



## **PLANNING COMMISSION WORK SESSION AGENDA**

**Monday, October 12, 2020 - 6:00 PM**

**City Hall, Conference Room A, 169 SW Coast Hwy, Newport, OR 97365**

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This meeting will be held electronically. The public can live-stream this meeting at <https://newportoregon.gov>. To access the livestream, visit the Planning Commission page at <https://www.newportoregon.gov/citygov/comm/pc.asp>. Once there, an "in progress" note will appear if the meeting is underway; click on the "in progress" link to watch the livestream. It is not possible to get into a meeting that will be livestreamed before the meeting starts. The meeting will also be broadcast on Charter Channel 190.

Public comment may be made, via e-mail, by noon on the scheduled date of the meeting at [publiccomment@newportoregon.gov](mailto:publiccomment@newportoregon.gov). To make a "real time" comment during a meeting, a request to speak must be received by 2:00 P.M. on the scheduled date of the meeting. The request to speak should include the agenda item on which the requestor wishes to speak. If the comments are not related to a particular agenda item, the request to speak should include a notation that the request is for general public comment, and the general topic. The request should be e-mailed to [publiccomment@newportoregon.gov](mailto:publiccomment@newportoregon.gov). Once a request to speak has been received, staff will send the requestor the Zoom meeting link. This link will allow a requestor to participate via video or telephone.

The agenda may be amended during the meeting to add or delete items, change the order of agenda items, or discuss any other business deemed necessary at the time of the meeting.

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1. CALL TO ORDER
2. UNFINISHED BUSINESS
3. NEW BUSINESS
- 3.A City of Newport COVID-19 Virtual, Hybrid, and In-Person Meeting Policy.  
[Memorandum](#)  
[Phase 2 Press Release](#)

Emergency Order No. 2020-28

**3.B Draft Regulations for Small Wireless Facilities (5G Implementation).**

Memorandum

Draft of NMC Chapter 9.25, Small Wireless, dated 10/8/20

Email Exchange with CLPUD Staff

LOC Small Wireless Facilities Model Ordinance

**3.C DLCD Regional Housing Needs Analysis Report and Outreach.**

Memorandum

Email from Lisa Phipps, DLCD Regional Rep 10/1/20

Regional Housing Needs Context Memorandum


Regional Housing Needs Technical Report - August 2020

**4. ADJOURNMENT**

# City of Newport

## Community Development Department

# Memorandum

To: Planning Commission / Commission Advisory Committee  
From: Derrick I. Tokos, AICP, Community Development Director   
Date: October 8, 2020  
Re: City of Newport COVID-19 Virtual, Hybrid, and In-Person Meeting Policy

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Enclosed is a new emergency policy (No. 2020-28) for the conduct of virtual, hybrid, and in-person meetings during the COVID-19 pandemic. It was prepared in recognition of the fact that Lincoln County has moved into Phase 2 of the Governor's reopening plan and that most City facilities will now be open to the public on at least a limited basis.

This work session agenda item has been scheduled so that Planning Commission and Advisory Committee members can discuss the policy and to gauge whether or not there is interest from any Commission members to attend meetings in person at this time.

Attachments

Phase 2 Press Release  
Emergency Order No. 2020-28



FOR IMMEDIATE RELEASE

Contact: Peggy Hawker  
541.574.0613

### **CITY OF NEWPORT RE-OPENING OF FACILITIES, PROGRAMMING, AND MEETINGS**

Due to the COVID-19 pandemic, the City of Newport closed facilities, programming, and meetings in March. Lincoln County will be entering Phase Two of re-opening on September 29, and the city is working on its re-opening plan as well. Re-opening will be a process for the city as many buildings required modification to re-open, and in some cases, the modifications are not complete. This could potentially delay the full re-opening of various facilities.

