DAS
DEPARTMENT OF ADMINISTRATIVE SERVICES

Oregon Housing Needs Analysis Methodology

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Common Terms & Acronyms

AMI: Area Median Income: Every year the U.S. Department of Housing and Urban Development (HUD) produces a median family income calculation/assessment to determine affordability thresholds for a given area (some geographies are HUD-specific). Affordable housing projects' income limits, rent limits, and other characteristics will be based on this income limit. This term is synonymous with Median Family Income or MFI.[1]

City: This report uses the terms "City" and "city with a population of 10,000 or greater" as DLCD does, which includes, regardless of size: (a) Any city within Tillamook County and the communities of Barview/Twin Rocks/Watseco, Cloverdale, Hebo, Neahkahnie, Neskowin, Netarts, Oceanside and Pacific City/Woods; and (b) A county with respect to its jurisdiction over Metro urban unincorporated lands.

Cost Burdening / Severe Cost Burdening: The term "cost burdening" refers to households who pay more than 30% of their income on housing costs. The term "severe cost burdening" is used for households paying more than 50% of their income on housing. These terms come from HUD, and include mortgage payments and interest, or rent, utilities, and insurance.

DAS: Department of Administrative Services

DLCD: Department of Land Conservation and Development

Goal 10 (Housing): One of Oregon's 19 statewide land use planning requirements relating to planning for housing need. All local governments are required to plan for housing needs within an urban growth boundary (see term below) under Goal 10. Cities with populations larger than 10,000 people (as well as all cities and certain urban, unincorporated communities in Tillamook County) must regularly update local planning documents to comply with Goal 10.

Goal 14 (Urbanization): One of Oregon's 19 statewide land use planning requirements relating to planning for the orderly and efficient urbanization of land within an urban growth boundary (UGB - see term below). All cities and Metro are required to establish and amend urban growth boundaries to accommodate identified land needs in compliance with Goal 14.

HB: House Bill (year)

[1] A note on AMI vs MFI from HUD: "HUD estimates Median Family Income (MFI) annually for each metropolitan area and non-metropolitan county. The metropolitan area definitions are the same ones HUD uses for Fair Market Rents (except where statute requires a different configuration). HUD calculates Income Limits as a function of the area's Median Family Income (MFI). The basis for HUD's median family incomes is data from the American Community Survey, table B19113 - MEDIAN FAMILY INCOME IN THE PAST 12 MONTHS. The term Area Median Income is the term used more generally in the industry. If the term Area Median Income (AMI) is used in an unqualified manor, this reference is synonymous with HUD's MFI. However, if the term AMI is qualified in some way - generally percentages of AMI, or AMI adjusted for family size, then this is a reference to HUD's income limits, which are calculated as percentages of median incomes and include adjustments for families of different sizes." Source: HUD. 2018. "FY 2018 Income Limits Frequently Asked Questions." https://www.huduser.gov/portal/datasets/il/il18/FAQs-18r.pdf

Housing Affordability: Housing is considered “affordable” to a household if it spends less than 30% of its gross (pre-tax) income on housing costs (see Cost Burdening).

HSC: Housing Stability Council: The advisory body overseeing Oregon Housing and Community Services.

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

LCDC: Land Conservation and Development Commission: The governing body with policy and administrative oversight of the state land-use planning program. LCDC is supported by the Oregon Department of Land Conservation and Development.

Metro UGB: Metro Urban Growth Boundary: The Portland metropolitan area’s urban growth boundary (UGB), managed by Metro. Within the Metro UGB, cities and counties do not have individual UGBs. Since 1997, Oregon law also requires Metro to maintain a 20-year supply of land for future residential development inside the Metro UGB. See also: UGB.

OEA: Oregon Office of Economic Analysis

OHNA: Oregon Housing Needs Analysis

OHCS: Oregon Housing and Community Services

PRC: Population Research Center

PUMA: Public Use Microdata Area: A geographic area defined by the U.S. Census Bureau to have roughly 100,000 people and to (typically) align with County boundaries. PUMA sizes vary depending on the population density. Oregon has 31 PUMAs, with most PUMAs located in the more densely populated western part of the state.

PUMS: Public Use Microdata Sample: Data files produced by the U.S. Census Bureau that allow users to create custom analyses that are not available through pre-tabulated data tables. These data are produced for PUMA geographies.

Regulated Affordable Housing: Housing that is rent- or income-restricted to be affordable to households earning certain incomes. These units typically have public support (funding) in exchange for affordability requirements. Housing is considered “affordable” to a household if it spends less than 30% of its gross (pre-tax) income on housing costs (see Cost Burdening above). Regulations are set according to the types of funding used to develop the housing, such as the Low-Income Housing Tax Credit, or U.S. Housing and Urban Development (HUD) funding. Most regulated affordable housing is affordable for households earning under 60% AMI, but restrictions vary.

SB: Senate Bill (year)

UUL: Urban Unincorporated Lands: follows the definition in HB4063 (2024), which are lands within the Metro urban growth boundary that are identified by the county as: (a) Not within a

city; (b) Zoned for urban development; (c) Within the boundaries of a sanitary district or sanitary authority or a district formed for the purposes of sewage works; (d) Within the service boundaries of a water provider with a water system; and (e) Not zoned with a designation that maintains the land's potential for future urbanization.

UGB: Urban Growth Boundary: A boundary delineating urban and urbanizable land from rural land. This boundary contains urban development, is used to plan for orderly growth, and can be amended to accommodate an identified land need. Cities in Oregon are surrounded by urban growth boundaries (UGBs) which designate where they expect to grow over a 20-year period. The Portland metropolitan region has a single regional UGB, established and maintained by Metro. See also: Metro UGB.

Background and Policy Context

The Oregon Housing Needs Analysis and its Implementation

The Oregon Housing Needs Analysis (OHNA) is a new component to Oregon's statewide land use planning system intended to facilitate housing production, affordability, and choice to meet housing needs for Oregonians statewide. The OHNA articulates new responsibilities for state agencies and local governments to reorient the implementation of statewide land use planning goals 10 (Housing) and 14 (Urbanization) to produce more housing, advance equitable access to housing, and enable state and local government action to address need. It affects the way all communities plan for housing and urban lands, and cities with populations of 10,000 or greater are now specifically required to regularly plan and take action to address needs. Under House Bill 2001 and 2889 (2023 Session), the OHNA adds the following new components to Oregon's Housing Planning Program:

Methodology	Dashboard	Program
• A methodology that estimates the total number of **Needed Housing Units** over a 20-year period for all of Oregon, divided into geographic regions, components of need, and income levels. • An allocation of need from each region to each local government in a region to use in their Housing Capacity Analyses. • This allocation at the local government level forms the basis for the development of **Housing Production Targets** for cities with over 10,000 people to use in their Housing Production Strategies. • The methodology will be run annually by the Oregon Office of Economic Analysis inside DAS.	• A publicly available **Housing Production Dashboard** to track progress toward housing production target goals by city. • A set of **Housing Equity Indicators** to monitor equitable housing outcomes by city. • The dashboard and equity indicators will be updated annually by OHCS.	• A **Housing Acceleration Program** that supports cities that are falling behind on their Housing Production Targets. • The Housing Acceleration Program requires action, partnership, and investment to identify barriers to production within the control of local governments. • The Housing Acceleration Program and OHNA integration into Oregon's other Land Use Planning Goals will be managed by DLCD and aligned with cities' Housing Capacity Analysis and Housing Production Strategy deadlines.

OHNA Implementation

1. **This report outlines the final OHNA Methodology**. DAS is responsible for finalizing the methodology with input from OHCS and DLCD and will run it annually.
2. **The OHNA Housing Production Dashboard and Housing Equity Indicators** will be published on OHCS's information dashboard website on January 1, 2025. OHCS is responsible for publishing and updating these items, with input from DAS and DLCD.
3. **DLCD is writing administrative rules for the OHNA Program** through January 1, 2026. To integrate the OHNA into the existing statewide land use planning system, the Land Conservation and Development Commission (LCDC) must adopt new and revised Oregon Administrative Rules surrounding three topics:
    a. **Housing Needs and Production** rules go into effect January 1, 2025.
    b. **Housing Acceleration** rules go into effect January 1, 2025.
    c. **Housing Capacity and Urbanization** rules will be adopted by January 1, 2026.

More information on OHNA implementation can be found on DLCD's Rulemaking Website.

This Report: The OHNA Methodology

This report describes the OHNA Methodology.[2] It describes the methodological steps, including how different components were calculated and the data sources used. It also provides state and regional results by housing need component and by income level and local (city) results by income level.

Public Input and Finalizing the OHNA Methodology

The law (Oregon Revised Statutes (ORS) 184.451) required DAS to finalize and run the OHNA methodology by January 1, 2025. OHCS and DLCD made recommendations to DAS in fall 2024 informed by public input. The OHNA Methodology process is outlined below, including opportunities that the public had for comment and testimony.

- May 2024: Statewide and Metro-specific webinars hosted by DAS, DLCD, and OHCS
- July 2024: DAS published Interim Methodology Report
- July-August 2024: Public comment period on Interim Methodology
- August 2024: Respond to public comments and revise methodology
- September 2024: DAS published Draft Methodology Report, LCDC meeting and public testimony on Draft Methodology
- October 2024: Housing Stability Council Presentation on Draft Methodology Report
- October-November 2024: Respond to public comments and revise methodology
- December 2024: DAS publishes Final Methodology

[2] A summary of changes from the Draft to the Final methodology can be found in Appendix B.

Legislative History

The OHNA has been under development for several years. Under 2019's House Bill 2003, OHCS completed a Pilot Methodology and published a technical report that describes a recommended methodology and the analytical choices that were ruled out. Many of the data limitations identified and discussed in the Pilot Methodology technical report are relevant in this Final Methodology and are not revisited herein.

In February 2021, OHCS produced a companion report that summarizes the Pilot Methodology and provides an overview of the policy choices. And in March 2021, DLCD conducted a review of the pilot methodology and submitted an evaluation of the methodology along with legislative recommendations.

Under subsequent direction from the Legislature (2021's House Bill 5006), OHCS and DLCD refined the methodology in 2022 to better account for specific functions and components and provided a Recommendations Report on how to implement the OHNA into Oregon's existing Land Use Planning System. For a detailed technical explanation of the OHNA methodology and changes recommended last year, see the technical appendix to the OHNA Recommendations Report.

In the 2023 Legislative Session, House Bills 2001 and 2889 codified the OHNA into law advancing these recommendations and directing OHCS, DLCD, and DAS to begin implementation. In addition, Senate Bill (SB) 406 required certain communities and any city in Tillamook County to plan for needed housing. In summer 2023, DLCD began rulemaking and implementation which will continue through June 30, 2026.

In the 2024 Legislative Session, House Bill 4063 was adopted which requires Metro counties to plan for the housing needs of Metro urban unincorporated lands (UULs) and directs DAS to include an allocation for each Metro county as part of the OHNA. Also in early 2024, OHCS and DAS began implementing the OHNA into their programs and systems.

The OHNA Legislative History can be summarized as follows:

- 2018: HB4006 Housing production reporting required
- 2019: HB2001 legalizes middle housing; HB2003 requires local housing production strategies; Pilot OHNA method
- 2020: OHCS pilots OHNA methodology and DLCD completes Housing Production Strategy Rulemaking
- 2021: HB5006 directs DLCD to create recommendations to implement the OHNA statewide
- 2022: HB5202 directs DLCD to manage Housing Capacity Work Group
- 2023: HB2001 and 2889 make the OHNA law and direct DAS, DLCD, and OHCS to implement it into programs; SB 406 required certain communities and any city in Tillamook County to plan for needed housing
- 2024: HB4063 requires Metro counties to plan for the housing needs of Metro urban unincorporated lands

Oregon Housing Needs Analysis Methodology

The OHNA Methodology focuses on the affordability and geographic distribution of newly produced housing, not the characteristics of the existing housing stock across the state. This is a methodological choice that has implications for policymaking and tracking the overall affordability of the entire housing stock. The Final Methodology incorporates multiple considerations to reflect different types of demand on current and future housing need. The OHNA Methodology has six steps:

1. Determine Regions
2. Determine Income Categories
3. Determine Components of Housing Need
4. Allocate Needed Housing to Income Categories
5. Allocate Needed Housing to Cities and UGBs
6. Set Housing Production Targets

Step 1: Determine Regions

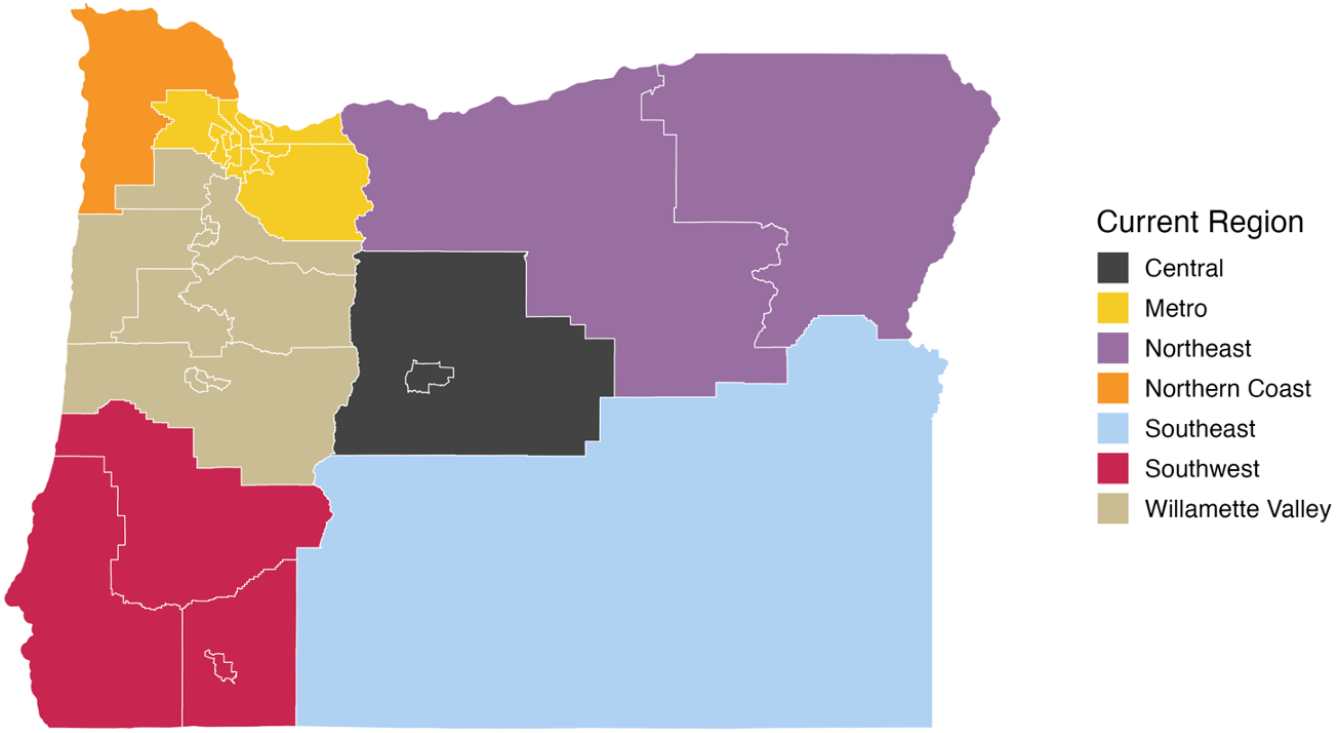
The first step in completing the OHNA is to define the regions for the analysis. The regions affect the entire analysis, from the ability to develop the analysis based on available data to the interpretation of the findings about regional housing needs for individual cities. Since each possible dataset that could be used to define regions has its own level of geographic specificity, choices about regions are integrally tied to choices about data.

Defining regions for this analysis required identifying the source of data that would be used throughout the analysis. The source of data needs to be consistently available statewide, available at an appropriate geographic level, updated annually, have acceptable margins of error for the variables of interest for the methodology, and be flexible enough to allow for comparisons necessary to deliver the analysis required by the statute. While the methodology is structured to account for limitations in available data, future iterations of the methodology could benefit from improvements in state access to data sources, such as a statewide parcel database of standardized assessor's data or a statewide rental registry that included information on costs and accessibility.

Regions

Figure 1 shows the regions in the OHNA Final Methodology. The OHNA regions are built from Census Public Use Microdata Areas (PUMA) regions using data from the 2022 vintage of data. PUMA regions shown in white outline, are aggregated up to the OHNA regions, shown in color. The U.S. Census Bureau updates PUMAs every 10 years following the Decennial Census; future changes to PUMA boundaries may affect the OHNA regions in the future.

Figure 1. OHNA Regions (PUMA boundaries denoted in white)



Step 2: Determine Income Categories

The second step is to define the income categories that are used to distribute needed housing across the income spectrum. The OHNA Methodology uses Area Median Income (AMI) limits that were stated in ORS 184.453(4):

(a) Less than 30%
(b) 30% or more and less than 60%
(c) 60% or more and less than 80%
(d) 80% or more and less than 120%
(e) 120% or more

These income categories align with common funding sources, including OHCS's programs, for subsidized affordable housing. It's important to note that the distribution of households in each income category is not equal.

The methodology uses regional incomes to allocate housing need to individual jurisdictions. This is an important change from prior Goal 10 planning requirements in which jurisdictions used their own city-level incomes to estimate housing need by income level. The effect of this change is that local governments will be required to plan for a share of the region's estimated housing needs by income, rather than locally estimating and planning for housing needs by income only within the boundaries of the local government.

Income categories translate into housing affordability. Income categories are expressed as a percent of AMI, which is determined by the U.S. Department of Housing and Urban Development (HUD) and takes into account household size and the number of bedrooms. A housing unit is determined to be affordable to a household if it accounts for less than 30% of that household's gross income.

