

Housing Equity Indicators Dashboard: Data Sources, Methods, and Definitions

January 2025

Overview

Oregon Revised Statute (ORS) 456.602 outlines a set of statewide housing equity indicators that Oregon Housing and Community Services (OHCS) must publish to support the Oregon Housing Needs Analysis (OHNA). The ORS states that OHCS shall produce the following indicators for each city with over 10,000 population, to the extent that the department can determine, define, or estimate:

- a) Housing outcomes, such as cost burden and availability of housing units to own or to rent, and housing condition for various demographics, including race or ethnicity, disability status, English proficiency and age;
- b) Housing types produced and overall land efficiency of existing and new housing;
- c) New housing units built to standards, as defined by the Department of Consumer and Business Services by rule, relating to accessibility and visitability;
- d) Risk of gentrification and displacement;
- e) Housing segregation by race and income;
- f) Environmentally just housing outcomes, informed by the environmental justice mapping tool, developed by the Environmental Justice Council under ORS 182.555;
- g) Residential tenants who spend more than 50 percent of their household income on gross rent for housing; and
- h) Other measurable factors of indicators identified by the department

OHCS elected to include age and population as one other measurable factor in [indicator H](#). See page 12 below for a description.

OHCS is required to publish the equity indicators on Jan. 1, 2025 and annually thereafter. Indicators [A](#), [D](#), [E](#), [G](#), and [H](#) will be included in the first version of the dashboard published on Jan. 1, 2025. See page 2 for a description of methods and sources. Each version of the dashboard will be saved in an archived section of OHCS's Tableau Public page as a reference. The first version is available at [OHNA Housing Equity Indicators Dashboard V1 | Tableau Public](#)

Indicators [B](#), [C](#), and [F](#) have insufficient data at this time to be included in the first dashboard. See page 13 for a description.

Methods and Data Sources

For each of the following indicators, the dashboard uses information from the U.S. Census Bureau American Community Survey (ACS) and decennial Census to provide data for all of these variables. The 2025 edition of the Housing Equity Indicators uses 2017 and 2022 five-year ACS data. Additional data sources used for a specific indicator are noted. OHCS has included analysis and visualizations of each indicator for every Oregon city with a population greater than 10,000.

Indicator A) housing outcomes

The ORS identifies this indicator as “Housing outcomes, such as cost burden and availability of housing units to own or to rent, and housing condition for various demographics, including race or ethnicity, disability status, English proficiency, and age.” For each Oregon city over 10,000 population, the dashboard provides data for:

- **Cost burden** is defined as a household that spends 30% or more of its gross (pre-tax) income on housing costs including utilities.
 - Source: U.S Census Bureau, American Community Survey, Table DP04
- **Availability of housing units to own or to rent** is defined as the current number and rate of households who own or rent their homes, also known as tenure in the ACS.
 - Source: U.S. Census Bureau, American Community Survey, Table DP04
- **Housing condition** is defined as the quality or state of a living environment. OHCS identified housing units built before 1970, a lack of a complete kitchen, and a lack of complete plumbing as potential housing problems. This aligns with definitions of poor housing conditions used by the Census Bureau and the U.S. Department of Housing and Urban Development.
 - Source: U.S. Census Bureau, American Community Survey Table DP04, B25049, and B25053

And for each of these three variables, the dashboard provides information for the following demographics when the data is available and the margins of error are within an acceptable range:

- Race or ethnicity, defined as the self-identified response to the American Community Survey (ACS). The U.S. The Census Bureau follows guidelines provided by the U.S. Office of Management and Budget to determine race and ethnicity categories. Information on the standards which guide ACS race and ethnicity surveys can be found [here](#).
 - Source: U.S. Census Bureau, American Community Survey, Table DP05

- Disability status, defined as the self-identified response to the American Community Survey (ACS). The U.S. Census Bureau includes six categories of disability status including, ambulatory, cognitive, self-care, hearing, vision, and independent living difficulties.
 - Source: U.S. Census Bureau, American Community Survey, Table S1810
- English proficiency defined as the self-identified response to the American Community Survey (ACS). The ability for an individual to speak English very well, not well, or not at all.
 - Source: U.S. Census Bureau, American Community Survey, Table B16002
- Age, defined as the self-identified response to the American Community Survey (ACS) from under 5 years old to 85 years or older.
 - Source: U.S. Census Bureau, American Community Survey, Table DP05

OHCS has opted not to provide cross tabulations of these variables (e.g., cost burden by race and ethnicity) due to data quality concerns at the city level. A significant majority of variables cross tabulated at the city level have high margins of error that severely limit the usefulness of information for decision making purposes. Where possible, OHCS has provided data disaggregated by race and ethnicity, but if margins of error are too high for disaggregation, data may be aggregated to compare White, Non-Hispanic and Black, Indigenous, and People of Color (BIPOC) populations (e.g., tenure by White, Non-Hispanic and BIPOC) in an attempt to balance information needs and data quality considerations. For the housing equity indicators dashboard, the BIPOC category is an aggregation of individuals who do not self-identify in the ACS as White, Non-Hispanic.

