for rental housing to continue to grow. Minorities will be the largest driver of rental demand because they are on average younger and less likely to own homes than whites. Demographics will also play a role. Growth in young adult households will increase demand for moderately priced rentals, in part because the oldest Millennials reached their late-20s around 2010. Meanwhile, growth among those between the ages of 45 and 64 will lift demand for higher-end rentals.

As the homeownership market recovers, the growth in renter households will likely slow. Since much of the increased demand for rental housing has been met through the conversion of single-family homes to rentals, future market adjustments may come from a return of these units to owner-occupancy. Additionally, the echo-boom generation should provide strong demand for rental units in the coming years.

Trends in housing affordability

Many homeowners pay a disproportionate share of their income on housing, with 35% of households in the U.S. who are cost burdened.[40] While the share of households that are cost burdened fell by about 4% in 2012, the share of households that were cost burdened increase between 2001 and 2011 (Figure A-4). More than 15% of U.S. households are severely cost burdened.

Figure A- 4. Share of Cost-burdened Households, 2001-2012



Source: The State of The Nation's Housing, 2014, The Joint Center for Housing Studies of Harvard University, p. 10. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/sonhr14-color-full.pdf.

The Joint Center for Housing Studies points to widening income disparities, decreasing federal assistance, and depletion of inventory through conversion or demolition as three factors exacerbating the lack of affordable housing. While the Harvard report presents a relatively optimistic long-run outlook for housing markets and for homeownership, it points to the significant difficulties low- and moderate-income households face in finding affordable housing and preserving the affordable units that do exist.

According to the Joint Center for Housing Studies, these statistics understate the true magnitude of the affordability problem because they do not capture the tradeoffs people make to hold down their housing costs. For example, these figures exclude people who live in crowded or structurally inadequate housing

[40] Households are considered cost burdened if they spent 30% or more of their gross income on housing costs. Households who spent 50% or more of their gross income on housing costs are considered severely cost burdened.

units. They also exclude the growing number of households that move to locations distant from work where they can afford to pay for housing, but must spend more for transportation to work. Among households in the lowest expenditure quartile, those living in affordable housing, spent an average of $100 more on transportation per month in 2010 than those who are severely housing cost-burdened. With total average monthly outlays of only $1,000, these extra travel costs could amount to roughly 10 percent of the entire household budget.

Demographic trends in housing preference

Demographic changes likely to affect the housing market and homeownership are:

- The aging of the Baby Boomers, the oldest of whom were in their late-60's in 2012.
- Housing choices of younger Baby Boomers, who were in their early to mid-50's in 2010.
- The children of Baby Boomers, called the Millennials, who ranged from their late teens to late twenties in 2012.
- Immigrants and their descendants, who are a faster growing group than other households in the U.S. [41]

The aging of the Baby Boomers will affect housing demand over the next decades. People prefer to remain in their community as they age.[42] The challenges that aging seniors face in continuing to live in their community include: changes in healthcare needs, loss of mobility, the difficulty of home maintenance, financial concerns, and increases in property taxes.[43] Not all of these issues can be addressed through housing or land use policies. Communities can address some of these issues through adopting policies that:

- Diversify housing stock to allow development of smaller, comparatively easily-maintained houses in single-family zones, such as single-story townhouses, condominiums, and apartments.
- Allow commercial uses in residential zones, such as neighborhood markets.

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[41] Urban Land Institute, "2011 Emerging Trends in Real Estate"

[42] 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.

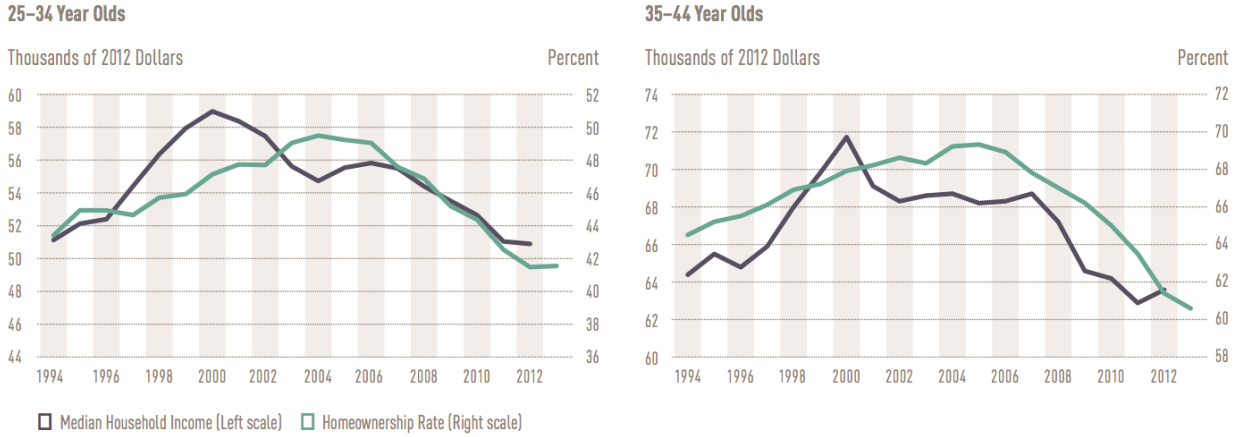
[43] "Aging in Place: A toolkit for Local Governments" by M. Scott Ball.

- Allow a mixture of housing densities and structure types in single-family zones, such as single-family detached, single-family attached, condominiums, and apartments.
- Promote the development of group housing for seniors that are unable or do not choose to continue living in a private house. These facilities could include retirement communities for active seniors, assisted living facilities, or nursing homes.
- Design public facilities so that they can be used by seniors with limited mobility. For example, design and maintain sidewalks so that they can be used by people in wheelchairs or using walkers.

Household formation fell to around 600,000 to 800,000 in the 2007-2013 period, well below the average rate of growth in previous decades. Despite sluggish growth recently, several demographic factors indicate increases in housing growth to come. The Millennial generation (those born after 1985) is the age group most likely to form the majority of new households. While low incomes have kept current homeownership rates among young adults below their potential, Millennials may represent pent-up demand that will release when the economy fully recovers. As Millennials age, they may increase the number of households in their 30s by 2.4 to 3.0 million over the through 2025.

While the population of young adults between 20 and 29 years grew in the 2003-2013 decade by more than 4 million from the previous decade, the rate at which members of this age group formed their own households fell. As a result, household growth has not kept pace with overall population growth**.** Even if today's low household formation rates were to persist, however, the aging of the Millennials into their 30s will likely raise household headship rates due to lifecycle effects. About 60% of all 35–44 year-olds head an independent household, compared with less than 42% of all 25–34 year-olds. Thus, the Millennial generation, more populous than the Baby Boomers, is expected to be the primary driver of new household formation over the next twenty years.

Figure A- 5. Homeownership Rates and Incomes for Young and Middle-Aged Adults, 1994-2012



Source: The State of The Nation's Housing, 2014, The Joint Center for Housing Studies of Harvard University, p. 10. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/sonhr14-color-full.pdf.

It is currently unclear what housing choices the Millennials will make. Some studies suggest that their parents' negative experience in the housing market, with housing values dropping so precipitously and so many foreclosures, will make Millennials less likely to become homeowners. In addition, high unemployment and underemployment may decrease Millennials' earning power and ability to save for a down payment. It is not clear, however, that Millennials' housing preferences will be significantly different from their parents over the long run.

Recent surveys suggest that as Millennials age and form families, they will increasingly prefer to live in single-family homes in suburban locations. A recent survey by the National Association of Homebuilders finds that roughly three-quarters of Millennials want to live in a single-family home and would prefer to live in a suburb, compared to just 10% that would prefer to live in a city center.

Other recent surveys suggest that Millennials prefer to live in walkable communities, where there are alternatives to driving. According to surveys from the American Planning Association and Transportation For America, at least three quarters of Millennials want their city to offer opportunities to live and work without relying on a car. While Millennials may choose housing that satisfies these preferences, the cost of living will place parameters on their housing choices. According to the APA survey, 71% percent of Millennials rated affordable housing as a high priority for metro areas.

In coming years Millennials will pursue homes that provide a combination of space, "walkability," and affordability. They will demonstrate these preferences

in the market soon: according to the APA survey, more than half of Millennials consider themselves at least somewhat likely to move within the next five years.[44]

From 2004 to 2013, homeownership rates for 25-34 year olds and 35-44 year olds fell by around 8% and 9% respectively, with ownership rates for people 25 to 54 years old at the lowest point since recordkeeping started in 1976 (Figure A- 5). Nonetheless, the 25 and 34 year-old age group still makes up the majority of first-time homebuyers. Young adults in this cohort make up 54.3 percent of first-time homebuyers. Their majority among first-time homebuyers means that their ability to buy homes will play an important role in growth of the housing market in the near future.

The fall in homeownership among young adults results largely from the decline in income. Approximately 6 million more individuals between 20 and 29 years earned less than $25,000 than in 2003, while the number of those earning between $25,000 and $50,000 fell by over a million. Furthermore, the share of households younger than 30 years with student loan debt increased by more than 7% since 2007, from 33.9% to 41.0%.

According to the Joint Center for Housing Studies, immigration and increased homeownership among minorities will also play a key role in accelerating household growth over the next 10 years. Current Population Survey estimates indicate that the number of foreign-born households rose by nearly 400,000 annually between 2001 and 2007, and accounted for nearly 30 percent of overall household growth. Beginning in 2008, the influx of immigrants was staunched by the effects of the Great Recession. After a period of declines, however, the foreign born are again contributing to household growth. Census Bureau estimates of net immigration in 2011–12 indicate an increase of 110,000 persons over the previous year, to a total of nearly 900,000. Furthermore, as shown in Figure A- 6, the Harvard report forecasts that minorities will make up about 76% of the household growth between 2015 and 2025. The greater diversity among young adults partly explains the increased share of growth that will belong to minorities. For example, about 45% of Millennials are minorities, compared to 28% of Baby Boomers.