The following facilities will open, at some level, during the week of October 5, 2020:

1. City Hall, including the Police Department, will be open from 8:00 A.M. until 2:00 P.M., Monday through Thursday. The building will be closed during the previous open hours of 3:00 - 5:00 P.M., on Tuesdays and Thursdays. The building will remain closed on Fridays except by appointment. The Friday closure is designed to allow the reduced staff (due to budget cuts) to continue to support city services. Access to City Hall during open hours will be through the main entrance (Highway 101 entrance).
2. Events may occur at the Airport subject to gathering restrictions imposed by Governor Brown and appropriate physical distancing.
3. The Library will tentatively re-open, on a limited basis, on October 19 for computer usage by appointment only. Access to Library materials will continue through the Library's Take-Out Service.
4. The Recreation Center will re-open on October 6 by reservation only. Organized sports will resume at a date to be determined.
5. The Aquatic Center will re-open on October 6 by appointment only. Organized sports will resume at a date to be determined.



6. Playgrounds and sports facilities will re-open. Organized practices on sports fields will be scheduled after meeting with city staff.
7. The Visual Arts Center will re-open on October 24, and will be operating on a modified schedule to be determined.
8. The 60+ Activity Center will remain closed until further notice.

Staff is studying the issue of city meetings. Until further notice, all City Council, Planning Commission, and city advisory committee meetings will occur virtually. Information regarding meeting participation in the city's meetings is included at this link [https://www.newportoregon.gov/dept/adm/covid19/City\\_of\\_Newport\\_Emergency\\_Order\\_No\\_2020-25.pdf](https://www.newportoregon.gov/dept/adm/covid19/City_of_Newport_Emergency_Order_No_2020-25.pdf).

Anyone entering a city facility will be required to wear a mask and have a temperature scan.

The re-opening of any city facility, program, and meeting is subject to change.

Questions should be directed to Peggy Hawker, at [p.hawker@newportoregon.gov](mailto:p.hawker@newportoregon.gov), or at 541.574.0613.

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**CITY OF NEWPORT  
EMERGENCY ORDER NO. 2020-28**

**ENACTING A COVID-19 VIRTUAL AND IN-PERSON  
MEETING POLICY**

**WHEREAS**, the Governor of the State of Oregon declared a state of emergency for the state on March 8, 2020, finding that COVID-19 created a threat to the public health and safety and constituted a statewide emergency; and

**WHEREAS**, the City of Newport declared an emergency on March 13, 2020, which was ratified by the City Council at its March 16, 2020 meeting; and

**WHEREAS**, the President of the United States signed a proclamation declaring a national emergency concerning COVID-19 on March 13, 2020; and

**WHEREAS**, local, state, and national public health agencies have instituted guidelines, recommendations, and actions to curb the spread of the disease in an attempt to "flatten the curve" of the disease's progression in the United States. Many of those recommendations have been adopted by states and local governments across the country. In Oregon, the Governor has issued Executive Orders 20-01 through 20-20, and 20-22, 20-24, 20-25, 20-27, 20-28, 20-29, 20-30, 20-37, and 20-38 to address COVID-19 closures and reopening of certain facilities, limiting public gatherings, higher education restrictions, and other needs and requirements related to the COVID-19 pandemic; and

**WHEREAS**, the Governor directed Oregonians to "stay at home to stay healthy" through physical and social distancing guidelines, limitations on congregations, and non-essential travel; and

**WHEREAS**, the City of Newport, through emergency orders, has closed various municipal facilities, and limited access to others; and

**WHEREAS**, Governor Brown approved Lincoln County for Phase Two reopening, and on September 29, 2020, Lincoln County entered Phase Two of its reopening; and

**WHEREAS**, City of Newport staff developed a phased reopening plan for city facilities, programming, and meetings; and

**WHEREAS**, the City Council, Planning Commission, and the city's standing committees have been holding fully virtual meetings since March of 2020; and

**WHEREAS**, the City of Newport is moving into its Phase Two reopening, and Phase Two allows the City Council to meet with three Councilors in-person, plus two staff members at the dais, with an audience limited to 15 - 18; and

**WHEREAS**, Phase Two allows the Planning Commission to meet with up to four Commissioners in-person, plus one staff person at the dais, and an audience size limited to 15 - 18; and

**WHEREAS**, Phase Two allows advisory committees to meet in-person, in the City Council Chambers, with a limit of 12 people, including staff.