Across the Final Methodology, all income categories are adjusted to account for household size. HUD provides regional AMIs based on a four-person household and provides guidance to allow practitioners to adjust for household size and number of bedrooms in a unit,[3] which is as follows:

Household Size Income Adjustment

- 1-person household: 70% of AMI
- 2-person household: 80% of AMI
- 3-person household: 90% of AMI
- 4-person household: 100% of AMI
- 5-person household: 108% of AMI

Apartment Unit Size Income Adjustment

- Studio unit: 70% of AMI
- 1-bedroom unit: 75% of AMI
- 2-bedroom unit: 90% of AMI
- 3-bedroom unit: 104% of AMI

Step 3: Determine Components of Need

The third step of the OHNA is to determine the different components of housing need. The OHNA is an estimate of total housing needed statewide over a 20-year horizon and includes housing units that are needed now to house the existing population (Current Need) as well as units needed in the future to accommodate household growth (Future Need).

- **Current Need** includes housing underproduction and housing units for people experiencing homelessness.
- **Future Need** includes units for expected population growth, expected housing units that will be lost to second and vacation homes, and units to accommodate expected demographic change.

By including an estimate of current housing need in planning requirements, the OHNA departs from historic Goal 10 planning requirements which only required jurisdictions to look forward at the 20-year population forecast. The Final Methodology recognizes that Oregon has been underbuilding housing for several decades and that a narrow focus solely on future population growth will not help communities relieve the pressures created in housing markets by low vacancy rates and high prices.

[3] Portland Housing Bureau Median Income Percentages 2024. https://www.portland.gov/phb/documents/2024-income-and-rent-limits-phb/download

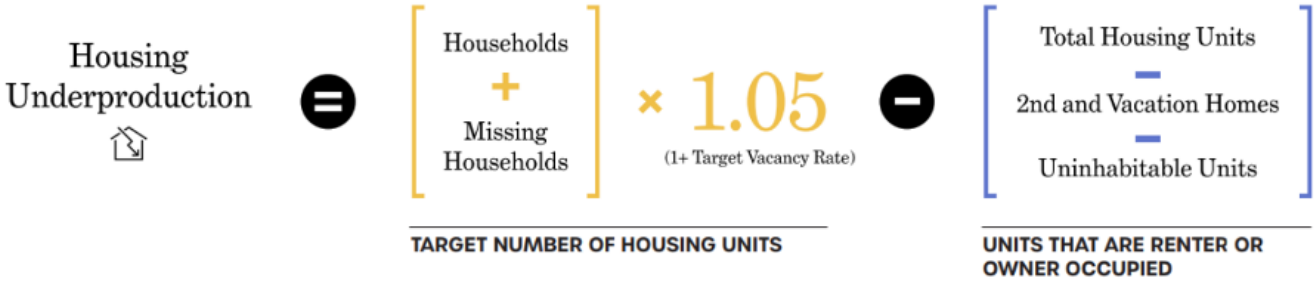
Current Need

The OHNA is an estimate of total housing needed statewide over a 20-year planning horizon, including an estimate of how many units the state, regions, and cities need currently to adequately house their existing populations. Current need takes into account housing underproduction and units needed for people experiencing homelessness.

Housing Underproduction

The Final Methodology adopts with some minor modifications of an approach used by Up for Growth, a housing policy research nonprofit in Washington, D.C., that has been vetted by housing industry experts.[4] This approach calculates the target number of housing units a region's market should have (demand) and compares that against the actual number of units that market has available for year-round occupancy (supply). These steps are broken down below. Regions where the demand exceeds supply are experiencing housing underproduction.

Figure 2. Up for Growth Housing Underproduction Methodology



Target Number of Housing Units

The estimate of the target number of housing units starts with the Census Bureau's estimate of total households and then estimates the number of "missing households" that have not formed in a market compared to historical formation rates in 2000.

Household formation is influenced by the housing stock available—when a market does not build sufficient housing, prices rise and vacancy falls, affecting the likelihood of households to form (e.g., roommates splitting up, children moving out, etc.). This measure estimates the number of households that are expected to form in less constrained housing market conditions, and as such are a component of current demand.

The Final Methodology calculates "missing households" based on changes in the headship rate (the percentage of people who are heads of households, or householders) for different age cohorts between 18 and 64. The lack of housing availability and affordability is not the only reason that explains reduced household formation rates, therefore including all age cohorts would be an overcount of household formation primarily caused by housing market

[4]Up for Growth, Housing Underproduction in the U.S. 2024. https://upforgrowth.org/apply-the-vision/housing-underproduction-reports/

constraints. Age cohorts are therefore limited to head of households between 18 and 64 as the most likely ages where this occurs—effectively excluding head of households over 65 is one way to limit the impact of the overcount. Limiting the age cohorts helps compensate for the nature of the overcount–essentially that housing isn't the only factor contributing to decreased household formation rates. The standard UFG approach limits age cohorts over the age of 44, the expansion of head of households to the age of 64 acknowledges circumstances unique to Oregon's housing market, and the fact that working households of all ages are experiencing the impacts of a constrained, underproduced housing market.

The OHNA Methodology uses a baseline headship rate in the year 2000 for all cohorts. This year was chosen because 2000 Decennial Census data offers the most recent statistically reliable estimate of a housing market that was more in balance. Headship rates were also generally stable between 1980 and 2000, so going back further would not have a large impact on the baseline headship rate. The Final Methodology compares the most recent headship rate (based on 2023 PUMS data) against the 2000 baseline for each age cohort. If a cohort has a lower headship rate in the most recent year compared to the baseline, it indicates that fewer households formed. The total estimate of "missing households" is the sum of reduced household formation from cohorts aged 64 years and younger. Should there be negative missing households (more households formed compared to the baseline rate) in any age cohort, they are netted out to zero because they are not contributing to excess demand beyond what is already captured in the households formed data observation.

The estimate of missing households is added to the current total number of households to approximate the total number of households that would be seeking housing in unconstrained market conditions. The model then applies a 5% target vacancy rate to estimate the total number of housing units a region should have to accommodate current need and have a healthy level of vacancy. Five percent vacancy is the 75th percentile of the national vacancy rate between 1980 and 2000 and is meant to represent unconstrained market conditions. It is backed by industry stakeholder outreach and research and is used in other methodologies of estimating housing need and underproduction.

Actual Units Available for Year-Round Occupancy

The estimate of the actual number of units available for year-round occupancy starts with the Census Bureau's estimate of total housing units and removes uninhabitable units and second and vacation homes that are not available for year-round occupancy from the stock. Uninhabitable units are identified in the Census PUMS data as those that lack indoor plumbing and complete kitchens, and that have been vacant for at least a year. Second and vacation homes are identified in the Census Bureau as those that are vacant and used for "seasonal or recreational purposes."

By removing uninhabitable units and second and vacation homes from the estimate of the current housing stock, the Final Methodology attempts to calculate each region's total housing stock available for year-round occupancy as a more accurate reflection of housing supply. When compared to the total number of households each region would have in unconstrained market conditions, the Final Methodology can capture current housing underproduction and incorporate current housing need into future planning purposes. This change pushes Oregon's

statewide housing planning system toward one that more accurately measures total housing need; planning for future housing need without accounting for current need will continue to yield insufficient housing production relative to demand across the state.

Housing Units Needed for People Experiencing Homelessness

DAS and OHCS engaged the Portland State University (PSU) Homeless Research and Action Collaborative (HRAC) to develop the methodology to estimate housing units needed for people experiencing homelessness. The HRAC methodology uses an annualized point in time count of unsheltered households, the number of households served in shelter over a year, and households doubled-up based on K-12 student data and U.S. Census data.

Determining the number of units a region needs to house people experiencing homelessness requires careful attention, because available datasets have many known limitations including undercounting populations. Populations experiencing homelessness are generally not captured in foundational datasets derived from the Census, so they are not included in the projections of current (or future) need. This methodological choice was made under the assumption that if jurisdictions can plan for current need as the sum of underproduction and housing for people experiencing homelessness, while planning for enough housing units to meet future need, then homelessness would become "functionally zero," and would be rare and brief.[5]

The Final Methodology relies heavily on the limited research available on this topic, as well as discussion and feedback from stakeholders with expertise in research and service provision for those experiencing homelessness in Oregon. The state continues to explore new research and better data to continually improve this portion of the OHNA methodology.[6]

The HRAC methodology combines portions of four data sets to better estimate the number of people experiencing homelessness in an OHNA region. The approach uses Continuum of Care (CoC) Point-In-Time Count (PITC) data and McKinney-Vento Student Data (MVSD) for children enrolled in K-12 public schools. It also utilizes CoC Homeless Management Information System (HMIS) data, By-Name Lists (BNL), and American Community Survey (ACS) data.

To calculate the number of households who need housing, the HRAC methodology combines:

- **Unsheltered data:** PITC unsheltered data that is annualized and converted to household numbers; or the household count from BNL across one year;
- **Sheltered data:** Households served in shelter over one calendar year, as recorded in HMIS; and,
- **Doubled-up data:** MVSD for doubled-up student households plus ACS doubled-up households without children enrolled in K-12 schools.

[5] Functional Zero Homelessness occurs "when the number of people experiencing homelessness at any time does not exceed the community's proven record of housing at least that many people in a month." https://community.solutions/built-for-zero/functional-zero

[6] Recommendations for improving data are included in Chapter 7 of the OHCS RHNA Technical Report and Appendix B describes the key analytical issues in estimating the amount of housing need to accommodate the population of people experiencing homelessness in Oregon

All data are converted to households (HH), and annualized when the data set is not an annual count. Each household is assumed to occupy one housing unit, thereby producing the estimate of the number of housing units needed. See Appendix C for a copy of the complete memo detailing the HRAC methodology.

Future Need

The OHNA is an estimate of total housing needed statewide over a 20-year planning horizon. Future need takes into account the housing units needed for population growth, housing units lost to second and vacation home demand, and housing units needed to accommodate demographic change.

Housing Units for Population Growth

To estimate 20-year future housing needs, forecasted population growth must be translated into future households and then translated into future needed housing units.

PSU's Population Research Center (PRC) produces the official population estimates for the State of Oregon with the exception of the Portland Metro Region.[7] The Final Methodology converts the PRC population forecast to households using the most recent regional average household size estimated with the most recent PUMS data.

As with past Goal 10 housing planning requirements, the OHNA Methodology excludes the estimate of people living in group quarters because they are not considered part of the household population, and their needs are planned for separately. Each region's base-year population estimates are reduced by the 2023 PUMS-derived share of population in group quarters, before converting population to households. For the horizon year forecasts, the model uses 2023 PUMS to calculate a group quarters rate by age cohort and apply it to regions' 2045 age cohort forecasts to arrive at an overall regional group quarters rate. Since most regions' forecast a greater share of older cohorts in 2045, the OHNA currently models slight increases in overall group quarter rates for all regions in the horizon year.

The loss of units to second and vacation homes in the future is calculated as a separate component of need (see next section), therefore the Final Methodology assumes that each future household will occupy one housing unit, while also planning for the target vacancy rate. Once total future needed housing units are determined, the Final Methodology applies the same 5% vacancy factor to estimate the future housing stock that cities and regions should plan for (see page 11).

Housing Units Lost to Second and Vacation Home Demand

Estimating second and vacation homes as its own component allows cities to better account for demand for these housing units in the future and improves the State's understanding of the

[7] Metro is responsible for issuing population forecasts within the Metro urban growth boundary, which serve as the basis for comprehensive and land use plans (see ORS 195.036). The Metro allocation methodology, outlined later in this document, is based on housing needs estimates for the Metro UGB in Metro's Urban Growth Report.

role that second and vacation homes play in each region's housing market. In many outdoor recreation- and tourist-heavy communities, particularly along the coast, in the Gorge, and in central Oregon, the presence of second and vacation homes removes units of the existing housing stock from year-round occupants at a different rate than in other parts of the state. This contributes to underproduction of needed housing by reducing the number of units available to full-time renters and owners, thereby decreasing vacancy rates and putting upward pressure on housing costs. As the stock of second and vacation homes grows in the future, it effectively takes away from housing production, as fewer units are available for year-round occupancy.

Summary of Process to Identify Second and Vacation Homes

1. Calculate change in the number of second and vacation homes per region
2. Determine how much housing is needed to offset this expected future loss in units
3. Apply the ratio to forecasted housing unit growth

The current share of second and vacation homes varies by region, as does the pace at which these shares are changing over time. First, the model calculates the change in the number of second and vacation homes for each region between the years 2000 and 2020. The growth in second and vacation homes is then contextualized by the number of all housing units added for each region between 2000 and 2020. The ratio of second and vacation homes added compared to the total housing production is calculated for each region. This ratio is effectively an approximation of how much additional production would be required to offset the loss in units to second and vacation home demand over the 20-year planning period. In practice, a jurisdiction could implement policies to reduce the growth of second and vacation homes or target the production of additional units to offset the loss of units available for year-round occupancy.

Example Calculation for Second and Vacation Home Demand

If a city produced 1,000 housing units between 2000 and 2020 but saw the number of second and vacation homes in the same time period grow from 100 to 200 units (either through new construction or conversion of an existing home), then it would have a ratio of 0.1 ((200-100)/1000). If this city was expected to grow by 2,500 households over twenty years, the additional production to account for units lost to second and vacation home need would be 0.1 * 2,500 or 250 units.

The Final Methodology only calculates second and vacation homes as part of determining future housing need. These units are no longer available for year-round occupancy, and as units are purpose-built or converted into second and vacation homes, the progress toward the desired number of units per household or target vacancy rate is lessened. Units identified as being currently occupied as second and vacation homes are captured as part of the underproduction calculation (current need).

Housing Units for Demographic Change

The number of housing units needed to account for demographic change helps to account for changing household demographic composition as the population of Oregon changes.

Like many states, Oregon is aging, and seniors typically have smaller household sizes; according to Census data, the average household size (persons per household, PPH) headed by a person aged 60 to 69 is only 1.9 people, compared to 2.9 people for households headed by a person aged 30-39. As population forecasts expect a larger share of the population to be 65 and older, and as the fertility rate continues to remain below replacement rate, more housing units will be needed to house Oregon's older total future population. An example below depicts how demographic change is handled in the model.

First, the Final Methodology uses PUMS data to calculate the current PPH for each major age cohort by region. It then joins the age cohort-based PPH figures to the 2025 and 2045 population forecasts by age cohort and then calculates a total PPH for each region for 2025 and 2045. Average household sizes for each region are forecast to be smaller due to changing demographics.

The PRC-forecasted populations in each region in 2025 and 2045 are then converted into households by dividing by the average household size in each region. This differs from the population change component, where the PPH is held constant between the baseline and horizon years (using 2025 PPH).

The final step in the process is to convert the added number of households in each region into needed housing units. Following the methodology for the other components, the Final Methodology also applies the target 5% vacancy factor to the estimated number of needed housing units in the future (see page 11).

Example Regional Demographic Change

1. $(Population_{2045} \div PPH_{2025}) - (Population_{2025} \div PPH_{2025})$ = Households added by Population Change
2. $(Population_{2045} \div PPH_{2045}) - (Population_{2025} \div PPH_{2025})$ – Households added by Population Change = Households added by Demographic Change
3. Households added by Demographic Change x 1.05 = Housing Units Needed to Account for Demographic Change

The demographic change component is effectively capturing the change in household size for existing households (starting in 2025) as well as the marginal new households added between 2025 and 2045. This is a deviation from other components in that it considers housing need for existing and future households. It is included in the future need category because it captures future demand for housing from existing households (rather than underproduction and homelessness, which are current demand).

Step 4: Allocate Needed Housing to Income Categories

Once total housing units needed are estimated for each component and each region, the next step is to distribute housing need to income categories. Allocation processes differ by component.

Current Need: Housing Underproduction

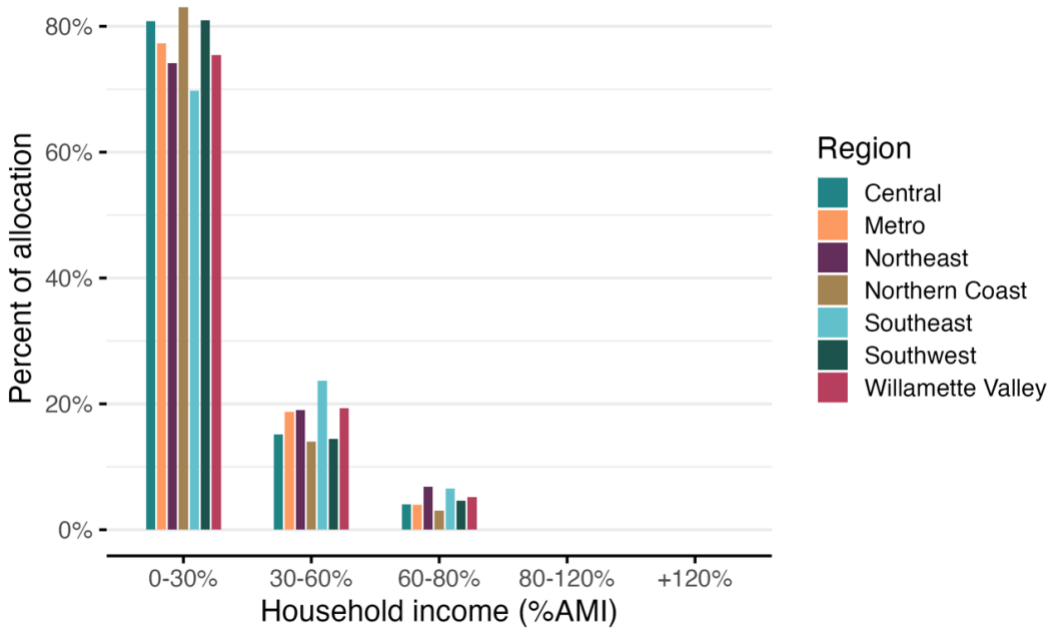
Underproduced units are allocated to income categories based on the rate of cost burdened renter households in each region. Cost burdening is a good proxy to estimate the income levels where current housing is in most need. Underproduction in a market leads to increased cost burdening by limiting choice and reducing overall affordability, and these impacts are most acutely experienced by lower-income renter households who have the highest rates of cost burdening. Underproduced units are therefore distributed proportionate to rates of regional cost burdening to approximate the income levels with the most acute need. For example, if 50% of all renter households who are cost burdened earn 0-30% of AMI, then 50% of the underproduction units should be targeted for households earning 0-30% of AMI. The model uses 2023 PUMS to first isolate cost-burdened renter households in each region, and from there, calculate the proportion of these cost-burdened households in each AMI household income bracket.