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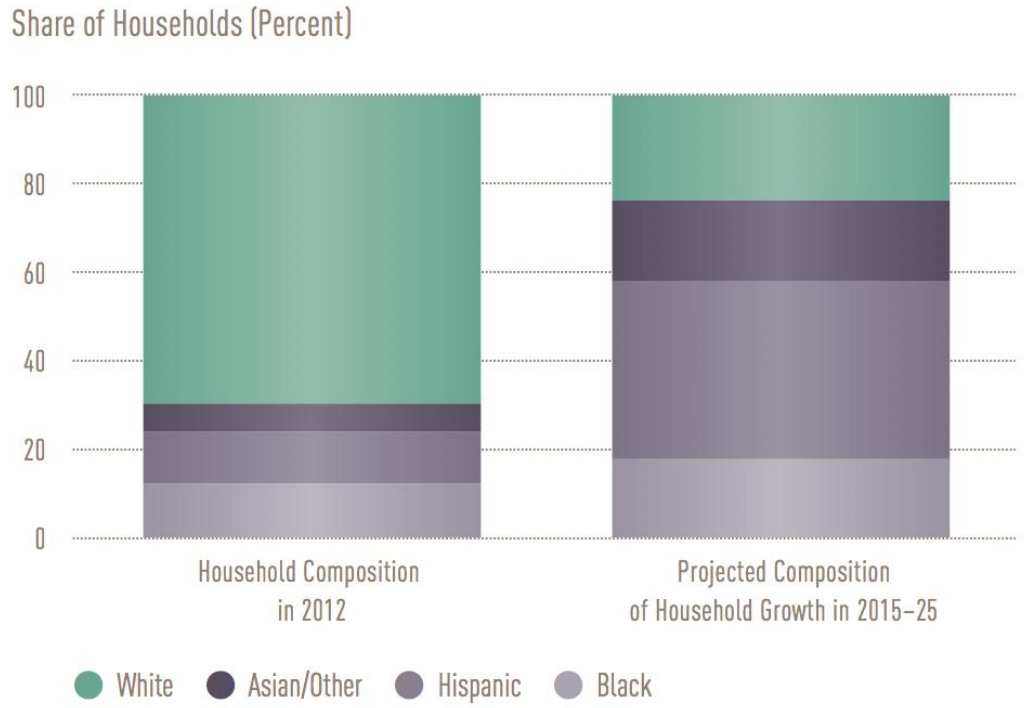
[44] The American Planning Association, "Investing in Place; Two generations' view on the future of communities." 2014. "Survey Says: Home Trends and Buyer Preferences," National Association of Home Builders International Builders Show, accessed January, 2015, http://www.buildersshow.com/Search/isesProgram.aspx?id=17889&fromGSA=1. "Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows," Transportation for America, accessed January 2015, http://t4america.org/wp-content/uploads/2014/04/Press-Release_Millennials-Survey-Results-FINAL-with-embargo.pdf.

Figure A- 6. Share of Households by Racial/Ethnic Group, 2012 and 2015-25



Source: The State of The Nation's Housing, 2014, The Joint Center for Housing Studies of Harvard University, p. 10. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/sonhr14-color-full.pdf.

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. This makes the growing gap in homeownership rates between whites and blacks and whites and Hispanics troubling. Since 2001, the difference in homeownership rates between whites and blacks rose from 25.9 to 29.5 in 2013. Similarly the gap between white and Hispanic homeownership rates increased since 2008, from below 26%, to over 27% in 2013. This growing gap between racial and ethnic groups will hamper the country's homeownership rate as minority households constitute a larger share of the housing market.

Trends in Housing Characteristics

The U.S Census Bureau's Characteristics of New Housing Report (2013) 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:[45]

[45] https://www.census.gov/construction/chars/highlights.html

- **Larger single-family units on smaller lots**. Between 1990 and 2013 the median size of new single-family dwellings increased 25% nationally from 1,905 sq. ft. to 2,384 sq. ft., and 19% in the western region from 1,985 sq. ft. to 2,359 sq. ft. Moreover, the percentage of units fewer than 1,400 sq. ft. nationally decreased by almost half, from 15% in 1999 to 8% in 2012. The percentage of units greater than 3,000 sq. ft. increased from 17% in 1999 to 29% of new one-family homes completed in 2013. In addition to larger homes, a move towards smaller lot sizes is seen nationally. Between 1990 and 2013, the percentage of lots less than 7,000 sq. ft. increased from 27% of lots to 36% of lots.
- **Larger multifamily units**. Between 1999 and 2013, the median size of new multiple family dwelling units increased by 2% nationally and 3% in the western region. The percentage of new multifamily units with more than 1,200 sq. ft. increased from 28% in 1999 to 32% in 2013 nationally, and increased from 25% to 32% in the western region.
- **More household amenities**. Between 1990 and 2013, the percentage of single-family units built with amenities such as central air conditioning, 2 or more car garages, or 2 or more baths all increased. The same trend in increased amenities is seen in multifamily units.

During the recession, the trend towards larger units with more amenities faltered. Between 2007 and 2009, for example, the median size of new single-family units decreased by 6% throughout the nation, including in the West. In addition, the share of new units with amenities (e.g., central air conditioning, fireplaces, 2 or more car garages, or 2 or more bath) all decreased slightly during this time. With the recovery, however, housing sizes have been increasing annually; median housing sizes increased by 12% between 2009 and 2013 nationwide, and 10% in the western region. The short term, post-recession trends regarding amenities are mixed, but generally appear to be increasing (albeit more slowly than housing sizes).

It appears that the decreases in unit size and amenities were a short-term trend, resulting from the housing crisis. However, numerous articles and national studies suggest that these changes may indicate a long-term change in the housing market, resulting from a combination of increased demand for rental units because of demographic changes (e.g., the aging of the baby boomers, new immigrants, and the echo-boomers), as well as changes in personal finance and availability of mortgages.[46]

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[46] These studies include "Hope for Housing?" by Greg Filsram in the October 2010 issue of Planning and "The Elusive Small-House Utopia" by Andrew Rice in the New York Times on October 15, 2010.

These studies may be correct and the housing market may be in the process of a long-term change, with some fluctuations over time in unit size and amenities. On the other hand, long-term demand for housing may not be substantially affected by the current housing market. The echo-boomers and new immigrants may choose single-family detached housing and mortgages may become easier to obtain.

Studies and data analysis have shown a clear linkage between demographic characteristics and housing choice. This is more typically referred to as the linkage between lifecycle and housing choice and is documented in detail in several publications. Analysis of data from the Public Use Microsample (PUMS) in the 2000 Census helps to describe the relationship between selected demographic characteristics and housing choice. Key relationships identified through this data include:

- Homeownership rates increase as income increases;
- Homeownership rates increase as age increases;
- Choice of single-family detached housing types increases as income increases;
- Renters are much more likely to choose multiple family housing types than single-family; and
- Income is a stronger determinate of tenure and housing type choice for all age categories.

STATE DEMOGRAPHIC TRENDS

Oregon's *2011-2015 Consolidated Plan* includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide.[47] The plan concludes that, "Oregon's changing population demographics are having a significant impact on its housing market." It identified the following population and demographic trends that influence housing need statewide. Oregon is:

- Facing housing cost increases due to higher unemployment and lower wages, when compared to the nation.
- Experiencing higher foreclosure rates since 2005, compared with the previous two decades.
- Losing federal subsidies on about 8% of federally subsidized Section 8 housing units.
- Losing housing value throughout the State.

[47] http://www.ohcs.oregon.gov/OHCS/HRS_Consolidated_Plan_5yearplan.shtml

- Losing manufactured housing parks, with a 25% decrease in the number of manufactured home parks between 2003 and 2010.
- Increasingly older, more diverse, and has less affluent households.[48]

REGIONAL AND LOCAL DEMOGRAPHIC TRENDS

Regional demographic trends largely follow the statewide trends discussed above, but provide additional insight into how demographic trends might affect housing in Sherwood. 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. This section describes those trends.

The following section presents data tables. In a few places, additional explanatory text is included. For the most part, the text describing the implications of the tables is in the main part of the document.

Growing population

Sherwood has a growing population. Table B- 5 shows population growth in the U.S., Oregon, the Portland Region, Washington County, and Sherwood, between 1990 and 2013.

Table B- 5. Population in U.S., Oregon, the Portland Region, Washington County, and Sherwood, 1990-2013

	Population			Change 1990 to 2013		
Area	1990	2000	2013	Number	Percent	AAGR
U.S.	248,709,873	281,421,906	311,536,594	62,826,721	25%	1.0%
Oregon	2,842,321	3,421,399	3,919,020	1,076,699	38%	1.4%
Portland Region	1,174,291	1,444,219	1,693,600	519,309	44%	1.6%
Washington County	311,554	445,342	550,990	239,436	77%	2.5%
Sherwood	3,093	11,963	18,575	15,482	501%	8.1%

Source: US Census Bureau Decennial Census 1990 and 2000; Portland State University, Population Research Center
Note: AAGR is average annual growth rate.

The housing needs analysis in this report is based on a coordinated household forecast from Metro (the November 2012 "Gamma" forecast), which is a necessary prerequisite to estimate housing needs. The projection of household growth includes areas currently within the city limits, as well as areas currently outside the city limits that the City expects to annex for residential uses (most notably the Brookman area). We call these areas combined the "Sherwood planning area."

[48] State of Oregon *Consolidated Plan 2011 to 2015*. http://www.oregon.gov/ohcs/hd/hrs/consplan/2011_2015_consolidated_plan.pdf

Table B-6 presents Metro's forecast for household growth and new housing development in the Sherwood planning area for the 2010 to 2035 period. The table shows Metro's forecast for the Sherwood city limits, areas currently outside the city limits that are expected to be annexed by 2035, which are together the Sherwood planning area. Table B-6 shows Metro's forecast for the number of households in each of the following years:

- **2010.** Metro's forecast uses an estimate of the number of households in 2010 as the starting point of the forecast.
- **2025.** As part of the forecasting process, Metro developed a forecast of households for 2025 to allow jurisdictions an opportunity to review and comment on the forecast for growth between 2010 and 2025.
- **2035.** Metro's forecast estimates household growth of 1,343 dwelling units or 20%, by 2035. Part of the forecasting process was providing jurisdictions an opportunity to review and comment on the forecast for growth through 2035.

Table B-6 also shows Metro's forecast for the Sherwood West area, which is forecast to grow by 4,844 dwelling units by 2035.

Table B-6. Metro forecast for housing growth, Sherwood planning area, 2010 to 2035

	Households			
Year	Sherwood City Limits	Brookman Area	Sherwood Planning Area	Sherwood West
2010	6,476	101	6,577	270
2025	7,054	215	7,269	316
2035	7,269	651	7,920	5,114
Change 2010 to 2035				
Households	793	550	1,343	4,844
Percent	12%	545%	20%	1794%
AAGR	0.5%	7.7%	0.7%	12.5%

Source: Metro Gamma Forecast, November 2012
Note: The Sherwood City Limits are the following Metro Transportation Analysis Zones (TAZs): 989 to 997.
The Brookman area is predominantly in Transportation Analysis Zone 978, with a small area in 988. Brookman is an area that the City expects to annex for residential growth over the planning period.
Sherwood West is parts of Transportation Analysis Zones 1428, 1429, and 1432.

Sherwood's housing needs analysis must be based on a 20-year period, but Metro's forecast describes growth over a 25-year period. Table B- 7 shows an extrapolation of Metro's forecast for the 2015 to 2035 period. ECONorthwest extrapolated Metro's forecast to 2015 based on the number of households in 2010 and the growth rate in the forecast between 2010 and 2025. We assumed that little to no growth happened in Brookman or Sherwood West between 2010 and 2015, an assumption that is supported by the relative lack of building permit activity in these areas.

Table B- 7 shows that the Sherwood planning area will add 1,156 new households between 2015 and 2035, with 606 new households inside the existing city limits and 550 new households in outside the current city limits in the Brookman Area.