**WHEREAS**, the decision to hold in-person meetings will be left to the committee and its staff; and

**WHEREAS**, if a completely virtual, or a hybrid (part virtual and part in-person) meeting is held, the public comment and participation in virtual meetings will occur as described in Attachment A - Virtual Meeting Policy as revised October 5, 2020.



I, **Spencer R. Nebel, City Manager for the City of Newport, hereby order:**

**October 5, 2020 Approved a revised Virtual Meeting Policy for the City Council, Planning Commission, and standing committees of the City of Newport. A copy of the policy is included as Attachment A.**



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**Spencer R. Nebel, City Manager**



**ATTACHMENT A****COVID-19 TEMPORARY  
VIRTUAL, HYBRID, AND IN-PERSON MEETING POLICY****Why Virtual Meetings**

Due to COVID-19, the City of Newport has been holding all its public meetings virtually. This includes City Council, Planning Commission, and all of the city's standing advisory committees. Zoom is the virtual meeting platform that is utilized by the city. It is expected that virtual, hybrid, and some in-person meetings will continue as the city enters Phase Two of its reopening plan.

**Types of Meetings**

**Virtual Meetings** - virtual meetings will be held in the City Council Chambers of the Newport City Hall. These meetings will be livestreamed and televised on Charter Channel 190. Most attendees will be attending virtually with a limited number of staff and committee members present in the City Council Chambers.

**Hybrid Meetings** - hybrid meetings will be held in the City Council Chambers of the Newport City Hall. These meetings will be livestreamed and televised on Charter Channel 190.

For a hybrid City Council meeting, up to three City Councilors and two staff may be present on the dais. Audience size is limited to 15 - 18 people.

For a hybrid Planning Commission meeting, up to four Commissioners and one staff may be present on the dais. Audience size is limited to 15 - 18 people.

For hybrid advisory committee meetings, up to five people, including staff, may be present on the dais. Other advisory committee members may sit in the audience section, with a limit of 15 - 18 people.

For in-person advisory committee meetings, attendance is limited to 12 people including staff, when using the City Council Chambers as a meeting venue.

Meetings in other spaces are subject to congregation limits and required physical distancing measures.



All meetings are subject to Oregon Public Meeting Law, and the city's requirement that meetings, if not livestreamed and shown on Charter Channel 190, will have an audiofile that is posted on the city website within 24 hours of the meeting.

### **Access to Watch a Virtual City Council or Committee Meeting**

All virtual public meetings of the City of Newport are livestreamed and televised on Charter Channel 190. To access the livestream, visit the City of Newport website at [www.newportoregon.gov](http://www.newportoregon.gov). Once there, click on "City Government;" then click on "City Council" or "Committees (depending on the meeting of interest); click on the name of the committee; then an "in progress" note will appear if the meeting is underway; click on the "in progress" link to watch the livestream. It is not possible to get into a meeting that will be livestreamed before the meeting starts.

### **Public Comment during a Virtual or Hybrid Meeting**

#### **1. Written Comment.**

To submit a written public comment for any City of Newport meeting, send the written comment to [publiccomment@newportoregon.gov](mailto:publiccomment@newportoregon.gov). For City Council and Planning Commission meetings, the e-mail must be received by noon on the scheduled date of the City Council or Planning Commission meeting. For standing committee meetings, the public comment must be received four hours prior to a scheduled meeting. For example, if a meeting is to be held at 3:00 P.M., the deadline to submit written comment is 11:00 A.M. If a meeting is scheduled to occur before noon, the written comment must be submitted by 5:00 P.M. the previous day.

For City Council meetings, written comments received by the above noted deadlines will be included in the meeting materials, i.e., agenda packet. These comments will be acknowledged, at the appropriate time, by the Mayor or Council President, in the absence of the Mayor. If a specific request is made to read written public comment into the record during a meeting, the City Recorder, or designee, will be provided a maximum of three minutes to read the comment during the meeting.

#### **2. Virtual and Hybrid Meeting - Committee Guidelines.**

As a reminder, members of the City Council, Planning Commission, or any standing committee, should not be exchanging e-mails, texts, or communicating privately during the meeting in any way. This also applies to the chat feature of Zoom. The goal of this reminder is to prohibit side conversations which could violate public meetings law and/or trigger public records law related to retention and access/disclosure.