Current Need: Housing Units Needed for People Experiencing Homelessness

Housing units needed for people experiencing homelessness are distributed by income based on information provided from OHCS. There is no existing, high-quality dataset with information about the incomes of people who are experiencing homelessness, but many households that are experiencing homelessness have incomes and still cannot find a home that is affordable to them.

The Final Methodology uses data on the incomes of people experiencing homelessness from HMIS information managed by Continuums of Care. The data are from 2023 and are regional. Statewide, of households whose incomes are captured in the data, a large portion (77%) are in the lowest income category of 0-30% AMI. The regional distributions by income are shown in Figure 3.

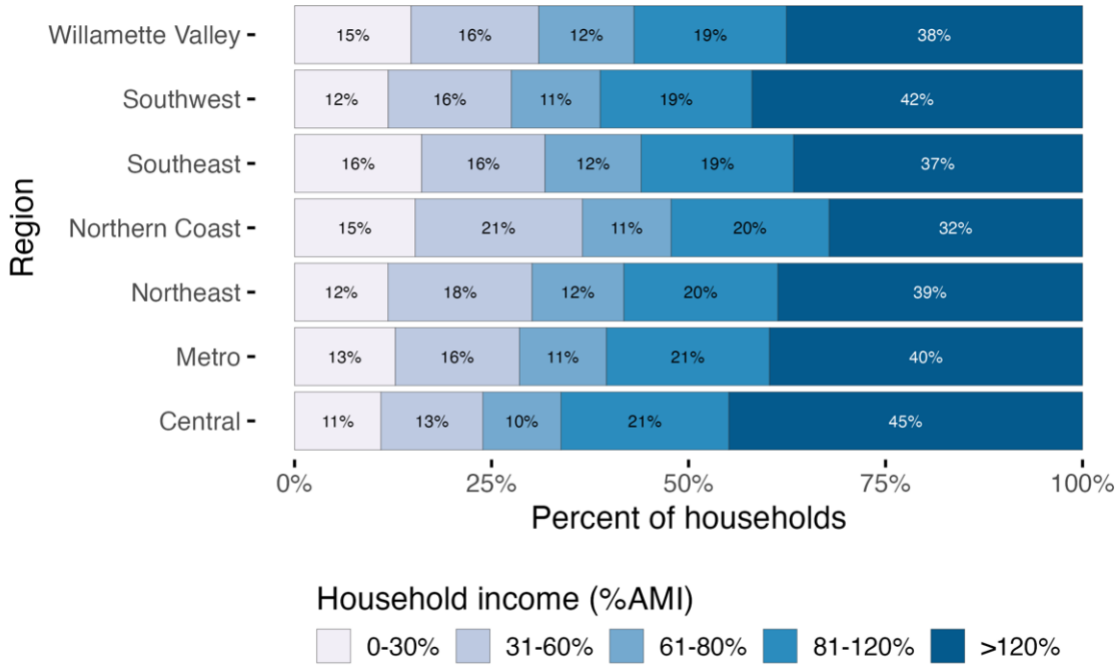
Figure 3. Income Distributions for Each OHNA Region for People Experiencing Homelessness, 2023



Future Need: Housing Units for Population Growth

Units needed to accommodate population growth are allocated based on each region's current income distribution. The state's income distribution and that of each region are shown in Figure 4 below.

Figure 4. Income Distributions for Oregon and Each OHNA Region, 2023



Future Need: Housing Units Lost to Second and Vacation Home Demand

PUMS data does not provide rent or valuation data for units identified as second and vacation homes, but data on the year built are available and are used as a proxy for valuation with the assumption that newer units are more expensive and should be allocated to the highest income categories. The OHNA methodology allocates units identified as second and vacation homes that were built prior to 1990 to the 80-120% AMI income category while those built after 1990 are allocated to the 120%+ AMI income category. This distribution was determined based on a PUMS analysis of regional patterns of affordability of occupied homes by year built.

Future Need: Housing Units Needed for Demographic Change

Given the similarities between units needed for population growth and units needed for demographic change, units needed for demographic changes are also allocated to income categories based on each region's income distribution.

Step 5: Allocate Needed Housing to Cities and UGBs

After the total housing units needed over 20 years is calculated, the fifth step in the methodology is to determine what needed housing should be allocated to areas inside or outside of Urban Growth Boundaries. The Portland Metro region has a different allocation methodology (see page 25). While the Salem-Keizer area has two cities within one UGB, PRC provides city-level population projections for both Salem and Keizer, preventing the need to create a separate allocation process for this UGB.

Step A. Determine Regional Need Inside vs. Outside UGBs

First, the 20-year future population growth outside of UGBs is determined for each region. This is based on PRC forecasts which report outside-UGB subtotals for every county. This step recognizes that not all Oregonians live inside UGBs, and not all Oregonians will live inside UGBs in the future. Lands outside a UGB receive a future housing estimate to reflect projected demand, but do not receive any current need allocations. Current need is a symptom of a lack of enough housing units within the planned areas of growth. Areas outside of UGBs are rural and resource lands and generally do not plan for housing growth under the statewide land use system; therefore, the responsibility for providing additional housing units to meet current need is accommodated inside of UGBs.

Second, units that accommodate population growth, demographic change, and demand for second and vacation homes outside UGBs are removed from the regional total. The remaining units are then allocated to UGBs inside the region.

Step B. Allocating Regional Need to Urban Growth Boundaries

Next, each component of need is allocated from the adjusted regional total (excluding areas outside of UGBs) to each of the UGBs in the region using a set of policy variables and weights in the following combinations. ORS 184.453 requires the methodology to allocate housing

need to each city in consideration of forecasted population growth, regional job distribution, and an equitable statewide distribution of housing. The allocation weights below operationalize this direction to align with the policy priorities set forth by the legislature, balancing where people currently live, where the PSU population forecasts expect people to live, and where the region's jobs are located. Second and vacation home allocations focus those housing units where the housing markets are most directly impacted today. Including an area's share of jobs as a weight in the allocation is a policy choice driven by Oregon's desire to create compact livable communities with access to jobs and amenities. Locating housing closer to jobs also helps support Oregon's climate and emissions reductions goals.

- **Housing Underproduction**
  - 50% from UGB's share of its region's current population
  - 50% from UGB's share of its region's current employment (derived from current Census Longitudinal Employer-Household Dynamics (LEHD) block-level counts of jobs within all geographies)
- **Housing Units for People Experiencing Homelessness**
  - 50% from UGB's share of its region's current population
  - 50% from UGB's share of its region's current employment
- **Housing Units for Population Growth**
  - 50% from UGB's share of its region's population growth
  - 50% from UGB's share of its region's current employment
- **Housing Units for Demographic Change**
  - 50% from UGB's share of its region's current population
  - 50% from UGB's share of its region's current employment
- **Housing Units Lost to Second and Vacation Home Demand**
  - 100% from UGB's share of its regions current second and vacation home stock (as determined by 2020 Decennial Census block-level counts of second and vacation homes spatially joined to UGB boundaries)

Step C. Distribute from Urban Growth Boundaries to Cities

This is only applicable in the Portland Metro UGB, which contains multiple jurisdictions (see page 25).

Step 6: Set Housing Production Targets

Once the total housing need is determined, the final (sixth) step of the methodology is to set targets for housing production. In early 2023, Governor Tina Kotek issued Executive Order 23-04 to establish an annual statewide housing production goal. Based on this policy objective and using the same formula as the Governor's housing production goal, the OHNA Final Methodology prioritizes and front-loads the current need over 10 years and spreads the future need over the 20-year OHNA planning horizon to calculate the annual production target. An example calculation of an annual production target is shown below using statewide total housing need. The same calculations apply for calculating the production targets for each city and each income level.

Example Annual Housing Production Target Calculation Using Statewide Results

See page 36 for more detail on the statewide results by component. See page 27 for a discussion of an alternative approach to estimating the statewide total housing need.

Total Need: 494,503 units
Current Need: 95,937 units
Future Need: 398,566 units

Annual Production Target:
[Current Need / 10 years] + [Future Need / 20 years]
[95,937 units / 10 years] + [398,566 units / 20 years]
= 9,594 units + 19,928 units
= 29,522 units per year

Changes Affecting the Annual Statewide Housing Production Target

In Executive Order 23-04, Governor Tina Kotek encouraged the state to produce 36,000 units per year. In the Final Methodology, the statewide annual production target is 29,522. The change is not due to Oregon producing more units, or from a different formula, it comes from changes to the methodology to calculate the total statewide housing need, and the underlying variables having changed in the four years since the Pilot Methodology was conducted.

Governor Kotek's statewide annual housing production target used an estimate of statewide housing need from the Pilot Methodology, which was produced in 2020. Page 4 describes the OHNA methodology iterations since the Pilot Methodology was completed. The following three categories represent the majority of the changes:

1. Methodological Changes. The OHNA Final Methodology adopted two new components compared to the Pilot: *Housing Units Lost to Second and Vacation Homes* and *Housing Need for Demographic Change*. In addition, the methodology changed how *Underproduction* and *Housing Units Needed for People Experiencing Homelessness* are estimated.
2. Data Updates: In addition, new data has been released since 2020. Page 40 outlines all the data sources in the OHNA Final Methodology and when they are updated.
3. Regions have Changed: In 2022, Census PUMA boundaries changed which impacted several of the regions, making comparisons from 2020 to 2024 challenging due to different regional boundaries. Page 7 describes the PUMA geographies that make up the OHNA regions and how boundary changes following the Decennial Census may cause further changes.

In order to produce annual targets for each jurisdiction that are more stable from year to year, DAS will run the OHNA Methodology each year and average the current year's results with the prior year's results. The intention with smoothing the data is to prevent OHNA targets from jumping around significantly from year to year due to data volatility, allowing local jurisdictions to have more consistent information for planning purposes. In this case the 2025 official results are the average of 2022 and 2023. The smoothing process will be challenging when PUMA boundaries change again in 2032, and a technical update may be required at that point in time.

Peer Cities

OHCS must produce a Housing Production Dashboard, which must include, for each city with a population of 10,000 or greater, "a comparative analysis of progress in comparison to the region and other local governments with similar market types" which are referred to as "peer cities."[8] DLCD must base referral decisions to the Housing Acceleration Program on a city's relative progress and performance towards housing production targets.[9] The following housing market attributes that indicate market similarity were used to group cities into peers:

1. Current population size (static)
2. Share of households with incomes >$200,000 (static)
3. Share of housing used as second and vacation homes (static)
4. Share of housing that is single unit detached (static)
5. Share of housing that is owner-occupied (static)
6. Population growth between 2010 and 2020 (percent change)

The methodology uses a statistical analysis called a K-Nearest Neighbor (KNN) to group each city with seven other peers based on their shared conditions across the seven variables listed above (see Figure 5 for the list of peers). The KNN algorithm uses place-level ACS and Decennial Census population estimates data as inputs, and each input is equally weighted. This approach allows for each city to be compared to its seven "closest" peers. This approach offers several advantages including a consistent number of peer cities, and for each city to be grouped with its best fitting peers.

KNN calculates a matrix of Euclidean distances between each pair of cities (the square root of the sum of squared differences for every variable). Some city pairs are socioeconomically and demographically "closer," or more similar to each other than others. As Euclidean distance increases, the potential fit as a peer decreases. A common rule of thumb for KNN is to limit neighbor groupings to the square root of the total number of samples in the set. In this case, the KNN model contains 58 cities (and Tillamook County) that have a population over 10,000 in Oregon, indicating that 7 nearest neighbors is the optimal number for the OHNA application.

[8] "City" is used as shorthand for the jurisdictions that will receive peers. See ORS 456.601(3)b: https://www.oregonlegislature.gov/bills_laws/ors/ors456.html
[9] See ORS 197A.130: https://www.oregonlegislature.gov/bills_laws/ors/ors197A.html

Not every local government defined as a "city with a population of 10,000 or greater" can be readily paired with market peers utilizing this methodology. This includes:

- Urban unincorporated lands within Metro counties: The peer methodology omits these local governments because they are non-standard and not reflected in any Census geographic unit. The closes approximation would be to use aggregation of census tracts, but these cross into other incorporated cities.
- Cities and specified unincorporated communities within the Tillamook County: While SB 406 (2023) defines these communities as "cities with a population of 10,000 or greater" for the purpose of housing planning, they are not large enough to have suitable Census data to be included in the peer methodology and are therefore grouped together.

Figure 5. Peer Cities List

City	Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Peer 7
Albany	Keizer	McMinnville	Medford	Grants Pass	Hermiston	Forest Grove	Woodburn
Ashland	Astoria	Pendleton	Klamath Falls	Newberg	North Bend	Newport	Tualatin
Astoria	Ashland	Pendleton	Klamath Falls	Roseburg	North Bend	The Dalles	Newport
Baker City	Sweet Home	North Bend	Central Point	Pendleton	Milwaukie	St. Helens	The Dalles
Beaverton	Hillsboro	Gresham	Eugene	Corvallis	Tualatin	Salem	Tigard
Bend	Oregon City	Newberg	Tigard	Redmond	Medford	Grants Pass	Forest Grove
Canby	Dallas	Oregon City	Gladstone	Central Point	Silverton	Newberg	Woodburn
Central Point	Dallas	Silverton	St. Helens	Woodburn	Oregon City	Keizer	Cornelius
Coos Bay	Pendleton	La Grande	Ontario	Springfield	Newport	McMinnville	Klamath Falls
Cornelius	Central Point	Troutdale	St. Helens	Dallas	Gladstone	Canby	Sandy
Corvallis	Beaverton	Eugene	Hillsboro	Monmouth	Gresham	Fairview	Tualatin
Cottage Grove	St. Helens	Woodburn	Prineville	Hermiston	Sweet Home	Dallas	Independence
Dallas	Woodburn	Central Point	Canby	St. Helens	Hermiston	Silverton	Oregon City
Eugene	Salem	Gresham	Hillsboro	Beaverton	Corvallis	Medford	Springfield
Fairview	Wilsonville	Lebanon	Independence	Tualatin	Monmouth	Hermiston	Corvallis
Forest Grove	Newberg	Molalla	The Dalles	Albany	Silverton	Hermiston	Keizer
Gladstone	Troutdale	Canby	Milwaukie	Central Point	Cornelius	Silverton	Oregon City
Grants Pass	Roseburg	The Dalles	Medford	Albany	Keizer	Silverton	McMinnville
Gresham	Salem	Eugene	Beaverton	Medford	Hillsboro	Springfield	Albany
Happy Valley	Sandy	Sherwood	West Linn	Oregon City	Lake Oswego	Canby	Bend
Hermiston	Independence	Lebanon	Woodburn	Albany	Dallas	Prineville	Forest Grove

City	Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Peer 7
Hillsboro	Beaverton	Eugene	Gresham	Salem	Tualatin	Corvallis	Tigard
Independence	Hermiston	Lebanon	Dallas	Silverton	Woodburn	Forest Grove	Prineville
Keizer	McMinnville	Albany	Woodburn	Newberg	Central Point	Milwaukie	Grants Pass
Klamath Falls	Pendleton	Astoria	Roseburg	Grants Pass	Ashland	Monmouth	Springfield
La Grande	Coos Bay	Pendleton	Ontario	Klamath Falls	Springfield	Milwaukie	Newport
Lake Oswego	Tigard	Sherwood	Newberg	Oregon City	Tualatin	West Linn	Canby
Lebanon	Independence	Hermiston	Albany	Roseburg	Forest Grove	Prineville	Fairview
Lincoln City	Tillamook County	Astoria	Molalla	The Dalles	Newport	Ashland	North Bend
McMinnville	Keizer	Albany	Milwaukie	Newberg	Woodburn	Silverton	Grants Pass
Medford	Albany	Grants Pass	Salem	Gresham	Keizer	McMinnville	Springfield
Milwaukie	North Bend	McMinnville	Keizer	Silverton	Pendleton	Gladstone	Central Point
Molalla	The Dalles	Prineville	Forest Grove	Silverton	Redmond	Newberg	Roseburg
Monmouth	Klamath Falls	Astoria	Lebanon	Corvallis	Ashland	Roseburg	Fairview
Newberg	Forest Grove	Silverton	The Dalles	Keizer	Oregon City	McMinnville	Central Point
Newport	Astoria	Ashland	Pendleton	Coos Bay	McMinnville	North Bend	Newberg
North Bend	Milwaukie	Silverton	Newberg	The Dalles	Central Point	Pendleton	Grants Pass
Ontario	Springfield	Independence	Lebanon	Pendleton	McMinnville	Hermiston	Klamath Falls
Oregon City	Canby	Central Point	Newberg	Silverton	Dallas	Keizer	Forest Grove
Pendleton	Klamath Falls	Astoria	Roseburg	Milwaukie	McMinnville	Ashland	North Bend
Portland	Eugene	Salem	Gresham	Hillsboro	Beaverton	Medford	Bend
Prineville	The Dalles	Roseburg	Molalla	Sweet Home	Silverton	Cottage Grove	Hermiston
Redmond	The Dalles	Molalla	Grants Pass	Central Point	Prineville	Oregon City	Silverton
Roseburg	Grants Pass	Prineville	The Dalles	Pendleton	Albany	McMinnville	Klamath Falls
St. Helens	Woodburn	Cottage Grove	Dallas	Central Point	Troutdale	Silverton	Keizer
Salem	Eugene	Gresham	Medford	Hillsboro	Albany	Beaverton	Springfield
Sandy	Cornelius	Dallas	Oregon City	Central Point	Canby	Sherwood	Redmond
Sherwood	West Linn	Oregon City	Lake Oswego	Cornelius	Central Point	Canby	Sandy
Silverton	The Dalles	Newberg	North Bend	Central Point	Molalla	Milwaukie	Keizer
Springfield	McMinnville	Albany	Medford	Roseburg	Gresham	Pendleton	Keizer

City	Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Peer 7
Sweet Home	Prineville	Cottage Grove	Roseburg	The Dalles	Baker City	St. Helens	Redmond
The Dalles	Molalla	Silverton	Prineville	Grants Pass	Newberg	Roseburg	Forest Grove
Tigard	Tualatin	Newberg	Oregon City	Canby	Forest Grove	Lake Oswego	Keizer
Troutdale	Gladstone	St. Helens	Woodburn	Cornelius	Central Point	Milwaukie	Keizer
Tualatin	Tigard	Beaverton	Hillsboro	Ashland	Gresham	Newberg	Fairview
West Linn	Sherwood	Lake Oswego	Cornelius	Happy Valley	Oregon City	Sandy	Central Point
Wilsonville	Fairview	Hillsboro	Tualatin	Beaverton	Corvallis	Forest Grove	Monmouth
Woodburn	St. Helens	Dallas	Keizer	Central Point	Hermiston	McMinnville	Cottage Grove
Tillamook County	Lincoln City	Baker City	Newport	North Bend	Redmond	Sweet Home	Astoria

Updating the Methodology

After the OHNA methodology produces the first official needs estimates and production targets in 2025, DAS plans to revisit the methodology at least every five years. The law also allows OHCS and DLCD to recommend changes to the OHNA Methodology, provided that the agencies provide an opportunity for written and oral testimony on proposed recommendations.