Table B- 7. Extrapolated Metro forecast for housing growth, Sherwood planning area, 2015 to 2035

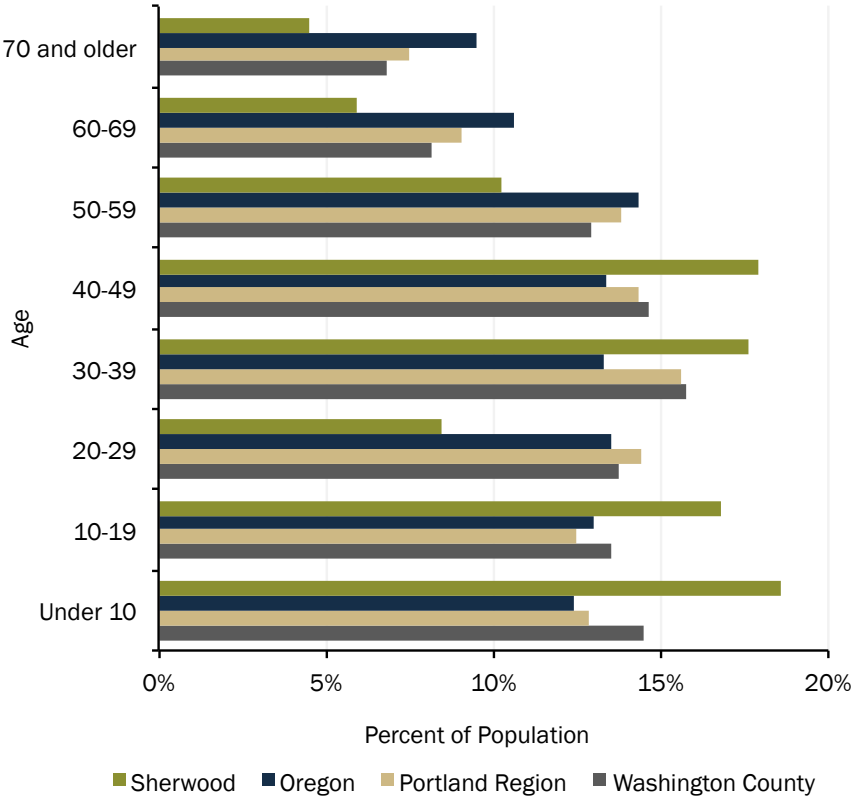
	Households			
Year	Sherwood City Limits	Brookman Area	Sherwood Planning Area	Sherwood West
2015	6,663	101	6,764	270
2035	7,269	651	7,920	5,114
Change 2010 to 2035				
Households	606	550	1,156	4,844
Percent	9%	545%	17%	1794%
AAGR	0.4%	9.8%	0.8%	15.8%

Source: Metro Gamma Forecast, November 2012

Aging population

In 2010, the median age in Sherwood was 34.3 years old, compared to the median of 35.3 in Washington County, and the State median of 38.4. Figure B- 7 shows the populations of Oregon, the Portland Region, Washington County, and Sherwood by age in 2010.

Figure B- 7. Population Distribution by Age for Oregon, Sherwood, Oregon, Portland Region, Washington County



Source: U.S. Census 2010, Profile of General Population and Housing Characteristics

Table B- 8 shows population by age in Sherwood for 2000 and 2010. Over the 2000 to 2010 period, the population of people aged 45 to 64 years old grew the fastest, increasing from 1,936 to 3,917, or 102%.

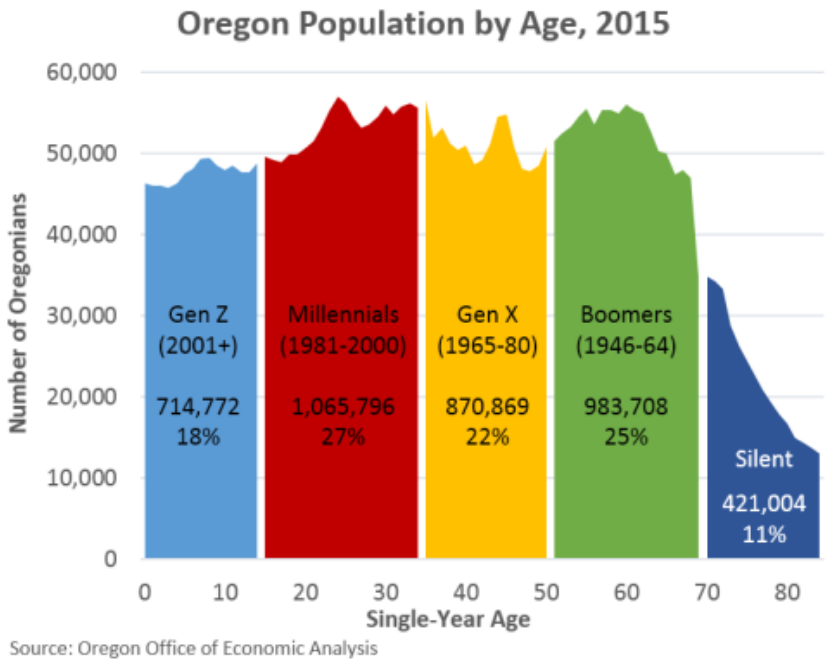
Table B- 8. Population by Age, Sherwood, 2000 and 2010

	2000		2010		Change 2000-2010		
Age Group	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	1,351	11%	1,518	8%	167	12%	-3%
5-17	2,383	20%	4,589	25%	2,206	93%	5%
18-24	644	5%	939	5%	295	46%	0%
25-44	4,854	41%	5,991	33%	1,137	23%	-8%
45-64	1,936	16%	3,917	22%	1,981	102%	5%
65 and over	623	5%	1,240	7%	617	99%	2%
Total	**11,791**	**100%**	**18,194**	**100%**	**6,403**	**54%**	**0%**

Source: U.S. Census 2000 Table P12, U.S. Census 2010 Table P12

Figure B- 8 shows the population distribution by generation and age in Oregon in 2015. The largest groups are the Millennials (27% of Oregon's population) and the Baby Boomers (25% of Oregon's population). By 2035, the end of the planning period for this analysis, Millennials will be between 35 and 54 years old. Baby Boomers will be 71 to 89 years old.

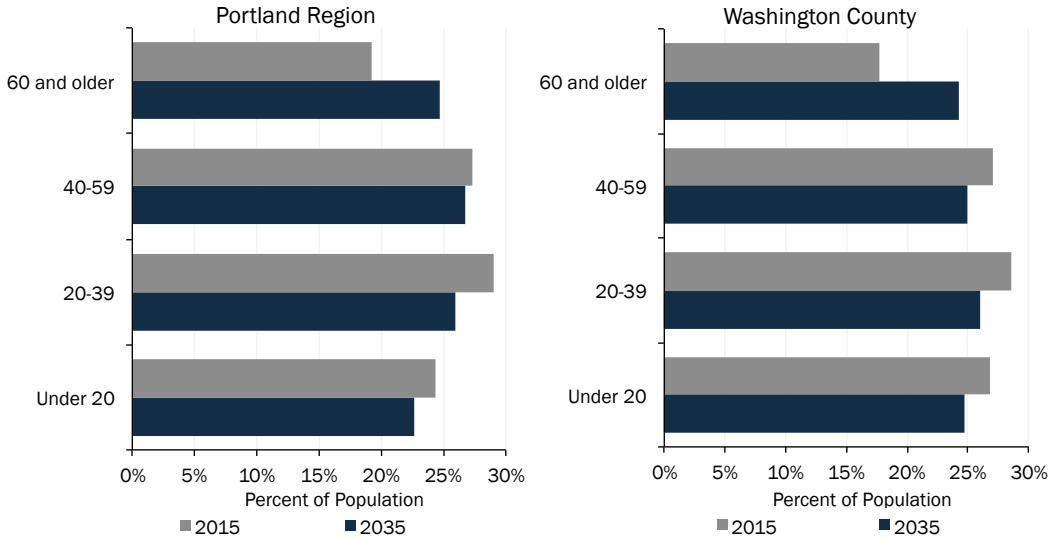
Figure B- 8. Population Distribution by Generation and Age, Oregon, 2015



Source: Oregon Office of Economic Analysis, "Population, Demographics, and Generations" by Josh Jehner, February 5, 2015.
http://oregoneconomicanalysis.com/2015/02/05/population-demographics-and-generations/

Figure B- 9 shows the Office of Economic Analysis's (OEA) forecast of population change by age group, from 2015 to 2035, for the Portland Region. By 2035, people 60 years and older will account for 24% of the population in Washington County (up from 18% in 2015). The percent of total population in each age group younger than 60 years old will decrease. The age distribution in the Portland Region will change in a similar pattern.

Figure B- 9. Current and projected population by age, Portland Region and Washington County, 2015 and 2035

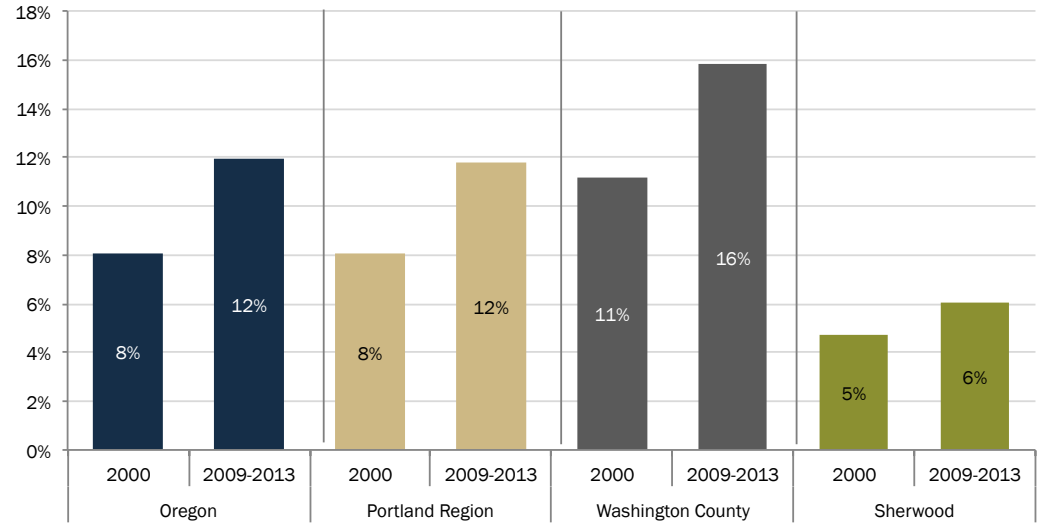


Source: Oregon Office of Economic Analysis.
http://www.oregon.gov/DAS/OEA/docs/demographic/pop_by_ageandsex.xls

Increased ethnic diversity

Figure B-10 shows the percentage of the total population that is of Hispanic or Latino origin for Oregon, the Portland Region, and Sherwood, in 2000 and 2009-2013. Between 2000 and 2009-2013, Hispanic or Latino population increased from 5% of the population to 6% of the population, adding 550 additional Hispanic or Latino residents. Sherwood has a smaller percentage of Hispanic or Latino population than the county or regional average.