#### **3. Virtual Comments during a Meeting.**





If you wish to make a “real time” comment during a meeting, a request to speak should be made by 2:00 P.M. on the scheduled date of a City Council or Planning Commission meeting. The request to speak should include the agenda item on which the requestor wishes to speak. If the comments are not related to a particular agenda item, the request to speak should include a notation that the request is for general public comment, and the general topic. The request should be e-mailed to [publiccomment@newportoregon.gov](mailto:publiccomment@newportoregon.gov). For standing committee meetings, the request to speak should be received four hours prior to a scheduled meeting. For example, if a meeting is to be held at 3:00 P.M., the deadline to submit a request to speak is 11:00 A.M. If a meeting is scheduled to occur before noon, the request to speak must be submitted by 5:00 P.M. the previous day. Once a request to speak has been received, staff will send the requestor the Zoom meeting link. This link will allow a requestor to participate via video or telephone.

**4. Public Hearings.**

Individuals wishing to offer testimony during public hearings should utilize the process in Sections 1. and 3. above.

**5. Script for Use at Quasi-Judicial or Legislative Land Use Hearings.**

The script for use at quasi-judicial or legislative land use hearings before the Planning Commission/City Council is attached.

**6. General Virtual Meeting Participation Guidelines.**

All public participants attending virtual meetings will be muted until it is their turn to speak. The participant will be muted at the conclusion of their comments. Public meeting participants are encouraged to remain on the Zoom meeting in the event the public body has follow-up questions. In that situation, the participant will be unmuted for the follow-up response.

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## CITY COUNCIL SCRIPT FOR QUASI-JUDICIAL OR LEGISLATIVE LAND USE HEARINGS USING THE ZOOM VIDEO-CONFERENCING PLATFORM

### 1. Call Public Hearing to Order (Mayor)

This public hearing is being conducted utilizing the Zoom video-conference platform. Before we get started, I would like to provide staff a moment to identify individuals that are participating virtually. I would also like to cover a few ground rules:

- A. Individuals wishing to speak may raise their hand proper or use the raise hand feature, which can be found by clicking on the "Participants" button on the bottom of a computer screen, the "Raise Hand" button on the bottom of a smartphone, or by dialing \*9 on a landline. I will call out the order of testimony in cases where multiple hands are raised.
- B. Please keep your microphone muted unless you are speaking. Press \*6 to mute and unmute a landline.
- C. For persons participating by video or phone, the City can make the shared screen feature available for those that wish to make a presentation. Information shared with the City Council in this manner is part of the record, and a copy of the materials will need to be provided to staff.
- D. For those persons who have elected to attend the hearing in person, a computer has been setup so that they may provide testimony using the video-conference platform.

### 2. Quasi-Judicial and Legislative Land Use Public Hearings (Briefly describe the public hearing items to be heard, as summarized in the staff report or hearing notice, then read the statement below VERBATIM.)

**"This statement applies to quasi-judicial and legislative land use hearings on the agenda. All testimony and evidence presented toward the request(s) being heard must be directed toward the applicable criteria in the Newport Comprehensive Plan, Newport Municipal Code, or other land use regulations or standards which the speaker believes to apply to the decision.**

**The failure of anyone to raise an issue accompanied by statements or evidence sufficient to afford the City Council and the parties an opportunity to respond to the issue will preclude appeal to the Land Use Board of Appeals (LUBA) based on that issue. An issue which may be the basis for an appeal to LUBA shall be raised not later than the close of the record at, or following, this evidentiary hearing. Such issues shall be raised and accompanied by statements or evidence sufficient to afford the city decision makers and the parties an adequate opportunity to respond to each issue.**

**The failure of the applicant to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow the city to respond to the issue precludes an action for damages in circuit court.**

**Prior to the conclusion of a hearing, any participant may request an opportunity to present additional evidence, arguments or testimony regarding the application. If such a request is made then the hearing will be continued to a date certain and schedule set for submittal of additional testimony, a period for parties to respond to the new testimony, and a period whereby the applicant can provide final argument."**