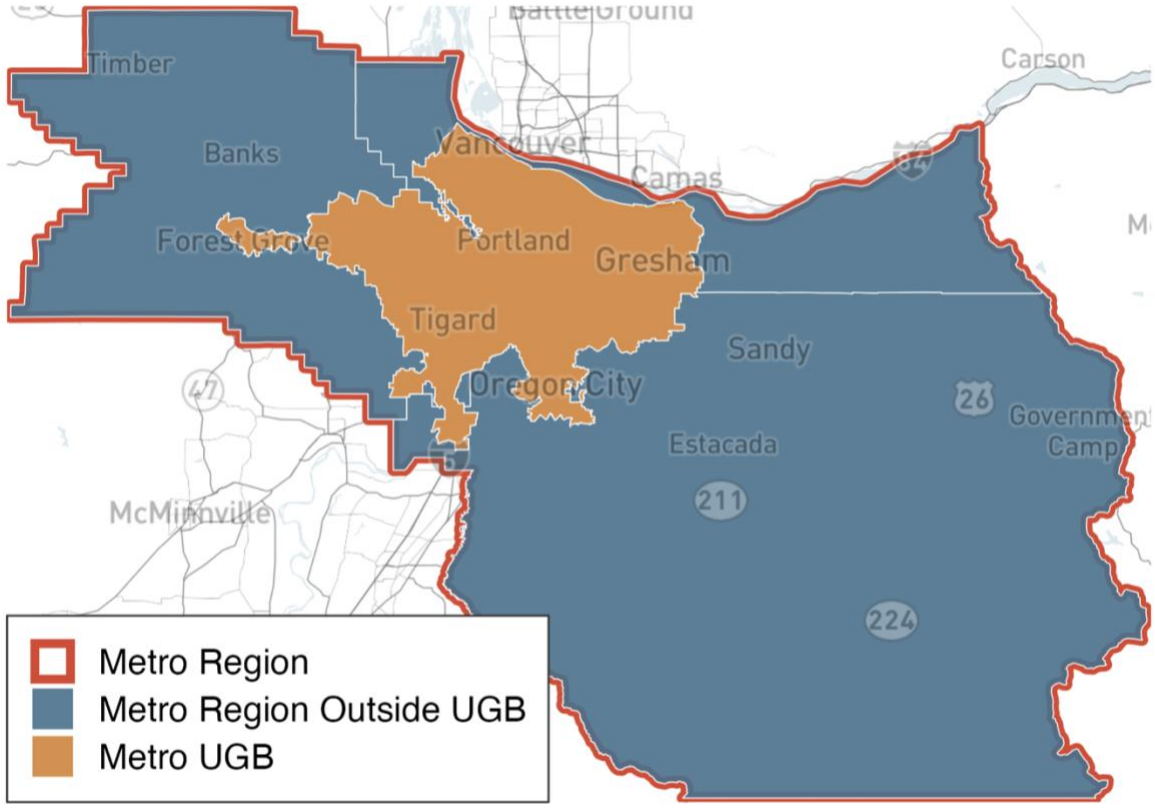
Portland Metro Region

The law codifying the OHNA into the statewide land use planning system treats the Portland Metro UGB differently from the rest of the state. Under HB2889 (2023) Metro maintains its statutory responsibility to estimate the region's housing need within the Metro UGB, while DAS is made responsible for allocating that need to Metro cities and urban, unincorporated lands (UULs).[10]

OHNA Metro UGB Suballocation Methodology Steps

In the OHNA methodology, every region, except for the Portland Metro Region uses a top-down estimation of need, followed by a local jurisdiction allocation process for all UGB's and non-UGB areas within the region. The Portland Metro Region is composed of Multnomah, Washington, and Clackamas counties. The Metro UGB is the growth boundary sitting inside the three counties, determined by Metro to separate urban and urbanizable land from rural land.

Figure 6. Map of OHNA Metro Region (Three Counties), Metro Region Outside UGB, and Metro UGB Areas



The OHNA methodology estimates the Portland Metro Region's total housing need (areas in red outline in Figure 6) in the same manner as all other regions in the state, but then swaps in Metro's own estimate of current and future housing need from its Urban Growth Report

[10]See ORS 184.453(3)(e) which requires DAS to consider Metro's projected housing needs and ORS 197A.348(2) which requires Metro to project housing need for the components of need that are included in the OHNA.

(UGR)[11] for the units needed inside the Metro UGB (areas in orange in Figure 6). The estimates of housing units needed in the Metro Region Outside UGB area (the blue remainder in Figure 6) are held constant so any changes related to a control total inside the Metro UGB do not impact the need in the rest of the region.

Step A: Determining Need for Metro UGB

The OHNA uses Metro's estimate of current and future housing need from its 2024 adopted UGR for the units needed inside the Metro UGB.

Planning for housing need inside the Metro UGB is determined separately from the rest of the OHNA Metro Region. The OHNA Metro Region's current and future need is calculated in the same manner as all other regions. However, within the OHNA Metro Region future and current need is allocated to UGBs using an amended methodology different from all other regions.

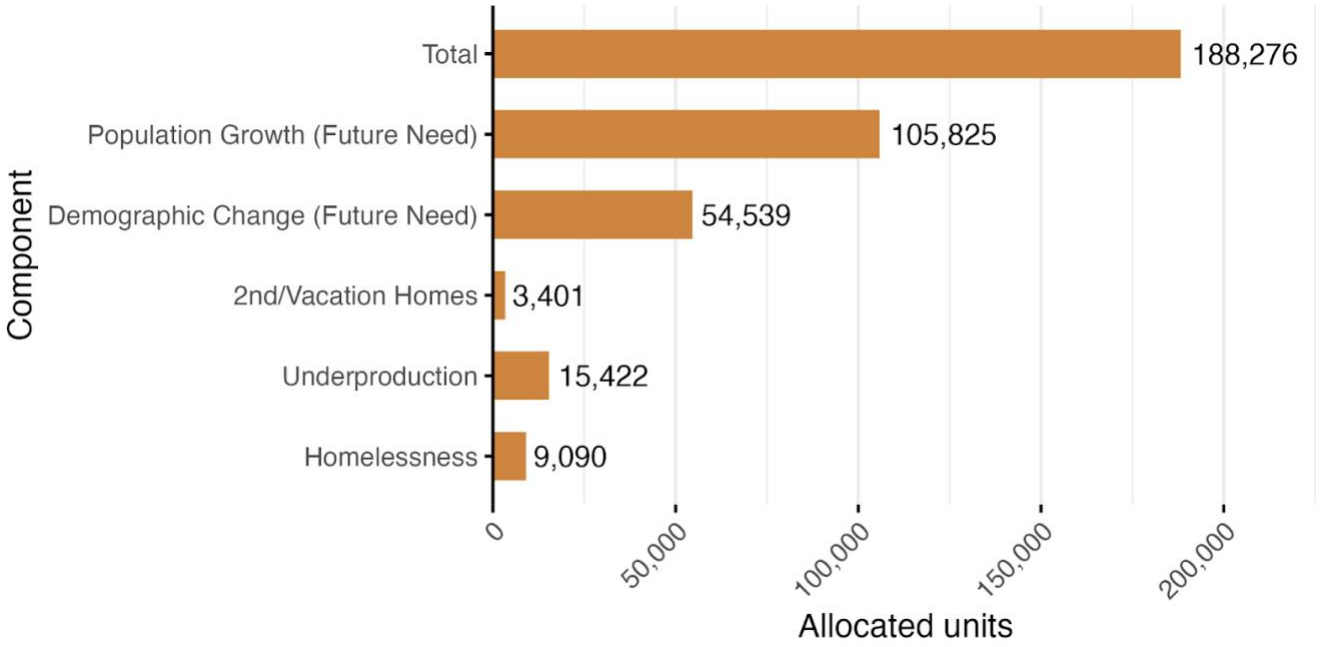
Current and future need is first determined for the Metro Region Outside UGB Areas (including the cities of Sandy, Estacada, Canby, Molalla, Barlow, Gaston, Banks, and North Plains), and the county areas outside of all UGBs separately. Then the estimate of current and future need within the Metro UGB is determined using Metro's adopted UGR, which includes an estimate of total future need from "household growth" (population growth and demographic change combined) along with estimates of need for underproduction, second and vacation homes, and units to address homelessness.

To align the Metro UGB need with the rest of OHNA, the UGR-calculated "household growth" need is split into population growth and demographic change components, and across household income brackets using the pre-existing distributions from the rest of the OHNA Metro Region. The rest of the Metro UGR-calculated components are swapped into the model for the Metro UGB as-is and allocated along the same regional income distributions.

Oregon statute requires that Metro must coordinate its regional forecasts with governments within the UGB. These growth forecast distributions are used to update land use and transportation plans, regulations and related policies. Metro typically completes its distributed forecast within one to two years after adopting the regional forecast in the UGR. Once available, the distributed forecast will be substituted in place of housing capacity when determining subsequent housing need allocations within the Metro UGB.

[11] See Metro's Urban Growth Report here: https://www.oregonmetro.gov/public-projects/2024-growth-management-decision/

Figure 7. Distribution by Component of Need for OHNA Metro Region, 2025



Step A Alternative: Scenario of Total Statewide Housing Needs with OHNA-Metro UGR Methodology Alignment

As noted on page 25, House Bill 2889 (2023) retains Metro's statutory responsibility to estimate housing need within the Metro UGB. Metro has discretion on the data sources and specific methods used in the UGR to estimate housing need, but the policy intent is for the UGR methodology to align with OHNA methodology.

Metro updates its UGR every 6-years, with 2024 being the most recent update year. Metro began the update process in early 2024 and adopted the UGR on December 5, 2024. Due to timeline discontinuity between the OHNA methodology development process and Metro's process, the underlying methods and data sources used to estimate housing need within the Metro UGB differ from OHNA. This discontinuity primarily affects the estimate of regional housing need but also has some feedback loops into local allocation process. This discontinuity could be reconciled if Metro were to update its UGR methodology to align with the OHNA and/or produce an updated calculation of need on or before the 6-year update schedule.

A comparison is shown below demonstrating the difference in the estimate of total OHNA Metro Region housing need had Metro's UGR incorporated the OHNA methodology and sources. A summary discussion of the major differences between methods is also included below.

Figure 8. Comparison of Metro UGB Allocation by Component

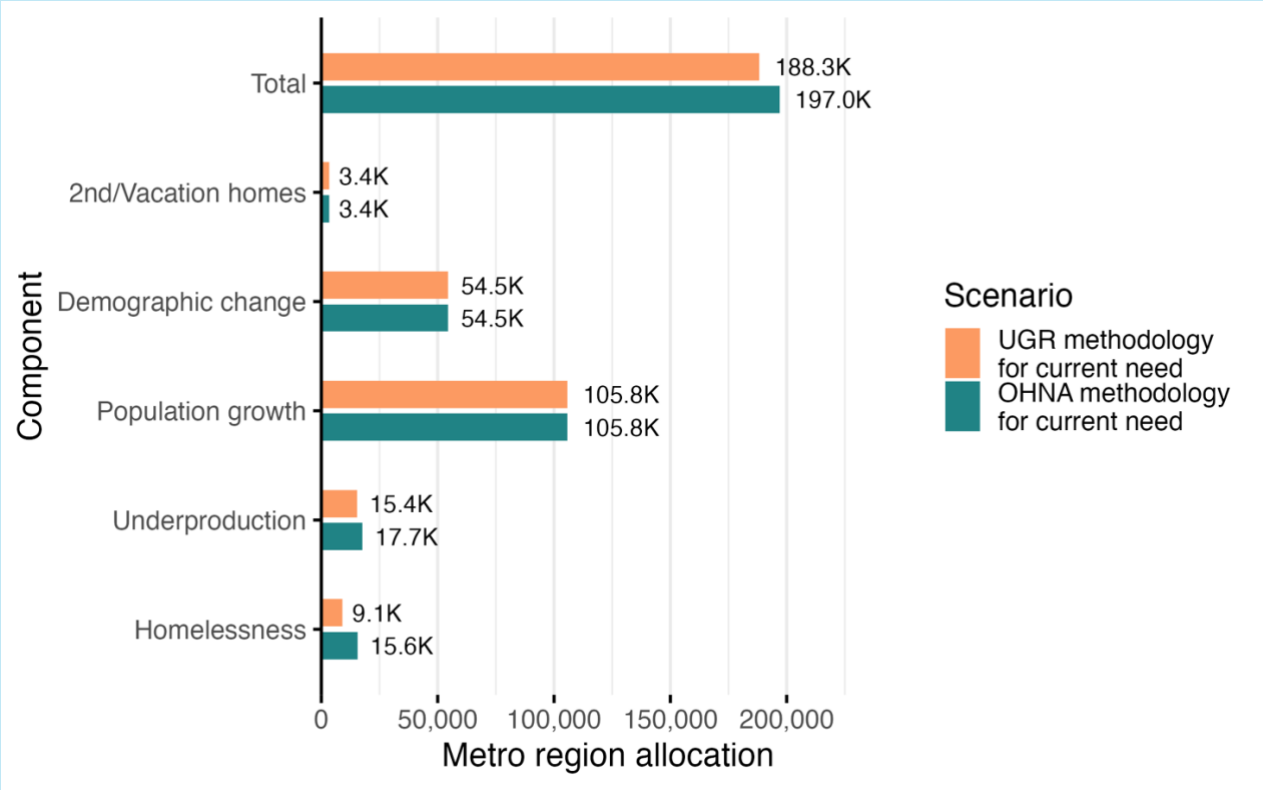
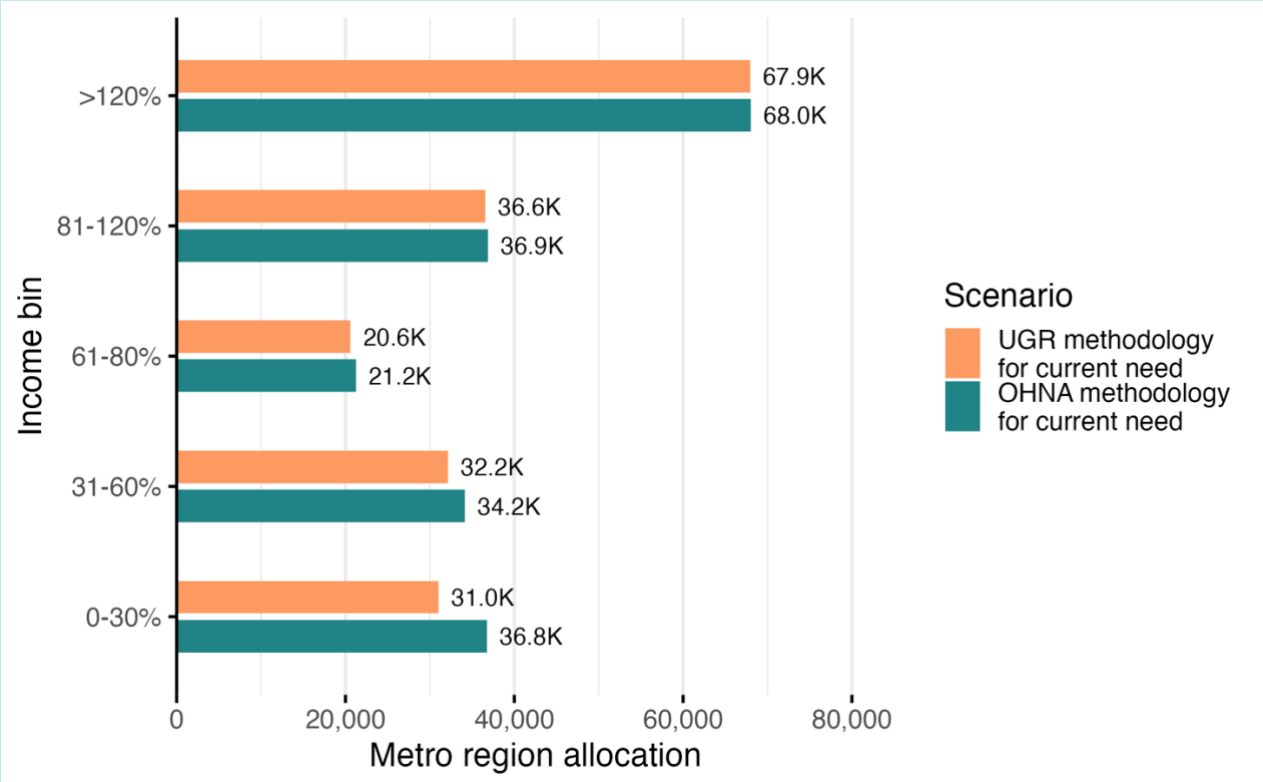


Figure 9. Comparison of Metro UGB Allocation by Income Level



Statewide Results

Had Metro's UGR estimate of regional housing need incorporated the OHNA Methodology for the calculation of current need, the estimate of total statewide housing need would have been 503,000 units instead of 494,503 and the annual statewide housing production target would have been 30,400 in 2025 instead of 29,522 (see page 19 for the discussion of statewide housing production targets).