Figure B- 10 Hispanic or Latino population by percentage, Oregon, the Portland Region, Washington County, Sherwood, in 2000 and 2009-2013



Source: U.S. Census 2000 SF1 Table P008, American Community Survey 2009-2013 Table B03003.

Household size and composition

Household size

Table B- 9 shows average household sizes in Oregon, the Portland Region, Washington County, and Sherwood in 2000 and the 2009-2013 period.

Table B- 9. Average household size, Oregon, Portland Region, Washington County, and Sherwood, 2000 to 2009-2013.

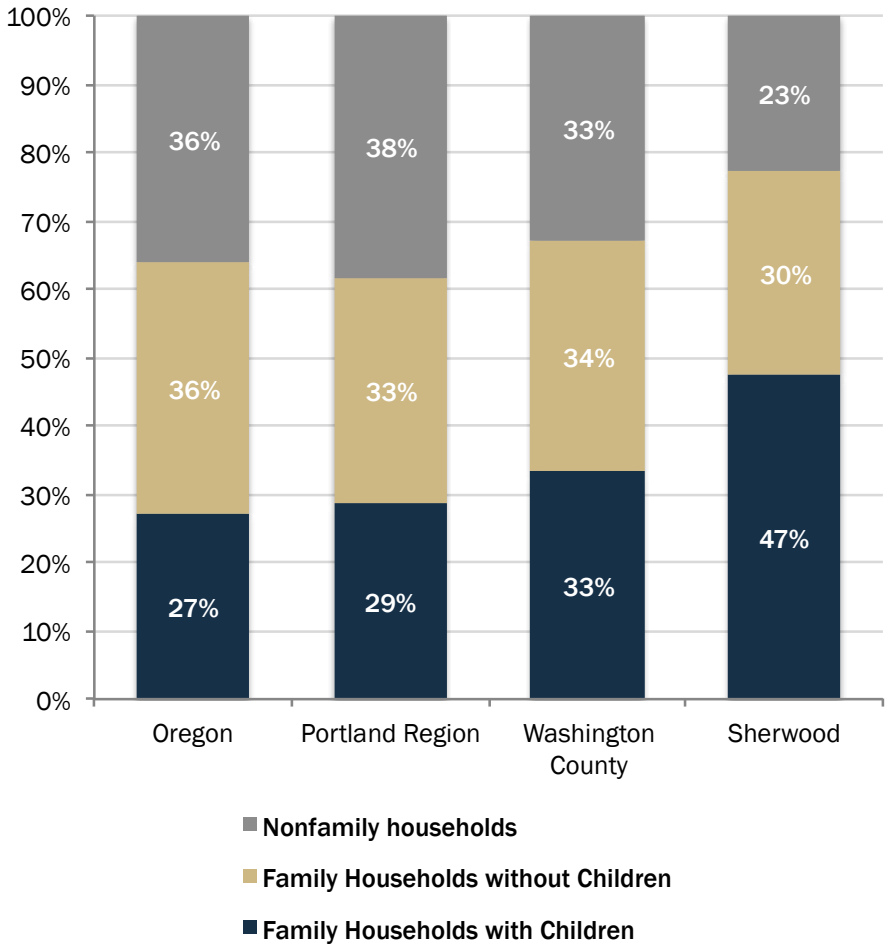
	Oregon	Portland Region	Washington County	Sherwood
2000				
Average household size	2.51	2.53	2.61	2.77
Owner-occupied units	2.59	2.67	2.75	2.85
Renter-occupied units	2.36	2.30	2.39	2.47
2009-2013				
Average household size	2.49	2.54	2.64	2.89
Owner-occupied units	2.55	2.64	2.72	3.00
Renter-occupied units	2.41	2.37	2.53	2.57
Change 2000 to 2009-2013				
Average household size	-0.02	0.00	0.03	0.12
Owner-occupied units	-0.04	-0.02	-0.03	0.15
Renter-occupied units	0.05	0.07	0.14	0.10

Source: U.S. Census 2000 SF1 H012, American Community Survey 2009-2013 Table B25010.

Household composition

Figure B- 11 shows household composition in Oregon, the Portland Region, Washington County, and Sherwood in 2009-2013. A larger share of Sherwood's housing composition is family household with children (47%) compared to that of Washington County (33%), the Portland Region (29%), and Oregon (27%).

Figure B- 11. Household composition, Oregon, Portland Region, Washington County, and Sherwood, 2009-2013.



Source: American Community Survey 2009-2013 Tables DP02.

Group Quarters

Table B- 10 shows the population living in group quarters in Oregon, the Portland Region, Washington County, and Sherwood in 2000 and 2010. Only seven out of 18,194 Sherwood residents lived in group quarters in 2010, less than 0.0%. In contrast, 2.3% of Oregon's population and 1.8% of the Portland region's population lives in group quarters.

Table B- 10. Persons in group quarters, Oregon, Portland Region, Washington County, and Sherwood, 2000 to 2010.

	2000	2010
Oregon		
Total Population	3,421,399	3,831,074
Persons in Group Quarters	77,491	86,642
Percent in Group Quarters	2.3%	2.3%
Percent in correctional institutions	0.6%	0.6%
Portland Region		
Total Population	1,444,219	1,641,036
Persons in Group Quarters	23,667	29,124
Percent in Group Quarters	1.6%	1.8%
Percent in correctional institutions	0.0%	0.0%
Washington County		
Total Population	445,342	529,710
Persons in Group Quarters	4,101	6,788
Percent in Group Quarters	0.9%	1.3%
Percent in correctional institutions	0.1%	0.4%
Sherwood		
Total Population	11,791	18,194
Persons in Group Quarters	19	7
Percent in Group Quarters	0.2%	0.0%
Percent in correctional institutions	0.0%	0.0%

Source: U.S. Census 2000 SF1 Tables P1 and P37, U.S. Census 2010 SF1 Tables P1 and P42

Commuting trends

Commuting within the Portland region is common, with small cities like Sherwood seeing the vast majority of workers commute out of the city for work and the majority of people working in the city commuting in from other parts of the region. Figure B- 12 shows this pattern in Sherwood, with the majority of people living in Sherwood commuting out for work and the majority of people working in Sherwood commuting into the city for work.

Figure B- 12. Inflow and Outflow of Employment and Residence in Sherwood, 2011

Source: U.S. Census Bureau: LED on the Map, http://lehdmap3.did.census.gov/themap3/
The U.S, Census bases this data on Unemployment Insurance earnings data and the Quarterly Census of Employment and Wages (QCEW) data, combined with administrative data, additional administrative data and data from censuses and surveys. From these data, the program creates statistics on employment, earnings, and job flows at detailed levels of geography and industry and for different demographic groups.

Table B- 11 shows the places where Sherwood residents were employed in 2011. More than 90% of Sherwood residents worked outside of the city.

Table B- 11. Places that residents of Sherwood were employed in, 2011.

Location	Number	Percent
Counties		
Washington	3,616	49%
Multnomah	1,803	24%
Clackamas	1,147	16%
Yamhill	338	5%
Maion	330	4%
Clark	71	1%
Polk	13	0%
Columbia	12	0%
All other counties	54	1%
Cities		
Portland	1,686	23%
Tigard	660	9%
Sherwood	658	9%
Beaverton	575	8%
Tualatin	575	8%
All other cities	3,230	44%
Total	**7,384**	**100%**

Source: U.S. Census Bureau: LED on the Map, http://lehdmap3.did.census.gov/themap3/.

Table B- 12 shows where employees of firms located Sherwood lived in 2011. More than 80% of people who worked in Sherwood commuted from outside the city.

Table B- 12. Places where workers in Sherwood lived in 2011

Location	Number	Percent
Counties		
Washington	2,013	47%
Clackamas	602	14%
Multnomah	467	11%
Yamhill	460	11%
Marion	224	5%
Clark	76	2%
Linn	52	1%
Lane	46	1%
Polk	44	1%
All other counties	296	7%
Cities		
Sherwood	658	15%
Portland	371	9%
Tigard	233	5%
Beaverton	224	5%
Newberg	207	5%
All other cities	2,587	60%
Total	**4,280**	**100%**

Source: U.S. Census Bureau: LED on the Map, http://lehdmap3.did.census.gov/themap3/

MANUFACTURED HOMES

Manufactured homes are and will be an important source of affordable housing in Sherwood. 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 a manufactured home to escape rent increases. 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.

Sherwood had 258 manufactured homes in 2000 and 155 manufactured homes in the 2009-2013 period, a decrease of 103 dwellings. According to Census data, roughly 83% of the manufactured homes in Sherwood were owner-occupied in the 2009-2013 period.

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. Table B- 13 presents the inventory of mobile and manufactured home parks within Sherwood in 2014. The results show that Sherwood had 4 manufactured home parks with 186 spaces and 1 vacant space.

Table B- 13. Inventory of Mobile/Manufactured Home Parks, City of Sherwood, 2014

Name	Location	Park Type	Total Spaces	Vacant Spaces
Carriage Park Estates	23077 SW Main St	Family	58	0
Crown Court	27300 SW Pacific Hwy	Family	14	1
Orland Villa	22200 SW Orland Street	Family	24	0
Smith Farm Estates	17197-17180 SW Smith Ave	Family	90	0
Total			**186**	**1**

Source: Oregon Manufactured Dwelling Park Directory, http://o.hcs.state.or.us/MDPCRParks/ParkDirQuery.jsp.

Changes in housing cost

According to Zillow, the median sales price of a home in Sherwood increased by about 30% between 2004 and 2014. Housing prices rose steeply prior to 2007, reaching a high of roughly $338,000, before the housing bubble and recession led to a period of declining housing prices. Housing prices in Sherwood, while following the same general pattern, remain higher than those observed in other parts of the region and the State as a whole.