**At this time, I would ask City Councilors to disclose any actual or potential conflicts of interest, bias, ex-parte contacts, or site visits? *(If there is an actual conflict of interest the member must abstain, but counts toward the quorum. Potential conflicts of interest need only be disclosed.)***

**If anyone present has an objection to the participation of any City Councilor, or the City Council as a whole, please raise that objection now. *(If an objection is made, the Councilor(s) to whom it is directed will need to respond and then decide as to whether or not they should recuse themselves.)***

The City Council may, at the request of a participant or on its own accord, continue the hearing to a date certain to provide an opportunity for persons to present and rebut new evidence, arguments or testimony related to the applicable criteria.

The hearing will proceed in the following order:

- Staff report
- Applicant's testimony
- Persons in favor
- Persons opposed
- Applicant's rebuttal
- Record closes for public testimony
- City Council deliberation, questions, and verbal decision
- A final order and findings will be prepared for consideration at the next meeting

(Optional: If due to time constraints, staff and the applicant will be allocated up to 15 minutes each for their presentations. Applicant will also receive up to five minutes for final rebuttal. All others wishing to testify will be given three minutes each.)

3. **Adjourn** (Note the time for the record)

# PLANNING COMMISSION SCRIPT FOR QUASI-JUDICIAL OR LEGISLATIVE LAND USE HEARINGS USING THE ZOOM VIDEO-CONFERENCING PLATFORM

## 1. Call Public Hearing to Order (Chair)

This public hearing is being conducted utilizing the Zoom video-conference platform. Before we get started, I would like to provide staff a moment to identify individuals that are participating virtually. I would also like to cover a few ground rules:

- A. Individuals wishing to speak may raise their hand proper or use the raise hand feature, which can be found by clicking on the "Participants" button on the bottom of a computer screen, the "Raise Hand" button on the bottom of a smartphone, or by dialing \*9 on a landline. I will call out the order of testimony in cases where multiple hands are raised.
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- D. For those persons who have elected to attend the hearing in person, a computer has been setup so that they may provide testimony using the video-conference platform.

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**"This statement applies to quasi-judicial and legislative land use hearings on the agenda. All testimony and evidence presented toward the request(s) being heard must be directed toward the applicable criteria in the Newport Comprehensive Plan, Newport Municipal Code, or other land use regulations or standards which the speaker believes to apply to the decision.**

**The failure of anyone to raise an issue accompanied by statements or evidence sufficient to afford the Planning Commission and the parties an opportunity to respond to the issue will preclude appeal to the Land Use Board of Appeals (LUBA) based on that issue. An issue which may be the basis for an appeal to LUBA shall be raised not later than the close of the record at, or following, this evidentiary hearing. Such issues shall be raised and accompanied by statements or evidence sufficient to afford the city decision makers and the parties an adequate opportunity to respond to each issue.**

**The failure of the applicant to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow the city to respond to the issue precludes an action for damages in circuit court.**

**Prior to the conclusion of a hearing, any participant may request an opportunity to present additional evidence, arguments or testimony regarding the application. If such a request is made then the hearing will be continued to a date certain and schedule set for submittal of additional testimony, a period for parties to respond to the new testimony, and a period whereby the applicant can provide final argument."**

**At this time, I would ask Planning Commissioners to disclose any actual or potential conflicts of interest, bias, ex-parte contacts, or site visits? *(If there is an actual conflict of interest the member must abstain, but counts toward the quorum. Potential conflicts of interest need only be disclosed.)***

**If anyone present has an objection to the participation of any Planning Commission member, or the Commission as a whole, please raise that objection now. *(If an objection is made, the Commissioner(s) to whom it is directed will need to respond and then decide as to whether or not they should recuse themselves.)***

The Planning Commission may, at the request of a participant or on its own accord, continue the hearing to a date certain to provide an opportunity for persons to present and rebut new evidence, arguments or testimony related to the applicable criteria.