Differences Between Methods

The two largest differences between the OHNA Methodology and the Metro UGR methodology are in how to estimate *Underproduction*, and how to estimate *Units Needed for People Experiencing Homelessness*. Given the income distributions of these two components, nearly the entire difference between the two methods is contained within the 0-80% AMI household income range.

Underproduction

As described on page 10, the OHNA Final Methodology estimates the "missing households" component of housing underproduction based on changes in the headship rate (the percentage of people who are heads of households, or householders) for different age cohorts between 18 and 64. In addition, the Final Methodology uses 2023 PUMS 1-year data to calculate underproduction, averaging it with results from 2022 PUMS 1-year data to create the final "smoothed" targets (see page 21 for a description of "smoothing"). These changes occurred between the Draft Methodology, published in September 2024, and this Final Methodology.

Metro's UGR methodology estimates the "missing households" using the prior age cohort range of 18 to 44 and uses 2022 PUMS data to estimate housing underproduction. The update to OHNA and the release of the latest vintage of census data occurred after Metro had submitted its draft UGR. The result is 2,250 fewer units of underproduction using the Metro UGR methodology than if the OHNA Final Methodology had been used.

Units for People Experiencing Homelessness

As described on page 12, the OHNA Final Methodology uses an approach created by the PSU Homeless Research and Action Collaborative (HRAC) to estimate the number of units needed for people experiencing homelessness. This approach includes new ways to annualize the sheltered and unsheltered data, introduces new local data, and adjusts the methodology to estimate the doubled-up population. This approach was finalized in November 2024 (see Appendix C on page 47 for the final methodology memo from HRAC).

Metro's UGR methodology estimates the number of units needed for people experiencing homelessness using the previous OHNA Methodology. The update to the OHNA Final Methodology occurred after Metro had submitted its draft UGR. The result is 6,556 fewer units needed for people experiencing homelessness using the Metro UGR methodology compared to the OHNA Final Methodology.

Step B: Allocation of Need from UGBs to Cities and Urban Unincorporated Lands (UULs)

As noted on page 25, House Bill 2889 (2023) maintains Metro's statutory responsibility to estimate the region's housing need within the Metro UGB, while giving DAS the responsibility to allocate that need to Metro cities and urban, unincorporated lands (UULs).

The allocation of future and current housing need to the cities and UULs within the OHNA Metro Region but outside the Metro UGB (the blue areas in Figure 6 on page 25) mirrors the methodology used in all other OHNA regions of the state.

The allocation of future and current housing need to cities and UULs within the Metro UGB uses a different allocation methodology that is unique to the Metro UGB. This approach reflects the fact that the area inside the Metro UGB functions as a single housing market with many different jurisdictions; the Metro UGB also has access to more robust data that allows for more nuanced indicators. Unique elements of the allocation methodology for the Metro UGB include a more refined approach to capturing access to jobs, and an approach that takes existing housing affordability and recent housing production into consideration when allocating existing, unmet housing needs. Each component of the methodology is allocated using the following indicators and weights:

Units Needed for Underproduction and for People Experiencing Homelessness:

- **Production:** 50% from the city's rate of housing unit production relative to the UGB-wide average as calculated from the Regional Land Information System (RLIS) parcel-based housing layer, which provides unit counts and year built for parcels. Units built within the last five years of the model "run-year" (the year corresponding to the model's PUMS data inputs) are calculated as a share of total units within each jurisdiction and UUL (**Inverse weight** – see comments on Inverse Weighting on page 35).
- **Affordability:** 50% from the percentage of a city's housing units that are rental 0-50% AMI units, relative to the UGB-wide average, using the most recent vintage of the CHAS 5-year data (**Inverse weight**). Urban unincorporated lands within the UGB have their affordability level calculated using tract-level CHAS data for tracts with at least 30% of their area in the UUL. CHAS is more out-of-date compared to the ACS/PUMS products, so the model corrects for this by applying the affordability rate from CHAS to the more recent unit counts calculated with RLIS's Housing Layer.

Future need is allocated to cities (including the unincorporated urbanizable areas for which they have planning authority based on intergovernmental agreements) and UULs using the following indicators and weights:

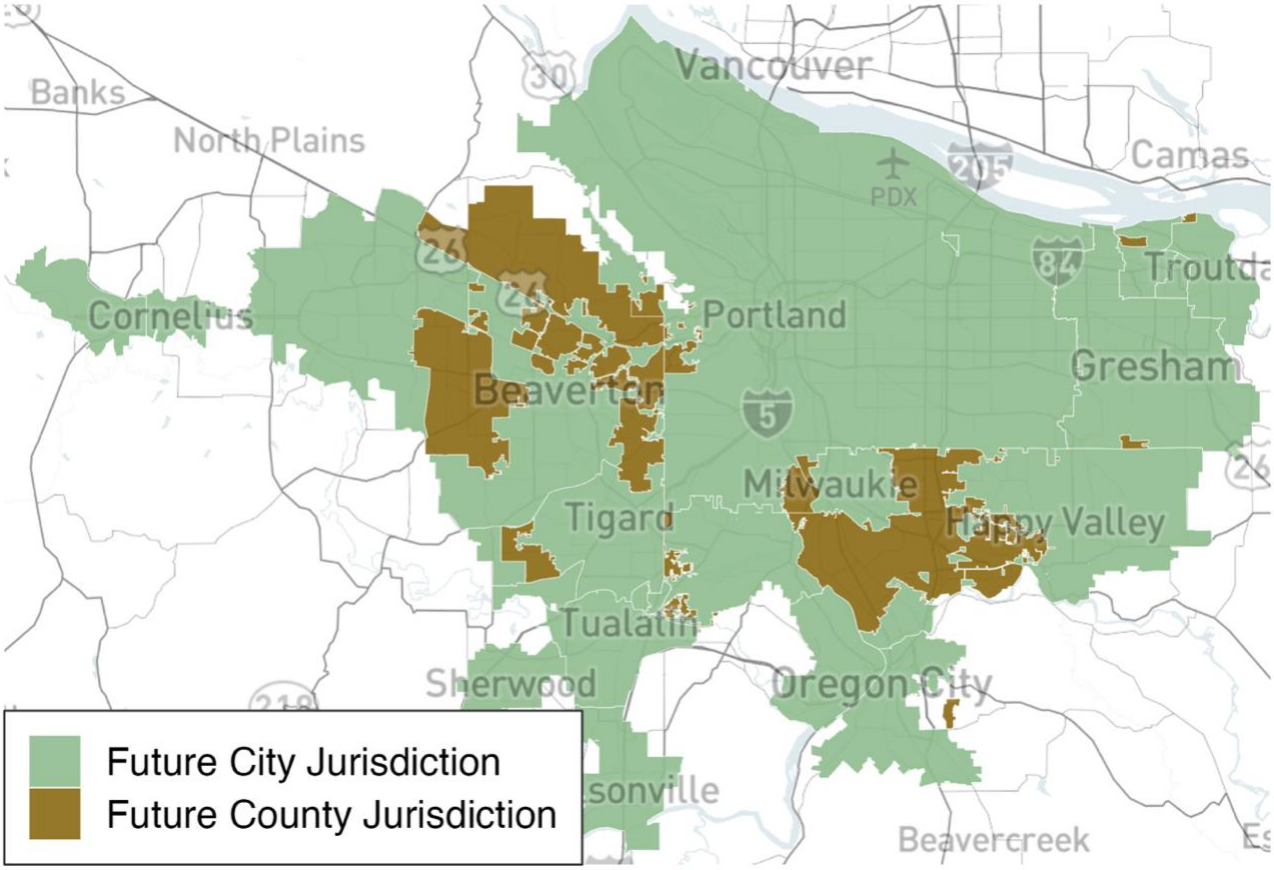
Units Needed to Accommodate Population Growth:

- **Residential capacity**: 33% from the city's share of jurisdictional residential capacity, as calculated with Metro's UGR process, wherein capacity in Metro's unincorporated

urbanizable areas has been assigned to their future responsible jurisdictions as shown in Figure 10.[12]

- **Jobs access:** 33% from the city's share of UGB employed residents who live within areas with adequate transit or walking access to jobs, as calculated with TriMet and SMART's most recent transit schedule data and OpenStreetMap street grid data (see comments on Measuring Jobs Access on page 32)
- **Forecasted job growth:** 33% from the city's share of all forecasted jobs to be added between 2020 and 2050, based on Metro's UGR modeling. This metric uses Metro's TAZ-level job forecasts, which are then assigned to cities using a Metro-provided map of expected future jurisdictional responsibilities (see Figure 11 on page 34).

Figure 10. Future Metro UGB Jurisdictional Responsibility



[12] The allocation is required to incorporate population forecasts under ORS 195.033 and 195.036. Under these statutes, only Metro is authorized to create population projections for cities within the Metro UGB for use in comprehensive planning. Because Metro's distributed forecast won't be published until 2025 and given the relatively close statistical relationship between modeled residential capacity and expected population growth, residential capacity is used as a proxy for the forecast in the initial run of the methodology. In the future, once Metro's distributed forecast is adopted, it will be substituted in as the source for this component of the allocation.

Units needed to accommodate demographic change:

- **Current population:** 33% from the city's share of current (baseline) population, as calculated with 2020 block-level Decennial Census data. The choice to use Decennial Census is driven by the need to allocate population to the complex UUL boundaries as well as cities, which can only be done with granular geographies like census blocks
- **Jobs access:** 33% from the city's share of UGB employed residents who live within areas with adequate transit or walking access to jobs, as calculated with TriMet and SMART's most recent transit schedule data and OpenStreetMap street grid data (see below).
- **Residential capacity:** 33% from the city's share of jurisdictional residential capacity, as calculated with Metro's UGR process, wherein capacity in Metro's unincorporated urbanizable areas has been assigned to their future responsible jurisdictions.

Units lost to second and vacation homes:

- **Second and vacation homes:** 100% from the city's share of all current UGB second and vacation homes as calculated with 2020 Decennial Census place-level counts

Measuring Jobs Access

One of the weights used to allocate units for population growth to Metro cities is a measurement of transit access to jobs. The approach uses current TriMet and SMART's schedule data, OpenStreetMap street grid data, and open-source trip-routing software to plot transit and walking trips from every Transit Analysis Zone (TAZ) in the Metro UGB to every other TAZ in the Metro UGB.

Walk and transit access was chosen specifically to be most applicable to all households, regardless of income and access to private vehicles as a mode of transportation. Joining this with Longitudinal Employer-Household Dynamics (LEHD) job location data spatially allocated to the TAZs, the model calculates the number of jobs reachable by transit within a 60-minute journey, mid-week, at 8:00 AM. The UGBs' TAZs are rank ordered by job access, and a threshold is set at the 10^{th} percentile to denote "transit access" zones. Each TAZ is assigned to a city based on Metro's TAZ planning jurisdiction shapefile, and where this information is missing, it is assigned based on which city has the largest overlap with any given TAZ. The number of employed residents living in these "transit access TAZs" is calculated for each jurisdiction, and the jurisdiction's share of the UGB's total is used as the final weight.

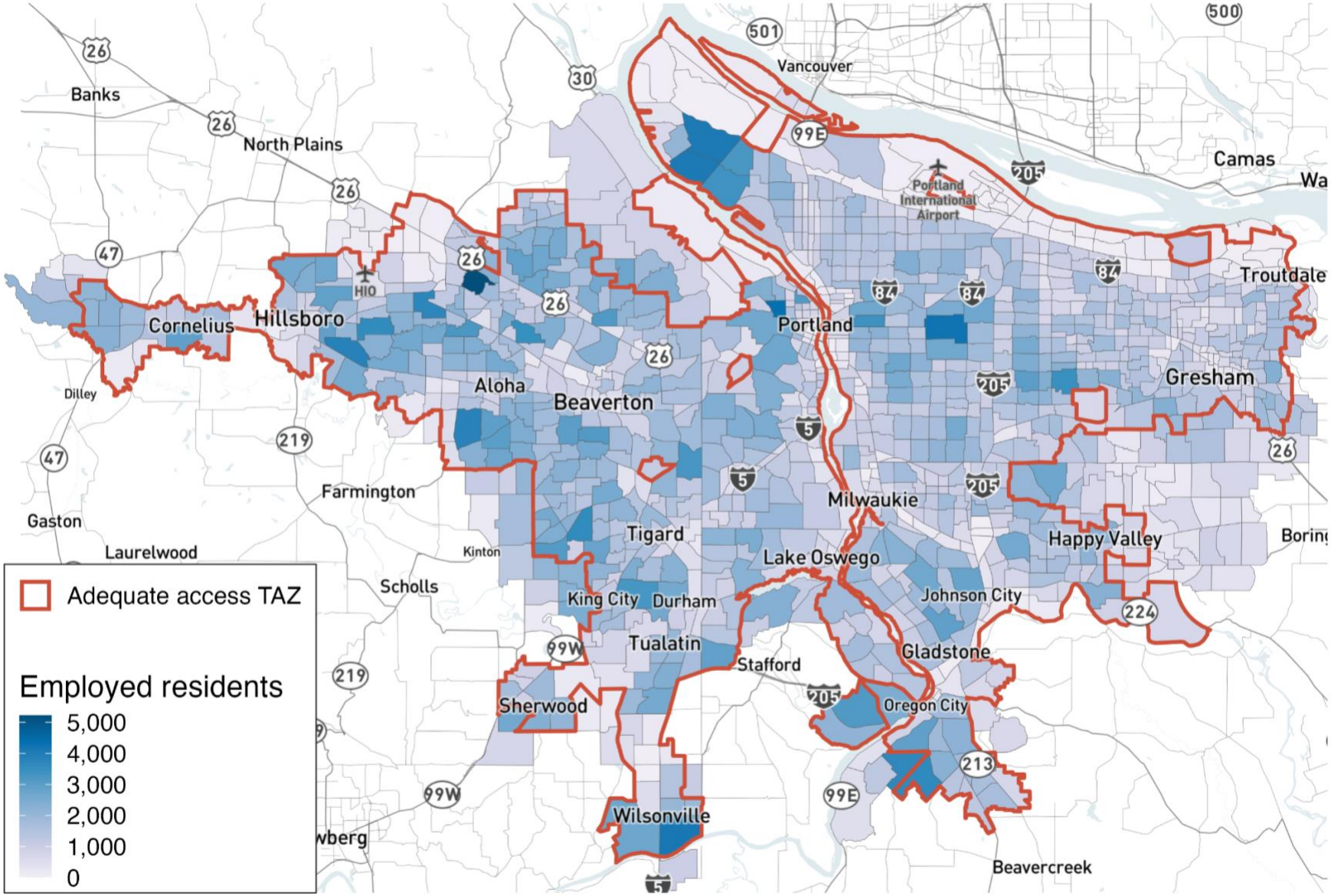
In the interest of maintaining accurate assessments of transit access, future iterations of the OHNA model will incorporate the most up-to-date TAZ-level jobs totals, transit schedules, and OpenStreetMap data.

Measuring Job Growth

Similar to the transit allocation component, the methodology incorporates forecasted job growth to operationalize the statutory direction to incorporate access/proximity to jobs as part of the allocation. This component has the effect of allocating more housing where future job growth is projected to occur. This data set is provided by Metro from their housing and transportation modeling processes, based on TAZ geographies, with job total forecasts for

2020 and 2050 included in separate columns for each TAZ. TAZs are joined spatially to jurisdictional boundaries (including planning agreements), based on spatial data provided by Metro and the change in jobs between 2020 and 2050 is totaled for all Metro jurisdictions. The weight is calculated as a jurisdiction's share of all UGB added jobs.

Figure 11. TAZ Transit Access Zones Used to Calculate the Jobs Access Weights



Inverse Weighting

Several weights used in the Metro UGB Suballocation Methodology are termed “inverse weights.” The selected inverse weights operationalize statutory direction for the allocation to incorporate an "equitable distribution of housing" under ORS 184.453 (3)(c), ensuring cities that have historically underproduced market-rate or affordable housing are responsible for a greater proportionate share of housing underproduction. The selected inverse weights have the effect of allocating more housing, particularly housing affordable at lower incomes, to cities that have historically produced less market-rate and affordable housing units. The inverse weighting system works in the following manner, using the “Production” weight as an example:

- Each city’s rate of housing unit production is calculated by taking the previous five years of total permits from RLIS housing unit data and converting them to a percentage of current total units.
- The UGB average is calculated from among all cities.
- The “delta,” or nominal units needed for each city to match the UGB’s average rate, is calculated. Cities above the UGB average receive a weight of 0.
- All the nominal deltas are converted to percent of the total delta. This percentage becomes half the weight used to allocate underproduction and units needed to accommodate homelessness.

Example Delta Calculation for Inverse Weights
UGB average rate of housing unit production: 7% of current units (average of all cities)

City X	**City Y**
City X’s current units: 12,000 City X’s actual production: 600 City X’s production rate: 5% of current units To match the UGB rate of housing production, City X should have built 840 units (7% * 12,000) Its delta is 240 units (840 – 600) If the sum of all cities’ deltas was 500, City X would have 240/500 or 48%. Because recent production is only half of the weight for the current need allocation, this 48% would be averaged with the weight calculated for affordability to arrive at a blended weight.	City Y’s current units: 15,000 City Y’s actual production: 1,500 City Y’s production rate: 10% of current units To match the UGB rate of housing production, City Y only needed to build 1,050 units (7% * 15,000) Since it produced more than the average, it has no delta, and its weight would be zero.

Statewide and Regional Results

This section provides statewide and regional results of total 20-year housing need by income and need component based on the Final Methodology. Local city-level results are provided by income level in beginning on page 53.