Housing values

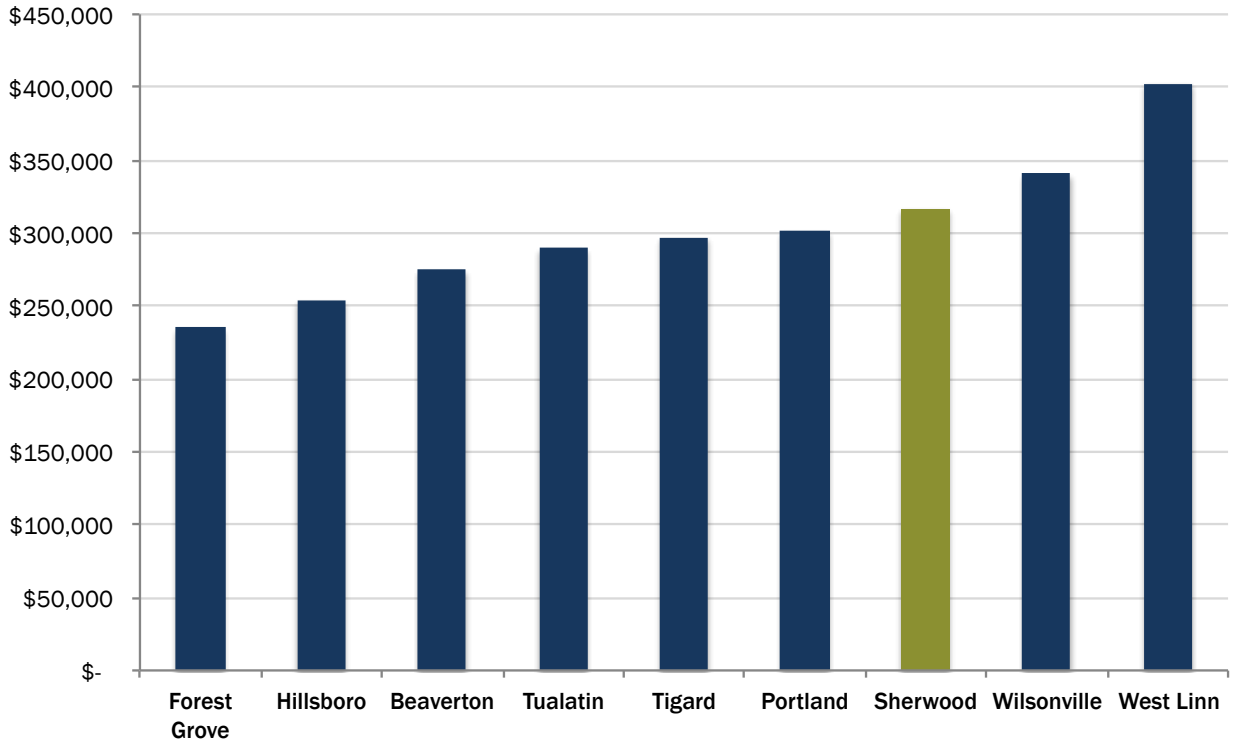
Figure B- 13 shows the median sales price in Oregon, the Portland MSA, Washington County, and Sherwood between 2004-2014. As of January 2015, median sales prices in Sherwood were $331,300, higher than in Washington County ($281,700), the Portland MSA ($269,900), and Oregon ($241,400).

Figure B- 13. Median Sales Price, Oregon, Portland MSA, Washington County and Sherwood, 2004-2014

Source: Zillow Real Estate Research.
Note: Gaps in Sherwood's median sales price occur where data was not available.

Figure B- 14 shows median home sales prices for Sherwood and regional cities in January 2015. In that month, median home sale prices in Sherwood were about $316,500, above sales prices in other Portland westside communities such as Tigard, Tualatin, and Beaverton. Median sales prices in Wilsonville and West Linn were higher than those in Sherwood.

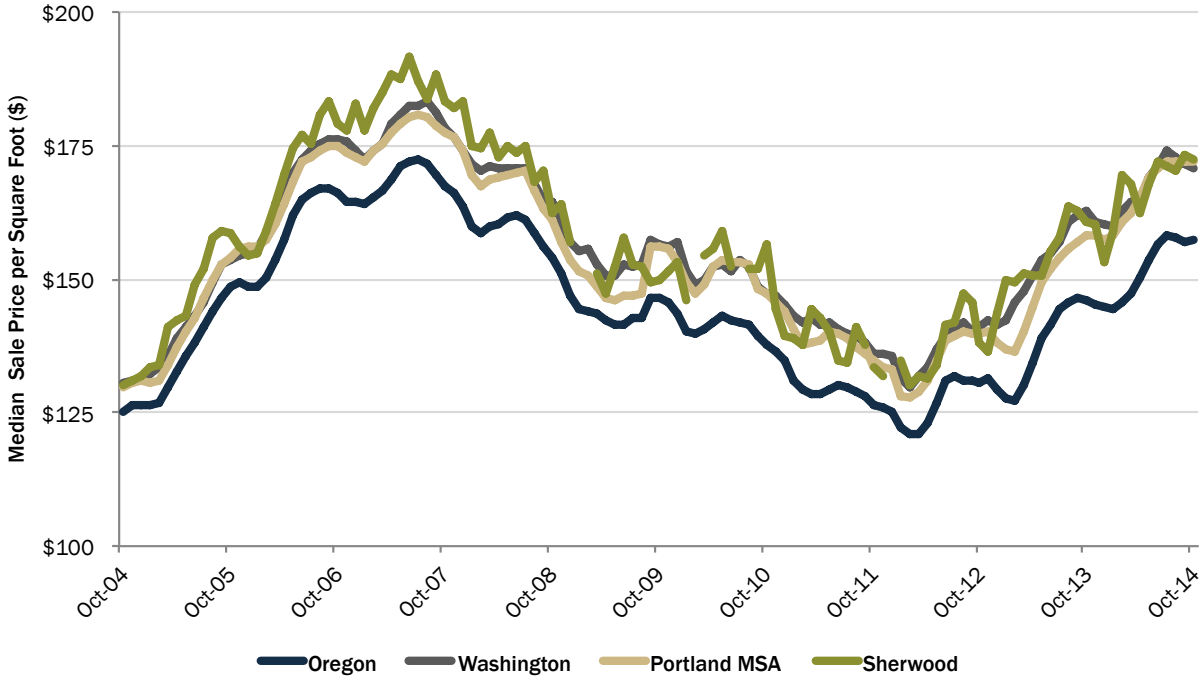
Figure B- 14. Median Home Sales Price, Sherwood, Tualatin, Tigard, Beaverton, Hillsboro, Forest Grove, Portland, January 2015



Source: Zillow Real Estate Research.

Figure B- 15 shows median home sales price per square foot for Oregon, the Portland MSA, Washington County and Sherwood from 2004-2013. Prices per square foot rose in Sherwood from $130 per square foot in October 2004 to $192 in July 2007. Prices fell after 2007 and rose again starting in 2011. In October 2014, the median price per square foot in Sherwood was about $170 dollars, comparable to the price in Washington County and the Portland Region (both about $170) and above that of the state as a whole ($157 per square foot).

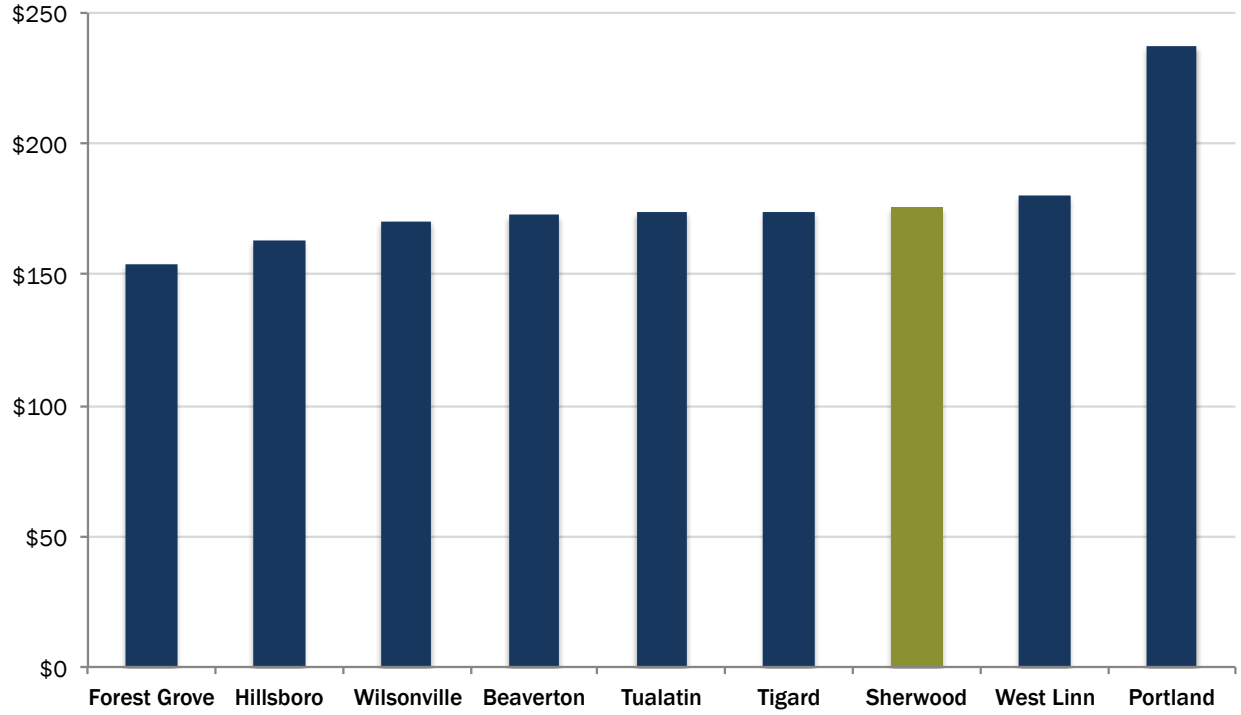
Figure B- 15. Median Sales Price per Square Foot, Oregon, Portland MSA, Washington County and Sherwood, 2004-2014



Source: Zillow Real Estate Research.
Note: Gaps in Sherwood's median sales price occur where data was not available.

Figure B- 16 shows median home sales price per square foot for Sherwood and regional cities in January 2015. Of the cities sampled, Sherwood had the third-highest price per square foot, at $176 per square foot. Prices per square foot in West Linn and Portland were higher, at $180 and $237 respectively. While Sherwood's prices were the third highest, they compared very closely to other cities such as Tigard ($174), Tualatin ($174), Beaverton ($173), and Wilsonville ($171).

Figure B- 16. Median Sales Price Per Square Foot, Forest Grove, Hillsboro, Wilsonville, Beaverton, Tualatin, Tigard, Sherwood, West Linn, and Portland, January 2015.



Source: Zillow Real Estate Research.

Housing rental costs

Table B- 14 shows the median contract rent in Oregon, Multnomah, Washington, and Clackamas counties, and Sherwood, in 2000 and 2009-2013. The median contract in Sherwood in 2009-2013 was $212 above the median in Washington County.