Similarly, OHCS will not utilize Comprehensive Housing Affordability Strategy (CHAS) data from the U.S. Department of Housing and Urban Development (HUD) due to high margins of error at the city level and release delays. While the CHAS data does include cross-tabulations of variables such as cost burden with disability status and race and ethnicity, the margins of error at the city level are significant due to small sample sizes and would make comparisons between cities or planning within a city difficult. The CHAS dataset is also much older than the ACS. The most recent CHAS data is from 2021 compared to 2023 from the ACS, which suggests it is less descriptive of Oregon's current state of affairs.

OHCS has instead provided a number of descriptive data variables from the ACS related to housing, population, and income, which can help cities understand the populations living in their communities and the challenges they face. In the majority of cases the data is shown for 2017 and 2022 so that change over time can be observed. The variables included on the

Housing Outcomes section of the Housing Equity Indicators Dashboard for each Oregon city with a population of 10,000 or greater are:

Housing Data:

- Household Tenure: The number and percentage of households who are Homeowners or Renters (DP04, 2017 and 2022)
 - Household Tenure by Age Group (S0102, 2017 and 2022)
 - Household Tenure for White and BIPOC Households (S2502, 2017 and 2022)
- Median Home Value (S2506, 2017 and 2022)
- Home Value to Income Ratio: This is the median home value divided by median household income (2017 and 2022)
- Housing Cost Burden (DP04, 2017 and 2022): A household is considered to have housing cost burden if they spend 30% or more of their gross (pre-tax) income on housing costs including utilities
 - Percent of all households (DP04, homeowners and renters) with housing cost burden
 - Percent of renter households with housing cost burden (DP04, 2017 and 2022)
- Poor Housing Condition (DP04, 2017 and 2022): this is shown as the number of housing units lacking complete plumbing or kitchen facilities
- Structures Built Pre-1970 (DP04, 2017 and 2022)

Population Data:

- Population by Race and Ethnicity (S2502, 2017 and 2022)
- Population by Age (S10102017 and 2022)
 - White, Non-Hispanic Population by Age (DP05)
 - BIPOC Population by Age (DP05)
- Population by Disability Type (S1810 and S1811, 2017 and 2022)
- Population Aged 75 or Older with a Disability (2017 and 2022)
- Population with Limited English Proficiency (B16002, 2017 and 2022): This is defined in the ACS as people who self-identify as speaking English “less than very well”.
- Household Types (B25115, 2017 and 2022): Number and Percentage of households that are in Family or Nonfamily households

Income Data:

- Median Household Income by Race and Ethnicity (S1901, 2022, adjusted for inflation to 2024)
 - Adjusted using Oregon Employment Department Inflation Tool

- Median Household Income by Age (B19037, 2017 and 2022, adjusted for inflation to 2024)
 - Adjusted using Oregon Employment Department Inflation Tool
- Population Below Poverty Level by Race and Ethnicity (S1701, 2017 and 2022)
- Population Below Poverty Level by Age (B17001, 2017 and 2022)
- Population with a Disability Below and Above the Poverty Level (B18130, 2017 and 2022)

Indicator D) Risk of gentrification and displacement

The ORS does not define this indicator in great detail. OHCS has adopted the Anti-Displacement and Gentrification Toolkit and related materials that were developed by Dr. Lisa Bates, Dr. Marisa Zapata, and Seyoung Sung at Portland State University. The toolkit was formally adopted in September 2021 by DLCD to help cities over 10,000 create housing needs analysis stemming from HB2003 (2019).

As described by DLCD, “the toolkit walks practitioners through a series of analyses that consider aspects of housing need that are not typically part of a HNA, including assessing current housing dynamics and spatial vulnerabilities for Black, Indigenous, and People of Color (BIPOC), low income, and renter households. From here, the toolkit provides a methodology to characterize specific neighborhood typologies depending on the unique housing characteristics of that neighborhood. These typologies can then be used to inform which specific HPS tools, actions, and strategies are best served to mitigate negative externalities, such as gentrification and displacement, within neighborhoods.”