The hearing will proceed in the following order:

- Staff report
- Applicant's testimony
- Persons in favor
- Persons opposed
- Applicant's rebuttal
- Record closes for public testimony
- Planning Commission deliberation, questions, and verbal decision
- A final order and findings will be prepared for consideration at the next meeting

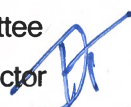
(Optional: If due to time constraints, staff and the applicant will be allocated up to 15 minutes each for their presentations. Applicant will also receive up to five minutes for final rebuttal. All others wishing to testify will be given three minutes each.)

3. **Adjourn** (Note the time for the record)

# City of Newport

## Community Development Department

# Memorandum

To: Planning Commission / Commission Advisory Committee  
 From: Derrick I. Tokos, AICP, Community Development Director   
 Date: October 8, 2020  
 Re: Draft Regulations for Small Wireless Facilities (5G Implementation)

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On August 10, 2020, the Planning Commission and Commission Advisory Committee held a work session to consider the Federal Communications Commission (FCC) rulings related to the deployment of small cell wireless facilities, and the League of Oregon Cities recently released model ordinance and design guidelines for implementing the small wireless requirements. The Commission also discussed options for adjusting its regulations for other wireless or telecommunications infrastructure.

This work session has been scheduled to provide the Commission and Advisory Committee an opportunity to review draft code amendments related to these issues. Given the scope of the potential changes, staff has split the draft code revisions into three parts. This first part puts in place a permitting process for small wireless facilities in public rights-of-way. For future work sessions, staff will roll out design guidelines for small wireless, followed by a final component that looks at the City's land use regulations that address other types of wireless and telecommunications facilities. When the second part is rolled out, I would anticipate bringing forward a more refined version of this draft. This would continue in an iterative manner until all three components have been refined to the point that the Commission is comfortable initiating a public hearings process.

Enclosed, as an informational item, are the standards Central Lincoln PUD has put together in anticipation of 5G small wireless eventually being deployed in Newport. They own most of the poles within the City's rights-of-way, and additional coordination with Central Lincoln PUD and other partner utilities will be needed before the code updates are finalized.

#### Attachments

Draft of NMC Chapter 9.25, Small Wireless, dated 10/8/20  
 Email exchange with central Lincoln PUD Staff, dated 8/18/20, with attached construction standards  
 League of Oregon Cities Small Wireless Facilities Model Ordinance



## CHAPTER 9.25 SMALL WIRELESS FACILITIES

### 9.25.005 Purpose

The purpose of this Chapter is to establish reasonable and non-discriminatory policies and procedures for the placement of small wireless facilities in rights-of-way within the City's jurisdiction, which will provide public benefit consistent with the preservation of the integrity, safe usage, and reasonable aesthetic qualities of the City rights-of-way and the City as a whole. In enacting this Chapter, the City is establishing uniform standards consistent with federal law to address the placement of small wireless facilities and associated poles in the rights-of-way, including without limitation, to manage the public rights-of-way in order to:

- A. prevent interference with the use of streets, sidewalks, alleys, parkways and other public ways and places; and
- B. prevent the creation of obstructions and other conditions that are hazardous to vehicular and pedestrian traffic; and
- C. prevent interference with the facilities and operations of facilities lawfully located in rights-of-way or public property; and
- D. protect against environmental damage, including damage to trees; and
- E. preserve the character of the community, historic districts or areas with decorative poles; and
- F. facilitate technology advancements, such as deployment of small wireless facilities, to provide the benefits of wireless services.

*Staff: This Section incorporates the purpose and intent language from the League of Oregon Cities Model Ordinance ("model ordinance"), dated June of 2020.*

### 9.25.010 Definitions

The following definitions apply in this chapter.

**Antenna** means the same as defined in 47 C.F.R. § 1.6002(b), as may be amended or superseded. The term includes an apparatus designed for the purpose of emitting radio frequencies (RF) to be operated or operating from a fixed location pursuant to Federal Communications Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under 47 C.F.R. Part 15.

**Antenna Equipment** means the same as defined 47 C.F.R. § 1.6002(c), as may be amended or superseded, which defines the term to mean equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.

**Antenna Facility** means the same as defined in 47 C.F.R. § 1.6002(d), as may be amended or superseded, which defines the term to mean an antenna and associated antenna equipment.