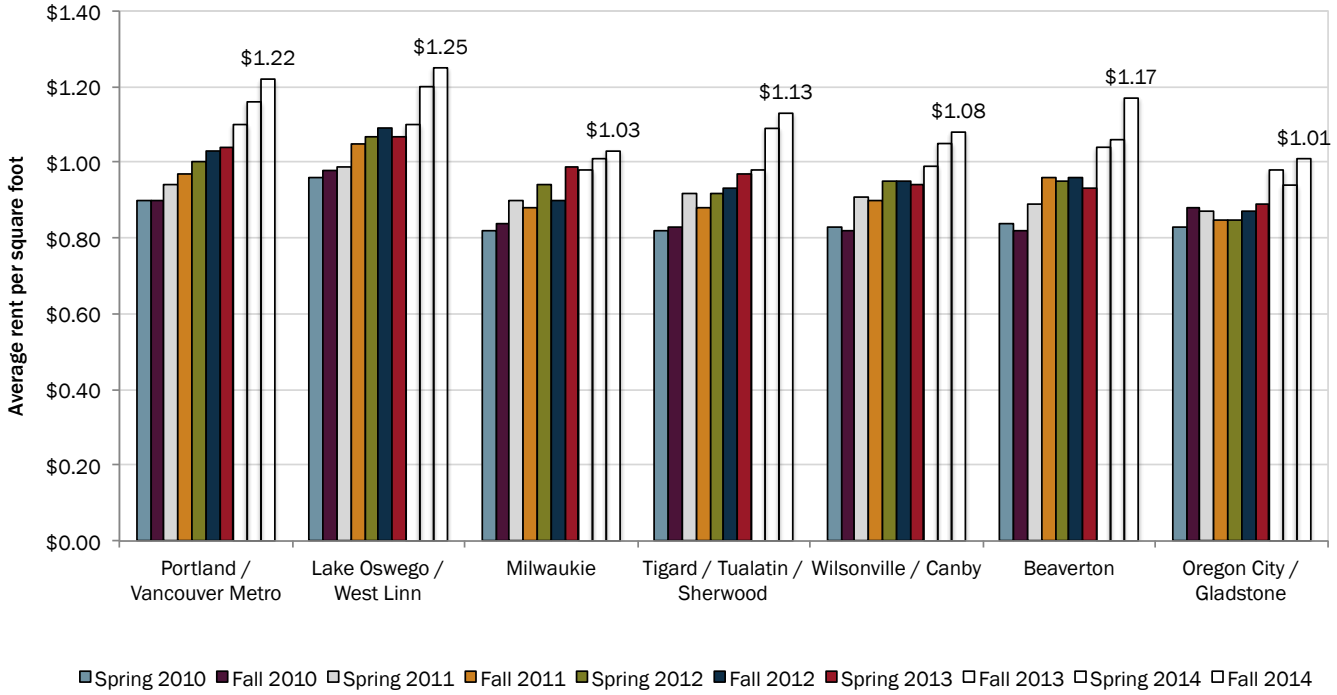
Table B- 14. Median contract rent, inflation-adjusted dollars, Oregon, Multnomah Washington, and Clackamas Counties, and Sherwood, 2000 to 2009-2013

Location	Rent		Change 2000 to 2009-2013	
	2000	2009-2013	Amount	Percent
Oregon	$741	$749	$8	1%
Multnomah County	$771	$799	$28	4%
Washington County	$878	$852	-$26	-3%
Clackamas County	$853	$858	$5	1%
Sherwood	$880	$1,064	$184	21%

Source: U.S. Census 2000 SF3 Table H56, American Community Survey 2012 Table B25058
Note: All data reported in 2013 dollars; 2000 figures were updated using Consumer Price Index.

Figure B- 17 shows average rent per square foot for apartments in the Portland/Vancouver Metro region and selected submarkets, according to Multifamily NW data between 2010 and 2014. Average rent in the Tigard/Tualatin/Sherwood area submarket was $1.13 per square foot in Fall 2014, lower than the regional average of $1.22 per square foot. Between Spring 2010 and Spring 2013, average rent in Tigard/Tualatin/Sherwood area increased by 38%, consistent with the regional increase of 36%.

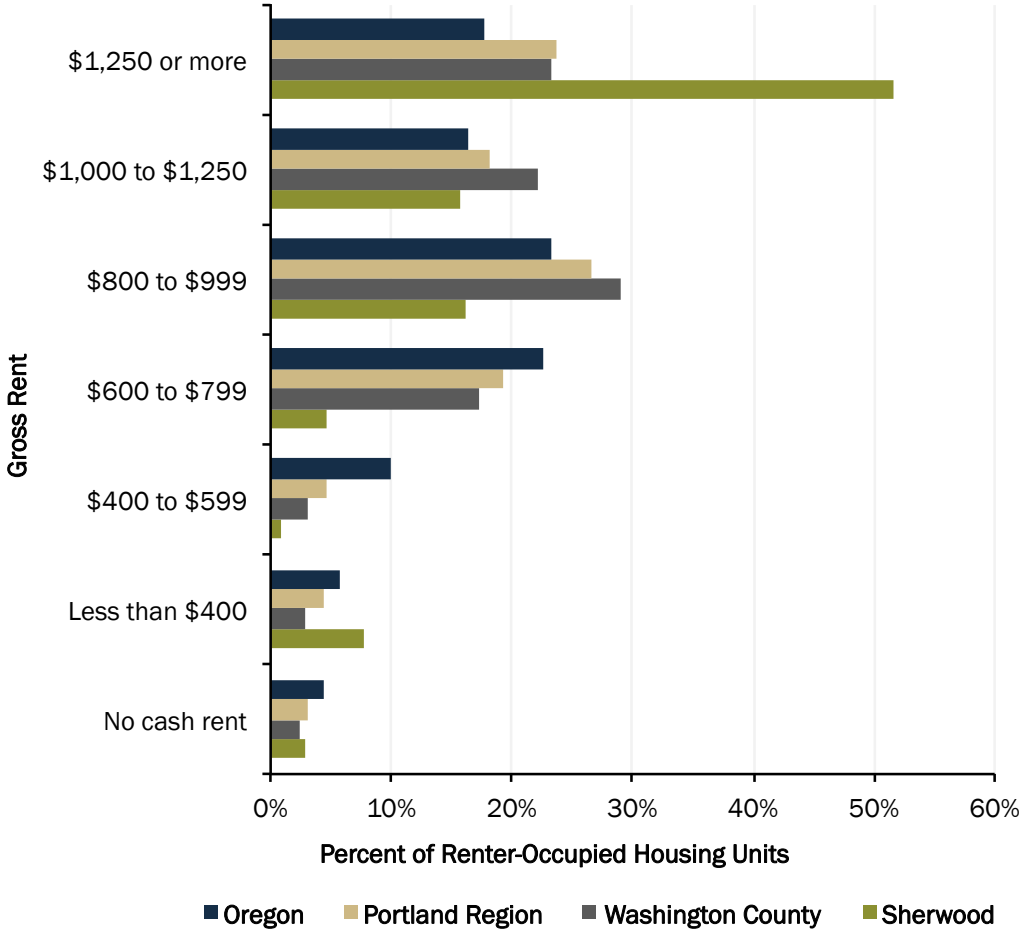
Figure B- 17. Average rent per square foot, Portland/Vancouver Metro and selected submarkets, 2010-2014



Source: Multifamily NW Apartment Reports, Spring 2010 through Fall 2014.
Note: The average rent price shown on the graph is for Fall 2014

Figure B- 18 shows a comparison of gross rent for renter-occupied housing units in Oregon, the Portland Region, Washington County, and Sherwood in 2009-2013.[49]

Figure B- 18. Gross rent, renter occupied housing units, Oregon, Portland Region, Washington County, and Sherwood, 2009-2013.



Source: American Community Survey 2009-2013 Table B25063.

[49] The U.S. Census defines gross rent as: "the amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else)."

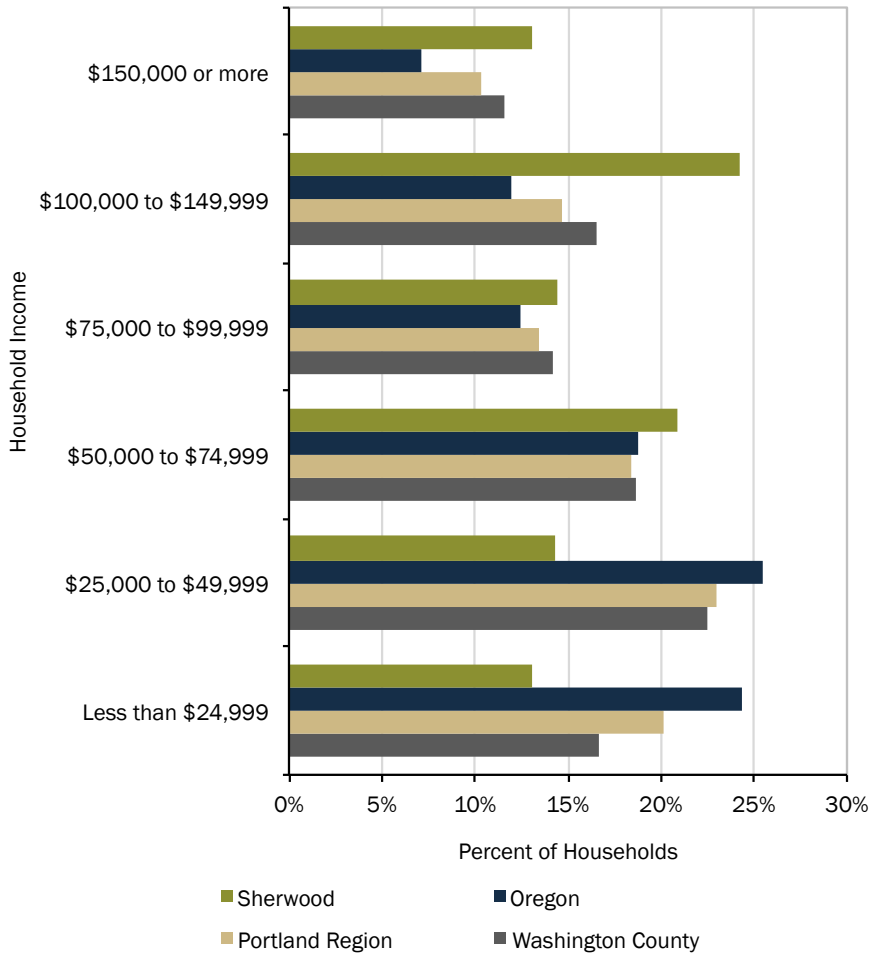
INCOME AND AFFORDABILITY OF HOUSING

This section summarizes regional and local income and housing cost trends. Income is a key determinant in housing choice and a households' ability to afford housing. A review of historical income and housing price trends provides insight into the local and regional housing markets.

The median household income in Sherwood was higher than in nearby counties and the state as a whole in the 2009-2013 period. Median household income in Sherwood was about $78,400, compared to $64,200 in Washington County, $64,400 in Clackamas County, and $52,500 in Multnomah County. Statewide, the median income was about $50,300.

Figure B- 19 shows the distribution of household income in Oregon, the Portland Region, and Sherwood in the 2009-2013 period. Sherwood had the highest share of households earning over $100,000 and the lowest share of households earning less than $25,000.

Figure B- 19. Household Income, Oregon, Portland Region, Washington County, and Sherwood, 2009-2013.