A wide range of data variables are aggregated at the census tract and city level and then compared to one another to determine the potential characteristics of a given neighborhood. A list of the established indicators and data variables is included.

| Indicator | Data Variables | Geography | Data Source |
|-------------------------|---|--------------------------|--|
| Neighborhood Change | <ul style="list-style-type: none"> · Median Household Income (MHI) Change · Renter Household Change · Education Change · BIPOC Change | Tract compared with city | American Community Survey, Multiple Tables, 2022 |
| Income Profile | <ul style="list-style-type: none"> · Low-income Households · Household Income | Tract compared with city | American Community Survey, Multiple Tables, 2022 |
| Vulnerable People | <ul style="list-style-type: none"> · BIPOC · Limited English-proficiency · Persons with disabilities · Female-headed households · 65 years and older | Tract compared with city | American Community Survey, Multiple Tables, 2022 |
| Precarious Housing | <ul style="list-style-type: none"> · Multifamily housing units · Housing units built before 1970 | Tract compared with city | American Community Survey, Multiple Tables, 2022 |
| Housing Market Activity | <ul style="list-style-type: none"> · Median rent · Rent change · Median home value · Home value change | Tract compared with city | American Community Survey, Multiple Tables, 2022 |

Using the above data, census tracts are sorted into six different neighborhood typologies which can help describe the characteristics of a given area. This is in an effort to provide cities the ability to make informed decisions about how to address housing problems that may be occurring in parts of their community. Data at the census tract level is compared to their respective cities and based on those relationships, a typology is assigned. Tract level typologies are provided.

| | Income Profile | Vulnerable People | Precarious Housing | Housing Market Activity | Neighborhood Demographic Change |
|-----------------------------------|-----------------------|--------------------------|---------------------------|--------------------------------|--|
| (Green) Affordable and vulnerable | Low | Yes | Yes | No | - |
| (Yellow) Early Gentrification | Low | Yes | Yes | Yes | No |
| (Orange) Active Gentrification | Low | Yes | Yes | Yes | Yes |
| (Red) Late Gentrification | High | Yes | No | Yes | Yes |
| (Blue) Becoming Exclusive | High | No | No | Yes | Yes |
| (Purple) Advanced Exclusive | High | No | No | Has higher home value and rent | No |
| (Grey) Unassigned | - | - | - | - | - |

The Anti-Displacement and Gentrification Toolkit then provides potential policy actions and intervention strategies to help address problems associated with a given typology. A full walkthrough of the methodology, typologies, and actions for a city to take can be found [here](#).

Indicator E) Housing segregation by race and income

The ORS does not define this indicator in great detail. OHCS’s definition evaluates segregation and concentration by race and income at the census tract and city level. Spatial concentration and segregation measure the imbalance of low-income, high-income, BIPOC, and white populations within and between OHNA cities. Specifically, it measures areas with a significant concentration of specific income and/or racial demographics while simultaneously missing (or excluding) other income and racial demographics.

This methodology attempts to highlight communities that are overrepresented in a given area but isolated or segregated from others. These are neighborhoods where housing segregation occurs and should be evaluated during planning. However, this is only a starting point - no single indicator can capture the systematic and historical nuances of a given neighborhood within a city.

For instance, a census tract that is sorted into the “High-Income White Neighborhood” typology would not only have a significant share of wealthier and white households but would have a small share of BIPOC and low-income households.

To determine the segregation or concentration of low-income households (those earning less than \$50,000 per year), high-income households (those earning more than \$150,000 per year, white (non-Hispanic), and BIPOC communities, a location quotient is calculated. Each census tract is compared to both its respective city and the average of all cities with a population of 10,000 or greater (“OHNA cities”). A location quotient of 0.8 or below is considered “low,” between 0.8 and 1.2 is “average,” and above 1.2 is “concentrated.”

| Location Quotient Score | Tract Descriptor |
|--------------------------------|-------------------------|
| Below 0.8 | Low |
| Between 0.8 and 1.2 | Average |
| Above 1.2 | Concentrated |

For example, if a census tract in Bend is made up of 52% low-income households, it is divided by the share of low-income households in the city of Bend (28.3%) and the average share of low-income households for all OHNA cities (31.6%). The location quotient for the tract is 1.84 compared with Bend and 1.64 for the all-city average. In either case, low-income households are overrepresented in the tract and would be considered concentrated (above the 1.2 threshold).