Statewide Results

Figure 12. Statewide and Regional 20-Year Total Housing Need by Income Level

Region	Income Level					Total Need
	0-30%	31-60%	61-80%	81-120%	>120%	
Central	8,151	8,568	6,853	12,759	22,071	58,401
Metro	31,034	32,156	20,591	36,566	67,929	188,276
Northeast	3,598	3,230	2,088	4,458	6,593	19,966
Northern Coast	4,554	3,364	1,350	3,450	3,574	16,292
Southeast	3,088	2,308	1,290	2,242	3,667	12,594
Southwest	13,200	11,002	6,476	10,724	21,150	62,551
Willamette Valley	33,905	25,746	14,342	24,440	37,989	136,421
Oregon	**97,529**	**86,373**	**52,990**	**94,638**	**162,972**	**494,503**

Figure 13. Statewide 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	Underproduction	Units for Homelessness	Second & Vacation Homes	Demographic Change	Pop. Growth	Total Needs
0-30%	15,049	35,287	-	17,377	29,818	97,529
31-60%	16,630	8,221	-	22,683	38,840	86,373
61-80%	7,953	2,129	-	15,616	27,292	52,990
81-120%	7,368	-	11,370	27,572	48,329	94,638
>120%	3,301	-	5,930	55,938	97,803	162,972
Total	**50,300**	**45,637**	**17,300**	**139,185**	**242,081**	**494,503**

Regional Results

Figure 14. OHNA Regions (from page 8)

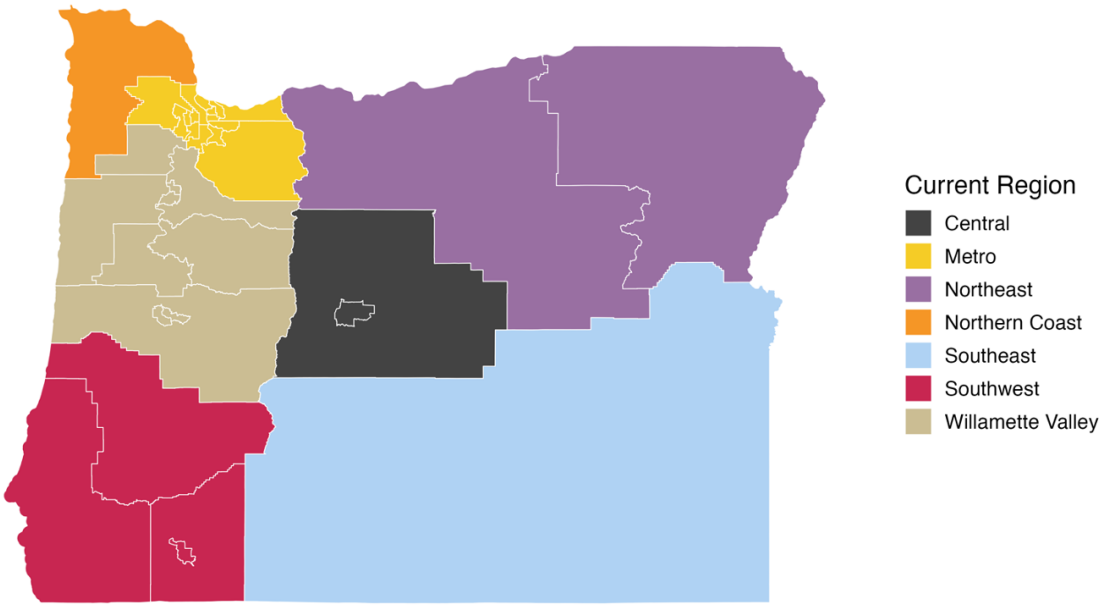


Figure 15. Central Region 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	**Underproduction**	**Units for Homelessness**	**Second & Vacation Homes**	**Demographic Change**	**Pop. Growth**	**Total Needs**
0-30%	1,469	2,113	-	1,090	3,479	8,151
31-60%	1,708	396	-	1,539	4,925	8,568
61-80%	1,267	107	-	1,303	4,176	6,853
81-120%	1,227	-	1,813	2,316	7,403	12,759
>120%	609	-	1,692	4,713	15,057	22,071
Total	**6,280**	**2,616**	**3,505**	**10,960**	**35,041**	**58,401**

Figure 16. Northern Coast Region 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	**Underproduction**	**Units for Homelessness**	**Second & Vacation Homes**	**Demographic Change**	**Pop. Growth**	**Total Needs**
0-30%	1,064	2,374	-	582	535	4,554
31-60%	1,235	407	-	903	819	3,364
61-80%	442	79	-	432	397	1,350
81-120%	423	-	1,301	909	818	3,450
>120%	158	-	644	1,459	1,314	3,574
Total	**3,321**	**2,859**	**1,945**	**4,284**	**3,883**	**16,292**

Figure 17. Southwest Region 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	**Underproduction**	**Units for Homelessness**	**Second & Vacation Homes**	**Demographic Change**	**Pop. Growth**	**Total Needs**
0-30%	1,645	6,613	-	2,152	2,789	13,200
31-60%	2,147	1,181	-	3,353	4,321	11,002
61-80%	1,022	375	-	2,215	2,863	6,476
81-120%	930	-	1,571	3,584	4,639	10,724
>120%	594	-	613	8,709	11,234	21,150
Total	**6,338**	**8,170**	**2,184**	**20,014**	**25,846**	**62,551**

Figure 18. Willamette Valley Region 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	**Underproduction**	**Units for Homelessness**	**Second & Vacation Homes**	**Demographic Change**	**Pop. Growth**	**Total Needs**
0-30%	5,008	14,794	-	5,229	8,874	33,905
31-60%	5,118	3,825	-	6,240	10,563	25,746
61-80%	2,115	987	-	4,165	7,075	14,342
81-120%	1,960	-	2,781	7,313	12,386	24,440
>120%	860	-	954	13,415	22,761	37,989
Total	**15,061**	**19,605**	**3,735**	**36,362**	**61,659**	**136,421**

Figure 19. Northeast Region 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	**Underproduction**	**Units for Homelessness**	**Second & Vacation Homes**	**Demographic Change**	**Pop. Growth**	**Total Needs**
0-30%	771	1,128	-	862	837	3,598
31-60%	665	282	-	1,150	1,133	3,230
61-80%	296	112	-	853	827	2,088
81-120%	233	-	1,309	1,483	1,433	4,458
>120%	146	-	733	2,904	2,810	6,593
Total	**2,110**	**1,522**	**2,042**	**7,253**	**7,040**	**19,966**

Figure 20. Southeast Region 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	**Underproduction**	**Units for Homelessness**	**Second & Vacation Homes**	**Demographic Change**	**Pop. Growth**	**Total Needs**
0-30%	615	1,238	-	836	400	3,088
31-60%	501	427	-	929	450	2,308
61-80%	222	110	-	647	310	1,290
81-120%	281	-	300	1,120	541	2,242
>120%	150	-	189	2,241	1,087	3,667
Total	**1,770**	**1,775**	**489**	**5,773**	**2,788**	**12,594**

Figure 21. Metro Region 20-Year Total Housing Need by Income Level and Component

	Current Need		Future Need			
Income Level	**Underproduction**	**Units for Homelessness**	**Second & Vacation Homes**	**Demographic Change**	**Pop. Growth**	**Total Needs**
0-30%	4,478	7,026	-	6,626	12,904	31,034
31-60%	5,256	1,703	-	8,568	16,629	32,156
61-80%	2,588	360	-	5,999	11,644	20,591
81-120%	2,314	-	2,295	10,848	21,108	36,566
>120%	786	-	1,106	22,498	43,540	67,929
Total	**15,422**	**9,090**	**3,401**	**54,539**	**105,825**	**188,276**

Data Sources and Updates

The OHNA Final Methodology relies on publicly available data, which are updated and released throughout the calendar year. Figure 22 below lists the variables used throughout the OHNA Final Methodology, their sources, and when they are typically updated.

Figure 22. Publicly Available Data Sources and Release Schedules

Category	Component	Data Input	Source	Area	Annual Release Schedule
Many	Regional Income Limits as a Percent of Area Median	AMI levels to allocate units to incomes	HUD	Region	April
Current Need	Underproduction	Total households	Census PUMS for American Community Service (ACS) 1-year estimates	Region	October
		Missing households			
		Total housing units			
		Second and vacation homes			
		Uninhabitable units			
		Rate of cost burdening (to allocate units to income levels)			
	Units Needed for Homelessness	Point-In-Time count	Continuums of Care	Continuums of Care	Varies (annual)
		Homelessness Management Information Systems			
		McKinney-Vento student data	Oregon Dept. of Education	Region	Varies (annual)
		Doubled-up population	Census PUMS	Region	October
Future Need	Units Needed for Population Growth	Population forecasts	PSU	Region	Rotating 4-year cycle

Category	Component	Data Input	Source	Area	Annual Release Schedule
					for a set of counties and their UGBs
		Number of people living in group quarters	Census PUMS	Region	October
		Average household size			
		Regional income distribution (to allocate units to income levels)			
	Units Lost to Second and Vacation Home Demand	Total housing units	Census PUMS	Region	October
		Units identified as used for “seasonal or recreational purposes”			
		Year built for units identified as used for “seasonal or recreational purposes” (to allocate units to income levels)			
	Units Needed for Demographic Change	Population forecasts by age cohort, by region	PSU	Region	Rotating 4-year cycle for a set of counties and their UGBs
		Number of people living in group quarters	Census PUMS	Region	October

Category	Component	Data Input	Source	Area	Annual Release Schedule
		Average household size			
		Regional income distribution (to allocate units to income levels)			
Allocating Needed Housing	Local Allocation Factor	UGB's current share of regional population	PSU	UGB	Rotating 4-year cycle for a set of counties and their UGBs
		UGB's current share of regional jobs	Census LEHD-LODES	UGB	December
		UGB's current share of regional units identified as used for "seasonal or recreational purposes"	2020 Census	UGB	December
Metro	Metro UGB	Metro's UGR Current and Future Need Totals	Metro UGR	UGB	At least every six years
	Local allocation factor	City's share of UGB's jobs and residents in transit accessible areas	Census LEHD-LODES	City (Metro only)	Variable
	Local allocation factor	City's share of UGB's jobs and residents in transit accessible areas	TriMet GTFS	City (Metro only)	Quarterly
	Local allocation factor	City's share of UGB's affordable units	HUD CHAS	City (Metro only)	September

Category	Component	Data Input	Source	Area	Annual Release Schedule
	Local allocation factor	City's share of UGB's recent housing production	Metro RLIS	City (Metro only)	Monthly
	Local allocation factor	City's share of residential capacity	Metro UGR	City (Metro only)	At least every six years
	Local allocation factor	City's share of forecast added jobs	Metro Distributed Forecast	City (Metro only)	At least every six years
	Local allocation factor	City's share of current population	ACS	City (Metro only)	Annual
	Local allocation factor	City's share of 2020 vacation units	Census	City	Decennial

Notes: All references to Census PUMS are for 1-year ACS data.
PSU forecasts come from the Population Research Center: *https://www.pdx.edu/population-research/population-forecasts*
LEHD-LODES is the Longitudinal Employer Household Data Origin-Destination Employment Statistics: *https://lehd.ces.census.gov/data/*
TriMet GTFS is the General Transit Feed Specification: *https://developer.trimet.org/GTFS.shtml*
HUD CHAS is the Comprehensive Housing Affordability Survey: *https://www.huduser.gov/portal/datasets/cp.html*
HUD SOCDS is the State of the Cities Data Systems which is calculated from Census Data: *https://www.huduser.gov/portal/datasets/socds.ht*

Appendix A. Summary of Public Comment on Draft Methodology

As part of the OHNA Final Methodology development process (see page 5), OHCS and DLCD offered opportunities for the public to comment on the Draft Methodology on behalf of DAS. The following describes the opportunities for public comment.

1) OHCS posted the document to its website, emailed its listserv to announce the public comment period, and discussed the Draft Methodology at its October Housing Stability Council Meeting.
2) As part of the September LCDC meeting, DLCD posted the document to its website, emailed its listserv about the meeting agenda, and held public testimony.
3) The public comment period ran from September 12, 2024, when the LCDC meeting packet was distributed, to October 4, 2024, when OHCS convened its Housing Stability Council Meeting.
4) Throughout the 2024 methodology development process, DLCD and OHCS advertised email addresses where the public could send comments.

The agencies combined public comment and testimony on the methodology and summarized them below. Although some comments and testimony also discussed the OHNA policy and housing policy frameworks, only comments related to the methodology are summarized below. These comments are listed in the same order as the steps of the methodology, all are noted in plural.

- Concerns with the vacancy rate used in several components of housing need.
- Concerns with the age cohorts ending at 45 to estimate the housing underproduction component of housing need.
- Concerns with the data source used to estimate second and vacation homes and the method of distributing them to income levels.
- Suggestions to include different population trends as a component of housing allocation.
- Suggestions to use different population projections.
- Concerns about including access to transit and access to employment as components of housing allocation from regions to cities.
- Suggestions that housing allocation should consider formal capacity planning estimates.
- Suggestions that housing allocation should have a different consideration of the presence of existing affordable housing stock.
- Suggestions to change or remove peer cities.

Appendix B. Major Changes from Draft Methodology to Final Methodology

The Draft OHNA Methodology was released on September 12, 2024, with a few known needed refinements and the opportunity for the public to comment. A summary of anonymized public comment is listed in Appendix A. This Appendix outlines the major changes between the Draft and Final Methodologies, listed in the same order as the steps in the methodology.

Step 3: Determine Components of Need: Housing Underproduction
The Final Methodology expanded the upper limit of the age cohort used to estimate missing households in the housing underproduction component from 44 to 64.

Step 3: Determine Components of Need: Housing Units Needed for People Experiencing Homelessness
DAS and OHCS engaged the Portland State University (PSU) Homeless Research and Action Collaborative (HRAC) to develop the methodology to estimate housing units needed for people experiencing homelessness. This refined the methodology used in the Draft Report. Updates included new ways to annualize the sheltered and unsheltered data, introducing new local data, and making adjustments to the estimates of the doubled-up population.

Step 4: Allocate Needed Housing Units to Income Categories: Units for People Experiencing Homelessness
The Final Methodology uses data from the regional Continuums of Care Homeless Management Information Systems (HIMS) to allocate units for people experiencing homelessness to income categories. The Draft Methodology used statewide OHCS administrative data from Community Action Agencies that receive state Emergency Housing Assistance (EHA) and State Housing Assistance Program (SHAP) funds. In the Draft Methodology, data were from 2020 and were statewide. The data used in the final methodology are from 2023 and are regional.

Step 5: Allocate Needed Housing to Cities and UGBs
The Final Methodology allocates housing from regions to statewide UGBs still in the same manner, but several changes have been made to the custom Metro UGB-to-cities allocation. See below.

Step 6: Set Housing Production Targets
The Final Methodology "smooths" the OHNA results by averaging the current year results (2023) and the prior year results (2022). The results in the Draft Methodology were not smoothed.

Changes to Methodologies in Portland Metro Region

Estimating Need: Metro Adopted UGR
As noted in the draft report, the Final Methodology uses Metro's adopted Urban Growth Report estimate of current and future housing need within the Metro UGB. This estimate serves as a control total for the Metro UGB portion of the Metro region's estimated housing need. As described on page 27, Metro's UGR methodology to estimate housing need was intended to align with the OHNA methodology, but due to timeline discontinuities, it did not incorporate

changes to estimating housing underproduction or estimating housing units needed for people experiencing homelessness.

Allocating Need: New Data
Metro provided an updated geospatial shapefile identifying Urban and Urbanizable unincorporated areas, which was used in the Final Methodology.

Allocating Need: New Weights
Units needed for population growth and demographic change are now allocated from the Metro UGB to Metro cities in the following manner:

- Units for population growth:
  - 1/3rd based on jurisdiction's share of UGB-wide residential capacity
  - 1/3rd based on jurisdiction's share of UGB-wide forecasted jobs to be added from 2020-2050
  - 1/3rd based on jurisdiction's transit-accessible workforce
- Units for demographic change:
  - 1/3rd based on jurisdiction's share of UGB-wide residential capacity
  - 1/3rd based on jurisdiction's share of UGB-wide current population
  - 1/3rd based on jurisdiction's share of transit-accessible workforce

The Final Methodology definition of transit-accessible Metro UGB workforce has been changed, with TAZs above the 10th percentile (in terms of total jobs within a 60-minute AM transit + walking trip) now being qualified as areas of adequate transit. The rest of this weight calculation is unchanged from the Draft Methodology.

The Final Methodology introduces a new weight for allocating units for population growth in the Metro UGB to jurisdictions: a jurisdiction's share of forecasted added jobs 2020-2050. Job forecast data is provided by Metro at the TAZ level. The TAZs are assigned to cities in the same way as the Transit Access weight, and total added jobs are summed by jurisdiction, and converted to shares of all added jobs in the Metro UGB.

Misc: Data Updates
As noted in the draft report, the Final Methodology includes the most recent data available from each data source used in the OHNA. The Data Sources and Update Schedule section, beginning on page 40, list the sources and their update schedules. As anticipated, updating the methodology with the latest data available impacted the results.

Misc: Determine Peer Cities
The Final Methodology makes a few minor changes to the Peer City methodology from the Draft. It redefines "high income households" to those earning $200,000 a year or more, instead of the previous definition of $150,000 or more. It no longer considers a city's OHNA target (as a % of total stock) as an input variable to the KNN model. It includes Tillamook County and does not include Metro UULs.

Appendix C. Detailed Methodology to Estimate Units Needed for Those Experiencing Homelessness

MEMO

TO: Megan Bolton, Oregon Housing & Community Services

FROM: Marisa A. Zapata, PhD, Portland State University
Franklin Spurbeck, Portland State University

DATE: November 8, 2024

SUBJECT: Homeless population and household estimates for OHNA, update

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In 2020, the State of Oregon created its first regional housing needs analysis. As part of this new analytical and geographic approach, the state also included housing needs estimates for people experiencing homelessness. Housing needs assessments typically use US Census data, but the Census is known for not counting people experiencing homelessness well. This memo provides a recommendation on how to estimate the housing needs for people experiencing homelessness based on more relevant data sets. The proposed methodology uses an annualized point in time count of unsheltered households, the number of households served in shelter over a year, and households doubled-up based on K-12 student data and US Census data.