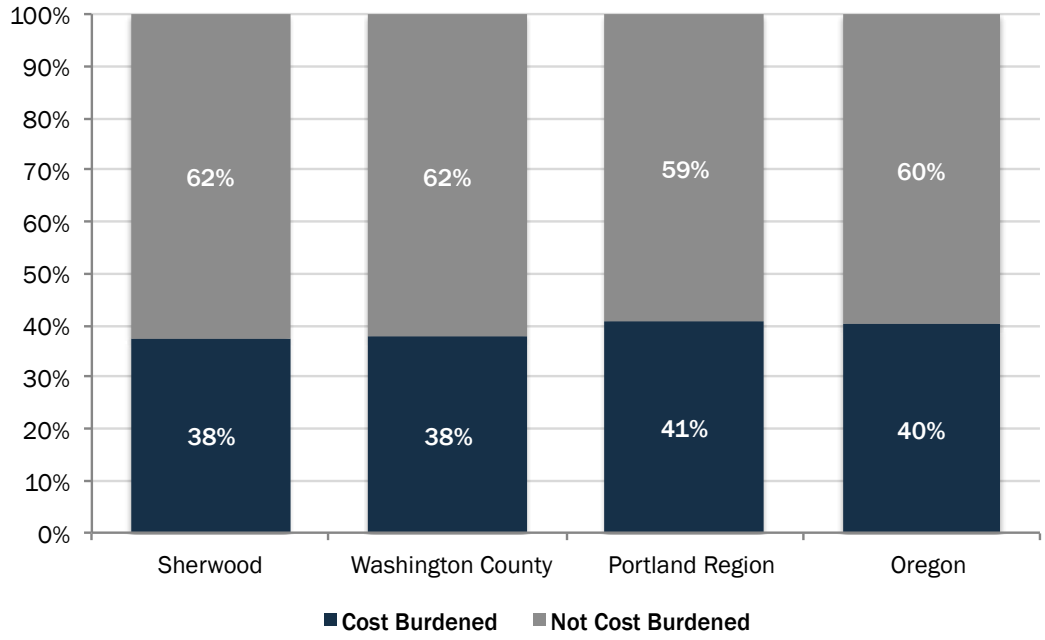
Source: American Community Survey 2009-2013 Table B19001.

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. HUD 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 of housing affordability is consistent with the Goal 10 requirement to provide housing that is affordable to all households in a community.

According to the U.S. Census, nearly 2,345 households in Sherwood—or 38%—paid more than 30% of their income for housing expenses in the 2009-2013 period. About 44% of renter households in Sherwood were cost burdened, compared with 35% of owner households. In comparison, 40% of Oregon's households were cost burdened in the 2009-2013 period, with 54% of renter households and 32% of owner households cost burdened.

Figure B- 20 shows the percentage of the population experiencing housing cost burdens in Oregon, the Portland Region, Washington County, and Sherwood in 2009-2013.

Figure B- 20. Housing cost burden, Oregon, Portland Region, Washington County and Sherwood, 2009-2013.

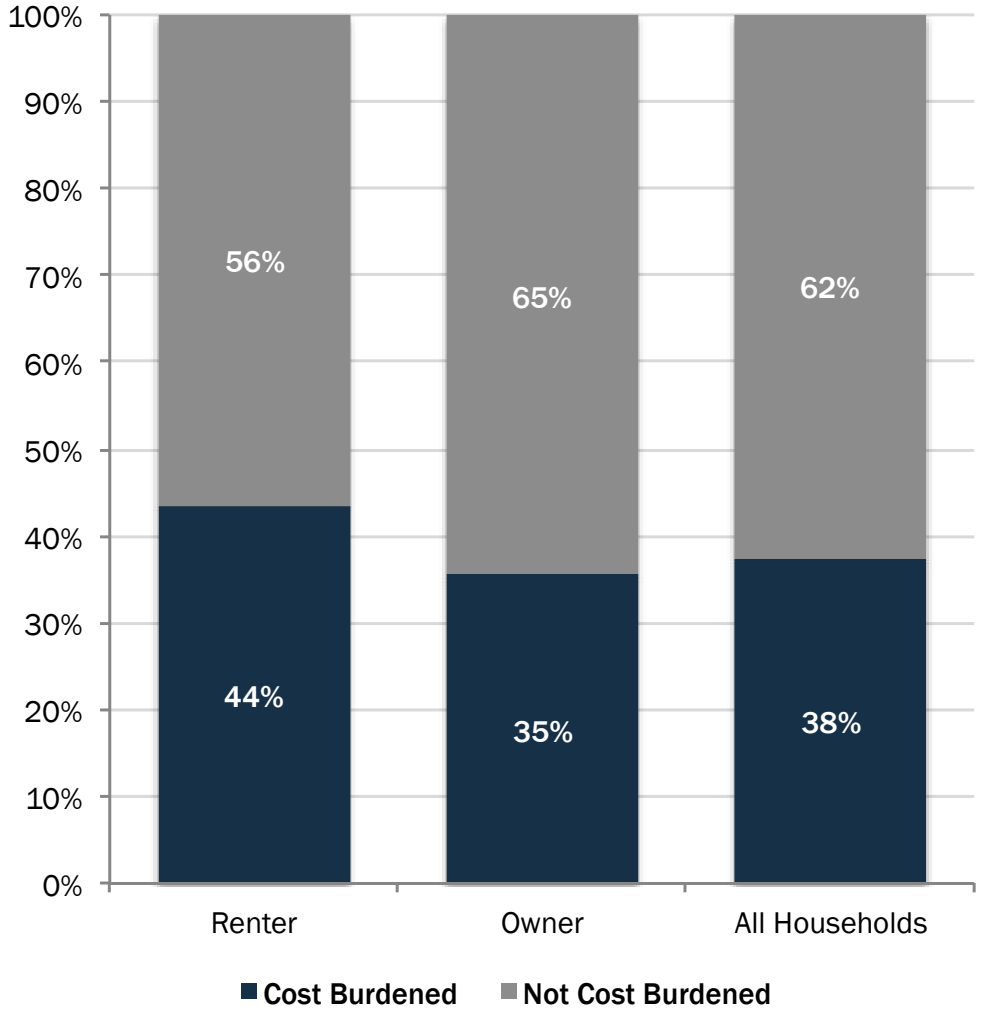


Source: American Community Survey 2009-2013 Tables B25070 and B25091.
Note: Households which the Census classifies as "Not computed" were excluded from the above calculations.

Figure B- 21 shows housing cost burden, by tenure, for Sherwood households in 2009-2013. Forty-four percent of Sherwood's renter households are cost burdened, compared to 49% of renter households in Washington County. Thirty-

five percent of owner households are cost burdened, compared to 31% of owner households in Washington County.

Figure B- 21. Housing cost burden by tenure, Sherwood, 2009-2013.



Source: American Community Survey 2009-2013 Tables B25070 and B25091.

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

- A household is defined as cost burdened if the housing costs exceed 30% of their income, regardless of actual income. The remaining 70% of income is expected to be spent on non-discretionary expenses, such as food or medical care, and on discretionary expenses. Households with higher income may be able to pay more than 30% of their income on housing without impacting the household's ability to pay for necessary non-discretionary expenses.
- Cost burden compares income to housing costs and does not account for accumulated wealth. As a result, the estimate of how much a household

can afford to pay for housing does not include the impact of accumulated wealth on a household's ability to pay for housing. For example, a household with retired people may have relatively low income but may have accumulated assets (such as profits from selling another house) that allow them to purchase a house that would be considered unaffordable to them based on the cost burden indicator.

Cost burden is only one indicator of housing affordability. Another way of exploring the issue of financial need is to review wage rates and housing affordability. Table B- 15 shows an illustration of affordable housing wage and rent gap for households in the Portland MSA at different percentages of median family income (MFI). The data are for a typical family of four. The results indicate that a household must earn $17.73 an hour to afford a two-bedroom unit according to HUD's market rate rent estimate.

Table B- 15. Affordable Housing Wage Gap, Portland MSA, 2014

Value	Minimum Wage	30% MFI	50% MFI	80% MFI	100% MFI	120% MFI
Annual Hours	2,080	2,080	2,080	2,080	2,080	2,080
Derived Hourly Wage	$9.10	$10.01	$16.68	$26.69	$33.37	$40.04
Annual Wage	$18,928	$20,820	$34,700	$55,520	$69,400	$83,280
Annual Affordable Rent	$5,678	$6,246	$10,410	$16,656	$20,820	$24,984
Monthly Affordable Rent	$473	$521	$868	$1,388	$1,735	$2,082
HUD Fair Market Rent (2 Bedroom)	$922	$922	$922	$922	$922	$922
Is HUD Fair Market Rent Higher Than The Monthly Affordable Rent?	Yes	Yes	Yes	No	No	No
Rent Paid Monthly OVER 30% of Income	$449	$402	na	na	na	na
Rent Paid Annually OVER 30% of Income	$5,386	$4,818	na	na	na	na
Percentage of Income Paid OVER 30% of Income for Rent	28%	23%	na	na	na	na
Percentage of Income Spent on Housing	58%	53%	32%	20%	16%	13%
For this area what would the "Affordable Housing Wage" be?	$17.73	$17.73	$17.73	$17.73	$17.73	$17.73
The Affordable Housing Wage Gap IS:	**$8.63**	**$7.72**	**$1.05**	**na**	**na**	**na**

Source: FMR comes from HUD's FY 2014 Two-Bedroom FMR for Portland-Vancouver-Hillsboro MSA. Minimum wage from Oregon's Bureau of Labor and Industries. MFI from HUD's FY 2014 MFI for Portland- Vancouver -Hillsboro MSA.

Table B- 16 shows a rough estimate of affordable housing cost and units by income levels for Sherwood in 2014 based on Census data about household income, the value of owner-occupied housing in Sherwood, and rental costs in Sherwood. Several points should be kept in mind when interpreting this data:

- Affordable monthly housing costs and estimate of affordable purchase prices are based on HUD income standards and assume that a household will not spend more than 30% of household income on housing costs. Some households pay more than 30% of household income on housing costs, generally because they are unable to find more affordable housing or because wealthier households are able to pay a larger share of income for housing costs.
- HUD's affordability guidelines for Fair Market Rent are based on median family income and provide a rough estimate of financial need. These guidelines may mask other barriers to affordable housing such as move-in costs, competition for housing from higher-income households,

and availability of suitable units. They also ignore other important factors such as accumulated assets, purchasing housing as an investment, and the effect of down payments and interest rates on housing affordability.

- Households compete for housing in the marketplace. In other words, affordable housing units are not necessarily *available* to low-income households. For example, if an area has a total of 50 dwelling units that are affordable to households earning 30% of median family income, 50% of those units may already be occupied by households that earn more than 30% of median family income.

The data in Table B- 16 indicate that in 2014:

- About 20% of households in Sherwood could not afford a two-bedroom apartment at HUD's fair market rent level of $922.
- A household earning median family income ($69,400) could afford a home valued up to about $173,500.
- Sherwood has a deficit of about 660 dwellings to households earning less than $35,000 (or 50% of the Portland metropolitan area's median family income).