Location quotient scores are then used to sort census tracts into typologies that describe not only what households are represented in an area but which are excluded. A tract must have a flag for both the city and all-city categories to meet typology requirements. An exception to this is the white descriptor due to the racial makeup of Oregon. If a census tract is made up of more than 90% households, it meets the typology for a “white” tract. Concentration of college students was also added as a typology. This is because colleges can significantly impact housing markets, often increasing competition especially for more affordable rentals. On mapping tools, race and ethnicity take precedence over college, though. If a census tract flagged as both a white and college neighborhood, only “white” would appear in the typology. However, all census tract concentrations are provided in the downloadable Excel Spreadsheet below.

| Typology | Definition |
|-----------------|---|
| Low-Income | Tract is concentrated compared to both city and all city for low-income households, scored “low” on both high-income categories |
| Mixed-Income | Tract scored as average in both income categories compared to both city and all city |
| High-Income | Tract is concentrated in both High-Income categories, scored “low” on Low-Income in both categories |
| White | More than 90% of tract households identified as white, non-Hispanic |
| BIPOC | Tract is concentrated in BIPOC compared to both city and all city, scored low on White in both categories |
| College | More than 10% of tract residents are enrolled in post-secondary education |

For example, a **Low-Income White Neighborhood** would be an area with a large share of low-income households, few high-income households, and more than 90% of the residents identified as White non-Hispanic.

A **High-Income BIPOC Neighborhood** would be an area with a large share of high-income and BIPOC households and with few low-income and white households.

Finally, a **Low-Income Neighborhood** would be an area with a large share of low-income households and few high-income households, did not have either more than 90% of residents as white, non-Hispanic or requirements for a BIPOC tract.

While this approach can help describe segregation and concentration by race and income within a city, it can struggle to capture typologies if a place is significantly different from the average OHNA city. For instance, if a city has a large number of high-income households throughout all of its tracts, it will flag as “concentrated” when compared to the average OHNA city. However, when the city’s tracts are compared to its own city, it may not appear as concentrated. This is due to the city having a significantly larger share of high-income households overall compared with the typical OHNA city. Since the comparators (individual city and OHNA city average) are significantly different, the results can vary as well.

To help address this, OHCS has provided comparisons between cities to take into consideration when planning. Cities are first sorted based on more general characteristics. A city is slotted into one of four categories based on racial diversity and low-income households. If a city falls below the OHNA city average in either category, it is considered less diverse and/or less low-income households. If a city is above the OHNA city average in either category, it is considered more diverse and/or more low-income households.

As an example, Beaverton is considered more diverse with less low-income households. This is because the city has a greater share of BIPOC communities and smaller number of low-income households when compared with the average OHNA city.

Additionally, the share of high or low-income concentrated tracts compared to the all-city average was calculated for each city. Then the mean and standard deviation was determined so that cities above one standard deviation were flagged to show that the overall city makeup is significantly different than the typical OHNA city.

| Income | Mean - Share of Concentrated Tracts | +1 Standard Deviation |
|---------------|--|------------------------------|
| High-Income | 29.0% | 55.8% |
| Low-Income | 27.2% | 54.2% |

In addition to the map and visualizations provided on the Housing Equity Indicators dashboard, here are some additional maps that show the underlying data points for determining the typologies.

Race and Ethnicity Typology <https://www.datawrapper.de/ /9IEr5/?v=5>

BIPOC Households Concentration <https://www.datawrapper.de/ /IL5GQ/>

White Households Concentration <https://www.datawrapper.de/ /YqUiL/>

High-Income Households Concentration <https://www.datawrapper.de/ /j1rkw/?v=2>

Low-Income Households Concentration <https://www.datawrapper.de/ /DSF1c/?v=2>

In addition, the full Excel workbook used to create these maps is available upon request by emailing hcs.ohna@hcs.oregon.gov.

Indicator G) Severe Cost Burdening

The ORS is clear on this indicator, specifying that the dashboard should display “Residential tenants who spend more than 50 percent of their household income on gross rent for housing.” For each city in Oregon with a population of 10,000 or greater, the dashboard displays information on the share of renter households who spend more than 30% (cost burdened) or 50% (severely cost burdened) of their gross (pre-tax) income on gross rent, including utilities. Each city was also placed into one of the following Rent Burden Typologies:

Low Severe Rent Burden; Low Rent Burden City = the percentage of renters with severe burden in the selected city is below the median rate of severe burden in all OHNA cities, and the percentage of renters with rent burden in the selected city is below the median rate of rent burden in all OHNA cities.

Low Severe Rent Burden; High Rent Burden City = the percentage of renters with severe burden in the selected city is below the median rate of severe burden in all OHNA cities and the percentage of renters with rent burden in the selected city is above the median rate of rent burden in all OHNA cities.