The draft OHNA methodology includes a recommendation about how to estimate the number of housing units needed for people experiencing homelessness. The homelessness estimates used for this approach had several limitations. To create a more robust methodology for estimating the number of housing units needed for people experiencing homelessness, PSU-HRAC reviewed additional literature, assessed various data sets, and met with continua of care for input. In this memo, we present a recommended methodology for the initial creation of OHNA numbers. We then document future considerations when conducting OHNAs along with additional research that responds to those considerations.

Recommended Methodology & Data Sets

We recommend combining portions of four data sets to better estimate the number of people experiencing homelessness in an OHNA region.

Our approach uses CoC Point-In-Time Count (PITC) data and McKinney-Vento Student Data (MVSD) for children enrolled in K-12 public schools. We also utilize CoC Homeless Management Information System (HMIS) data, By-Name Lists (BNL), and American Community Survey (ACS) data. Details on each data set follow.

Point-In-Time Count (PITC)

The PITC is a one-night count of people experiencing homelessness. The PITC includes a count of people living unsheltered (PITCu), and people living in shelter and transitional housing (PITCs). The sheltered and transitional housing numbers are submitted every year based on individuals sleeping in shelters that submit data into the CoC's Homeless Management Information System (HMIS). A count of people living unsheltered occurs a minimum of every other year. Some CoCs administer the unsheltered survey each year.

Homeless Management Information System (HMIS)

HMIS data is client-level administrative data created when an individual or family experiencing or at risk of homelessness interacts with the homeless services system.

By-Name Lists (BNL)

By-name lists are created by CoCs for a variety of purposes. Some are updated frequently and include information about where people are currently living. A BNL that includes people living unsheltered can augment or replace PITCu data (BNLu).

McKinney-Vento Student Data (MVSD)

The MVSD is a count of students enrolled in K-12 schools identified as experiencing homelessness. Unlike HUD, who oversees the PIT and HMIS, schools count students who are living doubled-up as homeless. That means the count includes students living unsheltered (MVSDu), sheltered (MVSDs), or doubled-up (MVSDd). The MVSD is the only widely collected primary data set about homelessness that includes doubled-up people.

American Community Survey (ACS)

The ACS is administered by the US Census Department on a continual basis. Collected data is used to create detailed estimates of people and housing information. We use ACS data to estimate the population living doubled-up (ACSdu).

Methodology

Methodology Overview

We recommend the following formula for calculating the number of households that need housing. It combines:

- **Unsheltered data:** PITC unsheltered data that is annualized and converted to household numbers; or, the household count from BNL across one year;
- **Sheltered data:** Households served in shelter over one calendar year, as recorded in HMIS; and,

- **Doubled-up data:** MVSD for doubled-up student households plus ACS doubled-up households without children enrolled in K-12 schools.

All data are converted to households (HH), and annualized when the data set is not an annual count.

Detailed Methodology

All data were converted into households and annualized based on a multiplier when an annual data set was not available.

$$[\ (\ PIT_{unsheltered} * PIT_{uannualizedrate} / PIT_{uhh}\ )\ _{or}\ (\ BNL_{hh}\ )\ ] + HMIS_{shelterhh}$$
$$+ [\ (\ MVSD_{unsheltered} + MVSD_{motel} + MVSD_{doubledup}\ ) / ACS_{hhsize}] + (\ ACS_{doubleduphh} - ACS_{doubledup5\text{-}18hh}\ )$$
$$= \textit{Total needed households for people experiencing homelessness}$$

where:

$PIT_{uannualizedrate}$ = an individual-level multiplier determined by how long an individual reports experiencing homelessness in the past year (Shinn et. al. 2024)

ACS_{hhsize} = Average number of children per family in a given OHNA region, derived from ACS data (same as draft OHNA methodology)

Unsheltered estimate

The unsheltered estimate can come from two data sources. One starts with the individual-level PIT count unsheltered data and applies an annualization rate derived from Shinn et. al. (2024). The other approach to estimating the number of unsheltered people living in the region is to use a current, deduplicated by-name list for one year. Details about each approach follow.

Annualized PIT Count Unsheltered Data

We recommend beginning with each CoC's PITCu data, still at the individual level. Using a method developed by Shinn et. al. (2024), annualize the unsheltered PIT estimate by weighting each individual by the inverse of how long that person reports experiencing homelessness in the past year. Individuals for whom there is no length of time homeless can either be weighted at one (representing only themselves), or can have a weight assigned to them based on the distribution of known lengths previously homeless from the rest of the PITCu. For categorical responses, such as "0 to 3 months," we assume the person has been experiencing homelessness for a length of time in the middle of the range (in this example, 2 months).

To go from annualized number of people to annual number of households, we divide the annualized estimate of people experiencing unsheltered homelessness by the average household size of households experiencing unsheltered homelessness, at the county level.

Table 1 Example of Annualized Unsheltered Rate

Client ID	How long have you been homeless this time?	Length homeless (integer)	Inverse (12 months/ integer months)	Weight
00001	0 - 3 months	2 months	12/2	6
00002	24 - 35 months	12 months	12/12	1
00003	No data	12 months	12/12	1
00004	4-6 months	5 months	12/5	2.4

In the above example, we go from a PITCu of three people to an annual estimate of 10.4 people.

Unsheltered Coordinated Entry Data

Some CoCs supplement their PITCu with data from a coordinated entry list, which is one type of BNL. This data may not include sufficient information to annualize or convert to households. In this case, we recommend adding the number of CE records that CoC added, without attempting to annualize or convert to households.

Unsheltered By-Name List

For counties that keep a well-maintained list of people experiencing unsheltered homelessness, we recommend using that list to reflect the number of people experiencing unsheltered homelessness. This number *should* be higher or close to the annualized PIT unsheltered count.

Sheltered estimate

We recommend pulling an HMIS report of all people who have used housing services for the given year. As much as possible, deduplicate by household; for households with multiple stays, include the more recent stay. Exclude households served in PSH or RRH, who are already in housing units. Exclude individuals who have exited the homeless services system by dying, who have exited to permanent housing and have not re-entered homelessness, or who exited to unsheltered homelessness. Exclude individuals who entered homelessness from unsheltered homelessness. If there's no data to suggest where an individual exited to or entered from, keep them in the dataset.

Doubled-up estimate

McKinney-Vento Estimate

We recommend using the most recent McKinney-Vento numbers available. Use doubled-up, motel/hotel, and unsheltered student numbers, but do not use the sheltered student numbers. Note that "unaccompanied youth" are already included in the other MV subcategories, so do not double count them. Publicly available McKinney-Vento data is redacted whenever the exact number of students in any instance is less than five. In those instances, replace the redaction with a 1. Once the number of students has been aggregated up to the OHNA region, divide by the average number of school-aged students per household in that OHNA region to move from an estimate of doubled-up students to doubled-up households.

ACS estimate

This estimate is based on a new method developed by Richard et. al. (2022), and uses census data to estimate the number of individuals who are doubled-up in a particular geography. We modified the method to estimate doubled-up households instead of doubled-up individuals. We then used this as the basis for estimating the number of households experiencing doubled-up homelessness. We further modified the Richard et. al. method by excluding from the estimate all doubled-up households that contain a child age 5-18, as we assume households with doubled-up children are accounted for by McKinney-Vento data.

We sum the McKinney-Vento estimate of households experiencing doubled-up homelessness and the ACS estimate of households experiencing doubled-up homelessness to create the overall estimate of doubled-up homelessness in each OHNA region.

Data Notes

We recommend using the most recent and/or valid data regardless of whether the data all come from the same year. The number of people experiencing homelessness can change rapidly based on local contexts. Data sets are also updated at different times. In this report we are using data from 2022 (ACS), 2023 (PITCu, MVSD, HMIS), and 2024 (PITCu).

The selected data sets include a mix of one day and annual counts. We identified a method to annualize the PIT unsheltered data. CoCs that manage an updated BNL that includes people living unsheltered and can be deduplicated should use their BNL annual count instead. We classified the ACS as an annual count, even though it is best understood as something in between one day and an annual count.

Not all data sets include household counts. We use the household size calculations from the EcoNW work to calculate household size for the MVSD. EcoNW calculated the average number of school-aged children per household in each OHNA region, then divided the MVSD count by that number, thereby creating an estimate of doubled-up households from the MVSD count of doubled-up students. The ACS household calculation for people living doubled-up involved creating a flag for the head of household for each dwelling unit that contained individuals who were flagged as being doubled-up. We then used this doubled-up head of household flag as the basis for estimating the number of doubled-up households in the population.

Each data set should be deduplicated within itself. We expect that some deduplication will happen across the data sets depending on the CoC. However, we recognize that there will be duplication. In particular, identifying people who are moving out of shelter and onto the street, or moving off the street onto someone’s couch, can be challenging. Despite the likely probability of someone being reflected in multiple data sets, we also know that there are many people experiencing homelessness who are not counted at all.

The methodology and corresponding data should *not* be used beyond the purpose of the OHNA. For instance, some CoCs classify shelter versus unsheltered differently based on the data set. Or, a BNL may include people in shelter as well. The purpose of this methodology is to provide a robust process

for estimating the needed housing units for people experiencing homelessness, regardless of their circumstances.

Future areas of improvement

- Duplication between lists. Many people experiencing homelessness move between emergency shelter, unsheltered homelessness, and being doubled-up. Without data that includes personally identifiable information, it will be difficult to de-duplicate across datasets.
- Better usage of BNL lists, such as Built for Zero lists or Coordinated Entry. At this time, there is little consistency across the state on how such by-name lists are created or maintained. However, such lists have the potential to be more accurate than extrapolating from other datasets.
- Accounting for the annual households served in shelters that do not report to HMIS.

Reference List

Joint Office of Homeless Services. (2024, August 15). *JOHS System Performance Quarterly Report - FY24 Q4.* Tableau Public. https://public.tableau.com/app/profile/johs/viz/JOHSSystemPerformanceQuarterlyReport-FY24Q4/Report

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Shinn, M., Yu, H., Zoltowski, A. R., & Wu, H. (2024). Learning more from homeless Point-in-Time Counts. *Housing Policy Debate, 34*, 1-10.https://doi.org/10.1080/10511482.2024.2306607

Appendix D. Local Results

Each figure contains the UGBs in an OHNA Region and displays the UGB's 1-year annual housing production target in total and by income level, as well as the 20-year housing need allocation in total and by income level. See page 19 for the calculation of annual housing production targets.

Figure 23. Central Region Results

Central UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Bend UGB	1-year	1,971	355	314	240	413	649
	20-year	33,763	4,826	4,941	3,928	7,474	12,595
Culver UGB	1-year	15	3	2	2	3	4
	20-year	241	38	37	29	52	85
La Pine UGB	1-year	57	9	9	7	13	20
	20-year	1,008	133	142	114	232	388
Madras UGB	1-year	132	26	22	17	25	41
	20-year	2,208	346	346	274	446	795
Metolius UGB	1-year	9	2	2	1	2	3
	20-year	157	25	25	20	31	56
Prineville UGB	1-year	184	37	31	24	36	57
	20-year	3,049	485	477	375	624	1,087
Redmond UGB	1-year	594	111	99	76	115	193
	20-year	10,141	1,524	1,574	1,254	2,056	3,734
Sisters UGB	1-year	100	15	14	11	23	36
	20-year	1,791	215	238	192	437	710

Figure 24. Metro Region Results

Metro UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Banks UGB	1 year	10	2	2	1	2	3
	20 year	163	31	29	18	30	57
Barlow UGB	1 year	0	0	0	0	0	0
	20 year	6	1	1	1	1	2
Beaverton	1 year	791	156	146	89	142	259
	20 year	14,086	2,302	2,424	1,562	2,667	5,130
Canby UGB	1 year	125	28	23	14	22	39
	20 year	2,189	390	376	238	409	776
Clackamas UA	1 year	648	173	136	74	103	163
	20 year	10,241	2,180	1,944	1,148	1,795	3,175
Cornelius	1 year	63	8	10	7	13	26
	20 year	1,255	156	198	138	249	513
Durham	1 year	15	5	4	2	2	2
	20 year	191	58	43	22	28	40
Estacada UGB	1 year	41	8	7	4	7	14
	20 year	736	124	124	80	139	269
Fairview	1 year	37	4	6	4	8	15
	20 year	743	89	115	81	152	305
Forest Grove	1 year	159	19	25	17	32	65
	20 year	3,182	386	497	348	641	1,309
Gaston UGB	1 year	4	1	1	0	1	1
	20 year	65	16	12	7	10	19
Gladstone	1 year	79	27	19	9	11	13
	20 year	1,055	305	229	120	162	238
Gresham	1 year	524	89	91	58	98	187
	20 year	9,726	1,433	1,615	1,073	1,891	3,715
Happy Valley	1 year	464	83	83	52	85	161
	20 year	8,491	1,301	1,428	938	1,626	3,197
Hillsboro	1 year	744	138	134	83	136	253
	20 year	13,473	2,113	2,280	1,487	2,586	5,009
Johnson City	1 year	5	2	1	1	0	0
	20 year	50	22	14	6	5	4
King City	1 year	129	31	26	14	22	36
	20 year	2,131	411	388	236	390	706
Lake Oswego	1 year	299	82	63	33	50	71
	20 year	4,620	1,009	870	503	864	1,373
Maywood Park	1 year	8	3	2	1	1	2
	20 year	123	31	25	14	20	34

Metro UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Milwaukie	1 year	109	14	17	12	22	44
	20 year	2,164	265	338	235	442	885
Molalla UGB	1 year	65	14	12	7	11	21
	20 year	1,152	198	197	126	214	418
Multnomah UA	1 year	55	10	10	6	10	18
	20 year	982	155	165	107	194	362
North Plains UGB	1 year	39	7	7	4	7	14
	20 year	724	108	119	79	139	278
Oregon City	1 year	274	37	44	30	54	108
	20 year	5,358	691	853	587	1,066	2,160
Portland	1 year	2,851	334	431	302	620	1,164
	20 year	57,019	6,678	8,615	6,032	12,408	23,287
Rivergrove	1 year	3	1	1	0	1	0
	20 year	44	12	9	4	10	9
Sandy UGB	1 year	86	18	15	9	15	28
	20 year	1,523	259	259	166	286	553
Sherwood	1 year	144	33	28	16	24	42
	20 year	2,427	450	437	271	441	828
Tigard	1 year	462	85	83	51	85	158
	20 year	8,407	1,308	1,419	928	1,614	3,139
Troutdale	1 year	77	15	14	9	14	26
	20 year	1,397	219	236	153	273	515
Tualatin	1 year	223	75	53	26	30	39
	20 year	3,061	853	655	349	473	730
Washington UA	1 year	1,479	475	340	171	210	284
	20 year	21,036	5,503	4,366	2,385	3,378	5,404
West Linn	1 year	240	83	57	28	33	39
	20 year	3,225	928	695	364	511	727
Wilsonville	1 year	186	41	35	20	33	56
	20 year	3,175	566	556	346	609	1,099
Wood Village	1 year	20	2	3	2	4	8
	20 year	391	47	61	42	80	160

Figure 25. Northeast Region Results

Northeast UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Adams UGB	1 year	2	0	0	0	0	0
	20 year	26	5	5	3	4	8
Antelope UGB	1 year	0	0	0	0	0	0
	20 year	8	0	0	0	4	3
Arlington UGB	1 year	4	1	1	0	1	1
	20 year	64	12	11	7	14	21
Athena UGB	1 year	6	2	1	1	1	2
	20 year	103	21	19	12	19	33
Baker City UGB	1 year	69	18	13	7	12	18
	20 year	1,115	230	191	120	227	347
Boardman UGB	1 year	44	11	9	5	7	12
	20 year	736	148	131	85	133	239
Canyon City UGB	1 year	4	1	1	0	1	1
	20 year	63	13	10	6	14	19
Cascade Locks UGB	1 year	11	2	2	1	2	4
	20 year	200	32	31	21	46	69
Condon UGB	1 year	5	1	1	0	2	1
	20 year	87	12	9	6	33	28
Cove UGB	1 year	2	1	0	0	0	1
	20 year	34	8	6	4	6	10
Dayville UGB	1 year	1	0	0	0	0	0
	20 year	12	1	1	1	6	4
Dufur UGB	1 year	4	1	1	0	1	1
	20 year	60	12	10	7	12	19
Echo UGB	1 year	3	1	1	0	1	1
	20 year	57	11	10	6	12	18
Elgin UGB	1 year	9	3	2	1	1	2
	20 year	139	31	25	15	27	42
Enterprise UGB	1 year	22	6	4	2	4	6
	20 year	361	71	60	38	77	114
Fossil UGB	1 year	3	1	0	0	1	1
	20 year	49	8	6	4	16	16
Granite UGB	1 year	3	0	0	0	2	1
	20 year	58	0	0	0	37	21
Grass Valley UGB	1 year	1	0	0	0	0	0
	20 year	13	3	2	2	2	4
Haines UGB	1 year	2	0	0	0	0	0
	20 year	27	5	4	2	8	8

Northeast UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Halfway UGB	1 year	4	1	0	0	1	1
	20 year	62	8	6	4	24	20
Helix UGB	1 year	1	0	0	0	0	0
	20 year	17	4	3	2	3	6
Heppner UGB	1 year	10	2	2	1	2	3
	20 year	157	30	24	15	40	49
Hermiston UGB	1 year	168	41	32	19	28	48
	20 year	2,833	545	500	325	523	940
Hood River UGB	1 year	111	25	18	11	26	32
	20 year	1,893	317	279	179	496	623
Huntington UGB	1 year	3	0	0	0	1	1
	20 year	49	6	5	3	20	16
Imbler UGB	1 year	2	0	0	0	0	0
	20 year	30	6	5	3	7	10
Ione UGB	1 year	2	0	0	0	0	0
	20 year	28	5	4	3	7	9
Irrigon UGB	1 year	9	3	2	1	1	2
	20 year	149	32	27	17	26	47
Island City UGB	1 year	9	2	2	1	2	3
	20 year	156	32	28	18	29	50
John Day UGB	1 year	15	4	3	2	3	4
	20 year	247	51	42	26	52	76
Joseph UGB	1 year	9	2	1	1	3	3
	20 year	151	22	18	12	50	50
La Grande UGB	1 year	96	26	19	11	15	25
	20 year	1,545	330	279	176	278	482
Lexington UGB	1 year	1	0	0	0	0	0
	20 year	17	3	3	2	4	5
Lonerock UGB	1 year	1	0	0	0	0	0
	20 year	20	2	2	1	8	7
Long Creek UGB	1 year	3	1	0	0	1	1
	20 year	50	8	7	4	14	16
Lostine UGB	1 year	2	0	0	0	1	1
	20 year	36	4	3	2	15	12
Maupin UGB	1 year	6	1	1	0	3	2
	20 year	120	10	9	6	54	42
Milton-Freewater UGB	1 year	34	10	7	4	5	9
	20 year	542	120	98	61	98	165