Table B- 16. Rough estimates of housing affordability, Sherwood, 2009-2013

Income Level	Number of HH	Percent	Affordable Monthly Housing Cost	Crude Estimate of Affordable Purchase Owner-Occupied Unit	Est. Number of Owner Units	Est. Number of Renter Units	Surplus (Deficit)	HUD Fair Market Rent (FMR) in 2014
Less than $10,000	186	3%	$0 to $250	$0 to $25,000	44	60	(82)	
$10,000 to $14,999	280	4%	$250 to $375	$25,000 to $37,000	40	69	(171)	
$15,000 to $24,999	364	6%	$375 to $625	$37,500 to $62,500	35	36	(293)	
								Studio: $666
$25,000 to $34,999	298	5%	$625 to $875	$62,500 to $87,500	71	111	(116)	1 bdrm: $774
$35,000 to $49,999	618	10%	$875 to $1,250	$87,500 to $125,000	77	510	(31)	2 bdrm: $922
								3 bdrm: $1,359
$50,000 to $74,999	1,333	21%	$1,250 to $1,875	$125,000 to $187,500	360	678	(295)	4 bdrm: $1,633
Portland MSA 2014 MFI: $69,400			$1,735	$173,500				
$75,000 to $99,999	922	14%	$1,875 to $2,450	$187,500 to $245,000	748	172	(2)	
$100,000 to $149,999	1,543	24%	$2,450 to $3,750	$245,000 to $375,000	2,172	23	652	
$150,000 or more	836	13%	More than $3,750	More than $375,000	1,151	23	338	
Total	**6,380**	**100%**			**4,698**	**1,682**	**0**	

Source: FMR comes from HUD's FY 2014 Two-Bedroom FMR for Portland-Vancouver-Hillsboro MSA. Minimum wage from Oregon's Bureau of Labor and Industries. MFI from HUD's FY 2014 MFI for Portland-Vancouver-Hillsboro MSA; Data about the share of owner and renter households and their income in Sherwood comes from the American Community Survey, 2009-2013 Tables B25075, B25063, B19001.

Table B- 17 shows that between 2000 and 2009-2013, both median household income and housing values increased substantially, with increases in home value outpacing growth in income. Median household income increased between 2000 and the 2009-2013 period.

Housing in Sherwood has become less affordable since 2000, consistent with county and statewide trends. In 2009-2013, the median home value was 3.8 times the median household income in Sherwood, up from 2.9 in 2000.

Housing in Sherwood is relatively affordable, compared to the county and state. In 2009-2013, the median home value was 4.4 times the median household income in Washington County, with a statewide average of 4.7.

Table B- 17. Household income to home value, 2013 dollars, Oregon, Washington County, and Sherwood, 2000 and 2009-2013.

	2000	2009-2013	Change 2000 to 2013	
			Number	Percent
Oregon				
Median HH Income	$57,282	$50,229	-$7,053	-12%
Median Owner Value	$204,120	$238,000	$33,880	17%
Ratio of Home Value to Income	3.56	4.74	1.17	33%
Washington County				
Median HH Income	$72,971	$64,180	-$8,791	-12%
Median Owner Value	$252,560	$282,400	$29,840	12%
Ratio of Home Value to Income	3.46	4.40	0.94	27%
Sherwood				
Median HH Income	$87,525	$78,355	-$9,170	-10%
Median Owner Value	$254,100	$300,300	$46,200	18%
Ratio of Home Value to Income	2.90	3.83	0.93	32%

Source: Census 2000 SF1 P53 P77 P82 P87, SF3 H7 H63 H76, American Community Survey 2009-2013 DP03, B25003, B25064, B25077.

Appendix C: Alternative Housing Forecasts

Metro's forecast for new housing in Sherwood shows that households will grow at less than 1% per year. In comparison, Sherwood's population grew at 3.4% per year between 2000 and 2013 and 8% per year between 1990 and 2013. This appendix presents three alternatives to Metro's forecast for growth in Sherwood.

Table C- 1 shows three alterative forecasts for population growth in Sherwood for the 2015 to 2035 period. The estimate of population in 2014 is for Sherwood city limits based on the official population estimate from Portland State University's Population Research Center. The alternative forecasts are:

- **Low growth at 2% growth per year.** This forecast assumes that Sherwood will grow at 2% per year, which is faster than the Portland Region's growth rate over the 1990 to 2013 period (1.6%) and slower than Washington County's growth rate over the same period (2.5%). At this growth rate, the would add 9,800 people over the 20-year period.
- **Middle growth at 3% growth per year.** This forecast assumes that Sherwood will grow at 3% per year, which is a little slower than the City grew over the 1990 to 2013 period (3.4%). At this growth rate, the would add 16,300 people over the 20-year period.
- **High growth at 4% growth per year.** This forecast assumes that Sherwood will grow at 4% per year, which is a little faster than the City grew over the 1990 to 2013 period (3.4%). At this growth rate, the would add 24,200 people over the 20-year period.

Table C- 1. Alternative population forecast, Sherwood, 2015 to 2035

	Low	Middle	High
2014	18,955	18,955	18,955
2015	19,334	19,524	19,713
2035	28,729	35,263	43,194
Change 2015 to 2035			
Population	9,774	16,308	24,239
Percent	52%	86%	128%
AAGR	2.0%	3.0%	4.0%

Source: 2014 population from Portland State University's Population Research Center; Calculations by ECONorthwest

The forecast of number of new housing units in Table C- 2 uses the following assumptions:

- **Group Quarters.** According to the 2009-2013 American Community Survey, Sherwood has fewer than 0.1% of its population in group quarters. This forecast assumes no growth in group quarters.

- **Household size.** According to the 2009-2013 American Community Survey, Sherwood household size is 2.89 persons per household. This forecast assumes that the household size in Sherwood will hold constant over the planning period.
- **Vacancy Rate.** According to the 2009-2013 American Community Survey, Sherwood's vacancy rate was 2.7%. This forecast assumes that the that Sherwood's average vacancy rate will hold stable over the planning period.

Table C- 2. Alternative housing forecast, Sherwood, 2015 to 2035

Variable	Low	Middle	High
Change in persons	9,774	16,308	24,239
minus Change in persons in group quarters	-	-	-
equals Persons in households	9,774	16,308	24,239
Average household size	2.89	2.89	2.89
New occupied DU	3,382	5,643	8,387
times Aggregate vacancy rate	2.7%	2.7%	2.7%
equals Vacant dwelling units	91	152	226
Total new dwelling units (2015-2035)	3,473	5,795	8,613
Annual average of new dwelling units	174	290	431

Source: American Community Survey 5-year Estimate for 2009-2013 for Group Quarters, Average Household Size, and Vacancy rates; Calculations by ECONorthwest

Table C- 3 uses the same assumptions about housing mix used in the housing needs analysis (Table 2), consistent with the requirements of OAR 660-007. Half of Sherwood's housing growth will be single-family detached, 10% will be single-family attached, and 40% will be multifamily.

Table C- 3. Alternative housing forecast by type of housing, Sherwood, 2015 to 2035

Variable	Low	Middle	High
Total new dwelling units (2015-2035)	3,473	5,795	8,613
Dwelling units by structure type			
Single-family detached			
Percent single-family detached DU	50%	50%	50%
equals Total new single-family detached DU	1,737	2,898	4,307
Single-family attached			
Percent single-family attached DU	10%	10%	10%
equals Total new single-family attached DU	347	580	861
Multifamily			
Percent multifamily detached DU	40%	40%	40%
Total new multifamily DU	1,389	2,318	3,445
equals Total new dwelling units (2015-2035)	3,473	5,796	8,613

Source: ECONorthwest

Table C- 4 uses the assumptions about the allocation of new housing to Sherwood's existing plan designations used in the housing needs analysis (Table 3). The capacity shown in Table C- 4 is capacity for vacant and partially vacant land within the Sherwood city limits and Brookman Area used in the housing needs analysis (Table 7). In the discussion below, we assume the capacity in

Sherwood West will be between 3,300 and 6,500 dwelling units, depending on zoning and other development regulations (Table 8).

Table C- 4. Alternative comparison of capacity of existing residential land with demand for new dwelling units, dwelling units, Sherwood planning area, 2015 to 2035

Zone	Capacity (Needed Densities)	Housing Demand	Comparison Capacity *minus* Demand (dwelling units)
Low Forecast			
Very Low Density Residential	76	191	(115)
Low Density Residential	144	365	(221)
Medium Density Residential-Low	416	1,077	(661)
Medium Density Residential-High	318	932	(614)
High Density Residential	327	909	(582)
Low Total	1,281	3,474	(2,193)
Middle Forecast			
Very Low Density Residential	76	319	(243)
Low Density Residential	144	609	(465)
Medium Density Residential-Low	416	1,797	(1,381)
Medium Density Residential-High	318	1,557	(1,239)
High Density Residential	327	1,516	(1,189)
Middle Total	1,281	5,798	(4,517)
High Forecast			
Very Low Density Residential	76	474	(398)
Low Density Residential	144	904	(760)
Medium Density Residential-Low	416	2,670	(2,254)
Medium Density Residential-High	318	2,313	(1,995)
High Density Residential	327	2,253	(1,926)
High Total	1,281	8,614	(7,333)

Source: ECONorthwest

Table C- 4 shows that Sherwood has a deficit of capacity housing under all of the alternative forecasts for land within the city limits and Brookman Area. The analysis in Table C- 4 leads to the following conclusions:

If Sherwood grows at 2% average population growth per year (slower than growth since 2000):

- All new growth could be accommodated in the city limits and Sherwood West, even if the Brookman Area is not annexed.
- Land within Sherwood's city limits and Brookman area could accommodate about seven to ten years worth of growth at this rate. Land within Sherwood's city limits only could accommodate about five years worth of growth at this rate.
- Assuming the Brookman Area is annexed, Sherwood West would need to be within the UGB, annexed, and serviced by about 2022 to 2025 to allow Sherwood to be able to continue to grow.

- If the Brookman Area does not annex or Sherwood West is not development-ready by 2025 (or sooner), Sherwood is likely to grow slower than 2% over the 2015 to 2025 period.
- Given the cyclic nature of development and growth and time necessary for development to happen, Sherwood West would need to be brought into the UGB during the next evaluation period for the Metro UGB and concept planning, annexation, and facility planning would need to be completed relatively quickly. If Sherwood West is not prepared for development early in the 2015 to 2035 period, Sherwood is likely to grow substantially slower as a result of the scarcity of buildable land in the city.

If Sherwood grows at 3% average population growth per year (a little slower than growth since 2000):

- All new growth could be accommodated in the city limits, Brookman Area, and Sherwood West, assuming that the Sherwood West develops with an average density of at least 8 dwelling units per acre.
- All new growth could be accommodated in the city limits and Sherwood West, if the Brookman Area is not annexed, assuming that the Sherwood West develops with an average density of at least 10 dwelling units per acre.
- Land within Sherwood's city limits and Brookman area could accommodate about four to five years worth of growth at this rate. Land within Sherwood's city limits only could accommodate about three years worth of growth at this rate.
- Assuming the Brookman Area is annexed, Sherwood West would need to be within the UGB, annexed, and serviced by about 2019 to 2020.
- The fact that the Brookman Area is not annexed and there is a significant amount of planning and facilities work to do before Sherwood West is development-ready, it is unlikely that Sherwood will grow at this rate.

If Sherwood grows at 4% average population growth per year (a little faster than growth since 2000):

- All new growth could be nearly accommodated in the city limits and Sherwood West, if the Brookman Area is not annexed, assuming that the Sherwood West develops with an average density of at least 12 dwelling units per acre.
- The fact that the Brookman Area is not annexed and there is a significant amount of planning and facilities work to do before Sherwood West is development-ready, it is almost certain that Sherwood will not grow at this rate.