High Severe Rent Burden; Low Rent Burden City = the percentage of renters with severe burden in the selected city is above the median rate of severe burden in all OHNA cities, and the percentage of renters with rent burden in the selected city is below the median rate of rent burden in all OHNA cities.

High Severe Rent Burden; High Rent Burden City = the percentage of renters with severe burden in the selected city is above the median rate of severe burden in all OHNA cities and the percentage of renters with rent burden in the selected city is above the median rate of rent burden in all OHNA cities.

Indicator H) Other measurable factors of indicators identified by the department

The ORS leaves this indicator open to OHCS's discretion. The department has defined this indicator to measure aging across Oregon. To accomplish this, the department:

- 1) Projected city populations to 2030 by 5-year age group using observed demographic trends between 2010 and 2020 and;
- 2) Calculated an elderly ratio, or the share of the elderly population (ages 70+) divided by the working age population (ages 20 to 69), for cities in 2020 and 2030.

Cities were then placed into a typology based on their 1) 2020 elderly ratio and 2) projected rate of change in the elderly ratio to measure their current and future outlook on aging.

- **High Current and High Projected:** These cities have an above average elderly ratio in 2020 and the ratio is projected to increase faster than average into 2030. These cities are generally at the peak of their aging cycle.
- **High Current and Low Projected:** These cities have an above average elderly ratio in 2020 and the ratio is projected to increase at a slower than average rate into 2030. These cities are generally in the late stages of aging.
- **Low Current and High Projected:** These cities have a below average elderly ratio in 2020, but that ratio is projected to increase at a faster than average rate into 2030. These cities are generally in the early stages of aging.
- **Low Current and Low Projected:** These cities have a below average elderly ratio in 2020 and that ratio is projected to increase at a slower than average rate into 2030. These cities generally experience minimal effects of aging due to a stable in-migration and/or growth of families and workforce populations.

Future Work

OHCS hopes to continue building out the Housing Equity Dashboard in the future as more and better data becomes available. At present, indicators B, C, and F identified in the ORS have insufficient data to be included in the dashboard for all cities with a population greater than 10,000.

Indicator B) Housing types produced and land efficiency

The ORS described this indicator as displaying “housing types produced and overall land efficiency of existing and new housing” for each city with over 10,000 population.

This is an important indicator that can help cities understand the number of units per buildable residential acre within their city and how built up or sprawling the units within a city are. However, there is no standardized measure of land efficiency using data that is available and accurate for each city across the state.

In order to accurately capture this data and compare the land efficiency of new housing relative to existing housing stock, OHCS would need a well-managed address-level inventory of all housing developments containing precise measurements (i.e. square footage) of each property. This data could come from county assessor offices, but at the moment the data are incomplete and inconsistent from county to county. Improving this data quality is something OHCS, DLCD and other partners will continue to explore in 2025.

In 2025, OHCS and DLCD will be working with Portland State University’s Population Research Center (PRC) on a revised version of the Annual Housing Units and Population Survey (AHUPS) that will be administered by PRC to all jurisdictions subject to OHNA to collect data on housing permitting and production activity. This survey will provide greater detail on housing types produced, which can then be displayed on an OHCS dashboard, but this is only one component of this indicator and does not tell the full story of land efficiency.

Indicator C) Housing Unit Accessibility and Visitability

The ORS described this indicator as displaying “new housing units built to standards, as defined by the Department of Consumer and Business Services by rule, relating to accessibility and visitability.”

This is an important indicator that can help cities understand the share of their housing stock that is available to people with disabilities, an important component of housing choice.

Unfortunately, no publicly available statewide dataset exists that tracks the building components that would be needed to indicate either accessibility or visitability.

In 2025, OHCS and DLCD will be working with PRC on a revised version of the Annual Housing Units and Population Survey (AHUPS) that will be administered by PRC to all jurisdictions subject to OHNA to collect data on housing permitting and production activity. This survey will ask new questions about accessible and visitable units to allow us to display this data in future years. However, that will only provide data on newly produced housing units, not existing units. That is a data element that OHCS, DLCD, and our partners will continue to work towards.

Indicator F) Environmentally just housing outcomes

The ORS described this indicator as displaying “Environmentally just housing outcomes, informed by the environmental justice mapping tool, developed by the Environmental Justice Council under ORS 182.555.”

Unfortunately, this dataset does not yet exist. However, OHCS is collaborating with the Environmental Justice Council to develop a “built environment” subcategory and will include the tool once it is publicly available.