Northeast UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Mitchell UGB	1 year	1	0	0	0	0	0
	20 year	22	3	2	1	9	7
Monument UGB	1 year	1	0	0	0	0	0
	20 year	9	2	2	1	1	3
Moro UGB	1 year	4	1	1	0	1	1
	20 year	61	13	11	7	11	20
Mosier UGB	1 year	5	1	1	0	2	2
	20 year	102	9	8	6	43	36
Mt. Vernon UGB	1 year	2	1	0	0	0	0
	20 year	29	7	5	3	5	8
North Powder UGB	1 year	3	1	0	0	0	1
	20 year	42	8	8	5	7	13
Pendleton UGB	1 year	122	33	23	14	20	32
	20 year	1,970	412	348	219	373	617
Pilot Rock UGB	1 year	5	1	1	1	1	1
	20 year	87	17	13	8	23	26
Prairie City UGB	1 year	4	1	1	0	1	1
	20 year	60	11	8	5	18	18
Richland UGB	1 year	2	0	0	0	1	1
	20 year	39	3	3	2	18	13
Rufus UGB	1 year	2	0	0	0	0	1
	20 year	30	5	4	3	9	10
Seneca UGB	1 year	2	0	0	0	1	1
	20 year	40	3	2	1	21	14
Shaniko UGB	1 year	0	0	0	0	0	0
	20 year	6	0	0	0	3	2
Spray UGB	1 year	1	0	0	0	1	0
	20 year	26	2	2	1	12	9
Stanfield UGB	1 year	16	4	3	2	3	5
	20 year	290	50	50	34	54	102
Summerville UGB	1 year	1	0	0	0	0	0
	20 year	8	2	1	1	2	3
Sumpter UGB	1 year	13	0	0	0	8	5
	20 year	259	4	4	2	157	92
The Dalles UGB	1 year	112	31	22	13	18	29
	20 year	1,805	387	323	202	334	559
Ukiah UGB	1 year	2	0	0	0	1	1
	20 year	30	2	2	1	16	10

Northeast UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Umatilla UGB	1 year	50	13	10	6	8	13
	20 year	820	167	145	93	153	262
Union UGB	1 year	9	2	2	1	2	2
	20 year	149	29	25	15	33	47
Unity UGB	1 year	1	0	0	0	0	0
	20 year	11	0	0	0	7	4
Wallowa UGB	1 year	4	1	1	0	1	1
	20 year	68	12	10	6	20	21
Wasco UGB	1 year	1	0	0	0	0	0
	20 year	23	4	3	2	7	7
Weston UGB	1 year	8	2	2	1	1	2
	20 year	138	26	24	16	26	47

Figure 26. Northern Coast Region Results

Northern Coast UGB	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Astoria UGB	1 year	142	61	35	12	17	17
	20 year	1,835	667	434	165	262	307
Bay City UGB	1 year	15	6	4	1	2	2
	20 year	186	69	43	16	29	30
Cannon Beach UGB	1 year	44	14	8	3	12	8
	20 year	660	153	101	39	216	151
Clatskanie UGB	1 year	23	10	6	2	3	3
	20 year	300	109	71	27	42	50
Columbia City UGB	1 year	13	6	3	1	1	1
	20 year	164	63	40	15	21	25
Garibaldi UGB	1 year	12	5	3	1	2	2
	20 year	161	52	34	13	32	30
Gearhart UGB	1 year	25	8	4	2	7	5
	20 year	382	83	55	21	134	90
Manzanita UGB	1 year	22	5	3	1	9	5
	20 year	373	51	37	15	169	103
Nehalem UGB	1 year	16	6	3	1	3	3
	20 year	227	63	45	18	51	50
Prescott UGB	1 year	1	0	0	0	0	0
	20 year	7	2	2	1	1	1
Rainier UGB	1 year	28	12	7	2	3	3
	20 year	359	132	86	33	48	59
Rockaway Beach UGB	1 year	33	7	4	2	13	8
	20 year	553	80	57	23	243	150
Scappoose UGB	1 year	94	38	23	9	11	13
	20 year	1,293	427	305	121	189	251
Seaside UGB	1 year	114	42	25	9	21	17
	20 year	1,603	467	318	124	365	329
St. Helens UGB	1 year	172	72	43	15	20	22
	20 year	2,283	799	544	211	320	410
Tillamook Outside UGB Area	1 year	62	7	11	5	18	21
	20 year	1,233	136	210	101	369	417
Tillamook UGB	1 year	97	42	24	9	11	11
	20 year	1,249	456	300	114	169	210
Vernonia UGB	1 year	21	9	5	2	2	2
	20 year	269	98	64	24	37	45
	1 year	94	38	23	8	12	13

Northern Coast UGB	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Warrenton UGB	20 year	1,276	427	297	117	194	241
Wheeler UGB	1 year	5	2	1	0	1	1
	20 year	62	20	12	5	14	11

Figure 27. Southeast Region Results

Southeast UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Adrian UGB	1 year	2	1	0	0	0	1
	20 year	37	8	6	3	8	11
Bonanza UGB	1 year	3	1	1	0	1	1
	20 year	50	11	7	4	13	15
Burns UGB	1 year	26	9	5	3	4	5
	20 year	381	106	72	38	66	99
Chiloquin UGB	1 year	6	2	1	1	1	1
	20 year	97	24	17	9	21	27
Hines UGB	1 year	15	5	3	1	2	3
	20 year	226	56	40	22	44	64
Jordan Valley UGB	1 year	3	0	0	0	1	1
	20 year	54	5	3	2	26	19
Klamath Falls UGB	1 year	386	132	82	39	54	80
	20 year	5,686	1,573	1,100	584	924	1,504
Lakeview UGB	1 year	34	11	7	3	6	8
	20 year	518	130	93	50	99	145
Malin UGB	1 year	5	2	1	0	1	1
	20 year	76	21	14	7	15	20
Merrill UGB	1 year	6	2	1	1	1	1
	20 year	96	26	18	10	17	26
Nyssa UGB	1 year	25	8	5	3	4	6
	20 year	383	100	71	39	68	106
Ontario UGB	1 year	161	52	33	16	23	36
	20 year	2,450	638	466	256	404	687
Paisley UGB	1 year	2	1	0	0	1	1
	20 year	40	8	6	3	11	12
Vale UGB	1 year	24	8	5	2	4	6
	20 year	373	94	70	39	64	107

Figure 28. Southwest Region Results

Southwest UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Ashland UGB	1 year	223	65	41	22	37	58
	20 year	3,542	779	603	348	681	1,132
Bandon UGB	1 year	51	12	8	4	13	14
	20 year	854	141	117	68	252	276
Brookings UGB	1 year	119	32	20	11	25	31
	20 year	1,923	381	295	170	468	608
Butte Falls UGB	1 year	3	1	1	0	0	1
	20 year	41	10	7	4	8	12
Canyonville UGB	1 year	19	6	4	2	3	5
	20 year	299	74	55	31	46	93
Cave Junction UGB	1 year	23	7	4	2	3	6
	20 year	356	81	64	37	57	116
Central Point UGB	1 year	166	51	32	17	22	44
	20 year	2,608	607	480	278	388	855
Coos Bay UGB	1 year	180	56	34	18	26	45
	20 year	2,793	663	498	284	472	876
Coquille UGB	1 year	37	12	7	4	5	9
	20 year	567	141	102	58	95	173
Drain UGB	1 year	9	3	2	1	1	2
	20 year	130	34	24	13	20	39
Eagle Point UGB	1 year	71	21	14	7	10	20
	20 year	1,135	253	206	121	176	380
Elkton UGB	1 year	2	1	0	0	1	1
	20 year	37	7	5	3	12	11
Glendale UGB	1 year	5	2	1	0	1	1
	20 year	67	19	13	7	9	19
Gold Beach UGB	1 year	37	9	5	3	10	10
	20 year	616	105	80	46	197	189
Gold Hill UGB	1 year	9	3	2	1	1	2
	20 year	141	35	25	14	24	42
Grants Pass UGB	1 year	555	154	105	58	78	160
	20 year	9,058	1,909	1,628	964	1,436	3,121
Jacksonville UGB	1 year	26	8	5	2	4	7
	20 year	408	91	68	39	82	127
Lakeside UGB	1 year	16	3	2	1	5	4
	20 year	267	39	29	16	104	79
	1 year	1,277	348	241	134	180	374

Southwest UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Medford UGB	20 year	20,966	4,353	3,768	2,241	3,307	7,296
Myrtle Creek UGB	1 year	41	14	8	4	5	9
	20 year	600	162	111	61	93	174
Myrtle Point UGB	1 year	19	7	4	2	2	4
	20 year	272	75	51	28	41	78
North Bend UGB	1 year	92	29	18	9	13	23
	20 year	1,421	345	258	147	225	446
Oakland UGB	1 year	7	2	1	1	1	1
	20 year	96	26	18	10	14	28
Phoenix UGB	1 year	43	13	8	4	6	11
	20 year	664	159	122	70	101	213
Port Orford UGB	1 year	16	4	2	1	5	4
	20 year	259	41	28	15	101	74
Powers UGB	1 year	4	1	1	0	1	1
	20 year	54	13	9	5	12	15
Reedsport UGB	1 year	33	10	6	3	6	8
	20 year	500	116	81	45	111	147
Riddle UGB	1 year	8	3	2	1	1	2
	20 year	126	32	24	13	18	39
Rogue River UGB	1 year	27	8	5	3	4	7
	20 year	428	96	76	44	71	140
Roseburg UGB	1 year	377	114	72	39	51	100
	20 year	5,938	1,371	1,081	627	919	1,941
Shady Cove UGB	1 year	21	6	4	2	5	5
	20 year	342	69	52	30	86	106
Sutherlin UGB	1 year	63	21	12	7	8	16
	20 year	970	241	178	101	148	302
Talent UGB	1 year	46	14	9	5	7	13
	20 year	736	166	132	77	119	243
Winston UGB	1 year	58	17	11	6	8	16
	20 year	937	205	170	100	144	318
Yoncalla UGB	1 year	5	2	1	0	1	1
	20 year	75	20	13	7	13	21

Figure 29. Willamette Valley Region Results

Willamette Valley UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Adair Village UGB	1 year	8	2	2	1	1	2
	20 year	124	30	24	13	21	36
Albany UGB	1 year	491	157	101	51	70	111
	20 year	7,797	1,981	1,506	840	1,292	2,179
Amity UGB	1 year	12	4	2	1	2	3
	20 year	185	46	36	20	31	52
Aumsville UGB	1 year	36	9	7	4	6	10
	20 year	621	131	115	69	111	195
Aurora UGB	1 year	12	3	2	1	2	3
	20 year	210	45	39	23	37	65
Brownsville UGB	1 year	9	3	2	1	1	2
	20 year	139	39	27	15	23	36
Carlton UGB	1 year	17	5	3	2	3	4
	20 year	276	63	51	29	51	81
Coburg UGB	1 year	27	8	5	3	4	7
	20 year	442	104	83	48	77	130
Corvallis UGB	1 year	519	176	109	53	72	109
	20 year	7,999	2,158	1,563	847	1,311	2,120
Cottage Grove UGB	1 year	62	23	13	6	8	11
	20 year	896	273	182	94	134	213
Creswell UGB	1 year	33	12	7	3	4	7
	20 year	495	139	98	52	79	127
Dallas UGB	1 year	156	45	31	16	24	39
	20 year	2,589	598	487	282	452	771
Dayton UGB	1 year	13	5	3	1	2	3
	20 year	200	56	40	21	31	52
Depoe Bay UGB	1 year	15	3	2	1	6	4
	20 year	273	36	28	16	119	74
Detroit UGB	1 year	8	0	0	0	6	2
	20 year	161	4	3	2	110	42
Donald UGB	1 year	10	3	2	1	1	2
	20 year	146	40	29	16	23	38
Dundee UGB	1 year	19	6	4	2	3	4
	20 year	287	76	55	30	50	76
Dunes City UGB	1 year	7	2	1	0	3	1
	20 year	121	19	12	6	56	28
Eugene UGB	1 year	1,688	562	352	173	238	364
	20 year	26,273	6,949	5,111	2,796	4,328	7,088

Willamette Valley UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Falls City UGB	1 year	6	2	1	1	1	1
	20 year	88	22	17	10	15	25
Florence UGB	1 year	87	25	15	7	22	17
	20 year	1,373	299	203	105	427	339
Gates UGB	1 year	3	1	1	0	0	1
	20 year	44	10	8	4	9	12
Gervais UGB	1 year	16	5	3	2	2	4
	20 year	249	65	49	27	40	69
Halsey UGB	1 year	6	2	1	1	1	1
	20 year	86	23	17	9	14	23
Harrisburg UGB	1 year	20	7	4	2	3	4
	20 year	300	84	60	32	47	77
Hubbard UGB	1 year	29	9	6	3	4	7
	20 year	467	118	90	50	79	130
Idanha UGB	1 year	1	0	0	0	0	0
	20 year	17	3	2	1	6	5
Independence UGB	1 year	79	23	16	8	12	19
	20 year	1,295	306	245	140	224	379
Jefferson UGB	1 year	18	6	4	2	2	4
	20 year	279	74	55	30	45	76
Junction City UGB	1 year	65	20	13	7	10	15
	20 year	1,050	255	200	113	179	302
Keizer UGB	1 year	252	81	52	26	36	57
	20 year	4,009	1,018	774	432	664	1,120
Lafayette UGB	1 year	29	8	6	3	4	7
	20 year	479	108	90	53	84	146
Lebanon UGB	1 year	141	50	30	14	19	28
	20 year	2,123	600	421	223	337	541
Lincoln City UGB	1 year	147	29	18	9	56	34
	20 year	2,553	362	267	146	1,106	673
Lowell UGB	1 year	6	2	1	1	1	1
	20 year	98	26	18	10	19	25
Lyons UGB	1 year	10	3	2	1	2	2
	20 year	166	39	30	17	32	47
McMinnville UGB	1 year	297	97	62	31	43	65
	20 year	4,660	1,210	901	496	779	1,273
Mill City UGB	1 year	14	5	3	1	2	3
	20 year	205	57	40	21	36	52

Willamette Valley UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Millersburg UGB	1 year	74	16	14	8	13	23
	20 year	1,337	249	241	150	250	448
Monmouth UGB	1 year	97	27	19	10	15	25
	20 year	1,623	367	304	178	284	491
Monroe UGB	1 year	4	2	1	0	1	1
	20 year	60	18	12	6	9	14
Mt. Angel UGB	1 year	27	9	6	3	4	6
	20 year	417	110	81	45	68	114
Newberg UGB	1 year	257	75	52	27	39	64
	20 year	4,248	990	801	462	737	1,258
Newport UGB	1 year	116	35	21	10	27	24
	20 year	1,841	418	291	154	511	467
Oakridge UGB	1 year	17	6	3	2	3	3
	20 year	255	69	48	25	48	65
Philomath UGB	1 year	48	14	10	5	7	12
	20 year	791	187	149	85	138	231
Salem UGB	1 year	2,016	661	420	209	283	444
	20 year	31,617	8,254	6,152	3,392	5,163	8,656
Scio UGB	1 year	10	3	2	1	1	2
	20 year	160	37	30	17	28	48
Scotts Mills UGB	1 year	2	1	0	0	0	1
	20 year	39	9	7	4	7	11
Sheridan UGB	1 year	30	10	6	3	4	6
	20 year	457	126	90	49	73	120
Siletz UGB	1 year	7	3	2	1	1	1
	20 year	113	31	22	12	18	29
Silverton UGB	1 year	84	27	17	9	12	19
	20 year	1,345	338	258	144	228	377
Sodaville UGB	1 year	3	1	1	0	0	1
	20 year	41	10	8	4	7	12
Springfield UGB	1 year	470	172	101	47	60	88
	20 year	6,937	2,042	1,395	728	1,063	1,709
St. Paul UGB	1 year	3	1	1	0	0	1
	20 year	45	12	9	5	7	12
Stayton UGB	1 year	68	22	14	7	10	15
	20 year	1,070	278	208	115	174	295
Sublimity UGB	1 year	14	5	3	1	2	3
	20 year	207	60	42	22	32	52

Willamette Valley UGBs	Results	Total	0-30% AMI	31-60% AMI	61-80% AMI	81-120% AMI	>120% AMI
Sweet Home UGB	1 year	60	19	12	6	9	13
	20 year	946	243	182	100	162	260
Tangent UGB	1 year	16	5	3	2	2	4
	20 year	254	65	49	27	42	70
Toledo UGB	1 year	23	8	5	2	3	4
	20 year	341	97	66	34	60	84
Turner UGB	1 year	23	6	5	2	4	6
	20 year	386	86	72	42	69	117
Veneta UGB	1 year	26	9	5	3	4	5
	20 year	402	108	78	42	67	106
Waldport UGB	1 year	18	5	3	1	5	4
	20 year	305	56	42	23	101	82
Waterloo UGB	1 year	1	0	0	0	0	0
	20 year	10	3	2	1	1	2
Westfir UGB	1 year	1	0	0	0	0	0
	20 year	16	4	3	1	4	4
Willamina UGB	1 year	14	4	3	1	2	3
	20 year	225	55	43	24	38	64
Woodburn UGB	1 year	213	71	45	22	29	45
	20 year	3,295	880	644	351	535	884
Yachats UGB	1 year	18	3	2	1	8	5
	20 year	333	36	29	16	162	90
Yamhill UGB	1 year	7	2	1	1	1	1
	20 year	108	29	21	12	17	29