**Applicable codes** means uniform building, fire, safety, electrical, plumbing, or mechanical codes adopted by a recognized national code organization or state or local amendments to those codes that are of general application and consistent with state and federal law.

**Applicant** means any person who submits an application as or on behalf of a wireless provider.

**Application** means requests submitted by an applicant (i) for permission to collocate small wireless facilities; or (ii) to approve the installation, modification or replacement of a structure on which to collocate a small wireless facility in the rights-of-way, where required.

**Collocate** means the same as defined in 47 C.F.R. § 1.6002(g), as may be amended or superseded, which defines that term to mean (1) mounting or installing an antenna facility on a preexisting structure, and/or (2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. "Collocation" has a corresponding meaning.

**Day** means calendar day. For purposes of the FCC shot clock, a terminal day that falls on a holiday or weekend shall be deemed to be the next immediate business day.

**Decorative pole** means a pole that is specially designed and placed for aesthetic purposes.

**Historic district** means a group of buildings, properties, or sites that are either: (1) listed in the National Register of Historic Places or formally determined eligible for listing by the Keeper of the National Register in accordance with Section VI.D.1a.i-v of the Nationwide Programmatic Agreement codified at 47 C.F.R. Part 1, Appendix C; or, (2) a design review district established pursuant to Chapter 14.30, or (3) historic buildings or sites listed in the Newport Comprehensive Plan as being significant

historical resources which should be preserved and regulated pursuant to Chapter 14.23.

*Staff: Adjusted the definition to include rights-of-way in design review districts (i.e. Nye Beach) and rights-of-way that may be a part of a historic site regulated under NMC Chapter 14.23.*

**Permissions** means a franchise agreement, building permit, right-of-way permit, business license or other authorization needed for SWF deployment.

**Person** means an individual, corporation, limited liability company, partnership, association, trust, or other entity or organization, including the City.

**Pole** means a type of structure in the rights-of-way that is or may be used in whole or in part by or for wireline communications, electric distribution, lighting, traffic control, signage, or similar function, or for collocation of small wireless facilities; provided, such term does not include a tower, building or electric transmission structures.

**Rights-of-Way or "ROW"** means areas dedicated to the public and administered by the city for use for transportation purposes, including any city street, road, bridge, alley, sidewalk, trail, or path, and all other public ways and areas managed by the city. Rights-of-Way also includes public utility easements to the extent that the easement allows use by the utility operator planning to use or using the public utility easement. "Right-of-way" includes the subsurface under and airspace over these areas.

*Staff: Definition aligns with definition in Chapter 9.05 Utilities*

**Routine Maintenance** means inspections, testing, repair, and modifications subject to Section 6409(a) that maintain functional capacity, aesthetic and structural integrity of a small wireless facility and/or the associated pole or structure.

**Small wireless facility** means a facility that meets each of the following conditions per 47 C.F.R § 1.6002(l), as may be amended or superseded:

- A. The facilities (i) are mounted on structures 50 feet or less in height including the antennas, or (ii) are mounted on structures no more than 10 percent taller than other adjacent structures, or (iii) do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater; and
- B. Each antenna associated with the deployment, excluding associated antenna equipment, is no more than three cubic feet in volume; and

- C. All other wireless equipment associated with the structure, including wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume; and
- D. The facilities do not result in human exposure to radio frequency in excess of the applicable safety standards specified in 47 C.F.R. § 1.1307(b).

**Structure** means the same as defined in 47 C.F.R. § 1.6002(m), as may be amended or superseded, which defines that term as a pole, tower, or base station, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of service).

**Wireless Infrastructure Provider** means any person, including a person authorized to provide communications service in the state, that builds or installs wireless communication transmission equipment, wireless facilities, but that is not a wireless services provider.

**Wireless Provider** means a wireless infrastructure provider or a wireless services provider.

**Wireless Services Provider** means a person who provides personal wireless services (whether or not it is comingled with other services).

*Staff: Except where staff comments are provided, definitions are verbatim from the model ordinance. "City Structure" is a defined term in the model ordinance that is not included because collocation interest is likely to be limited to City owned poles, and the term "pole" is defined.*

#### 9.25.015 Permit Required

Except as otherwise provided in this Chapter, no person shall place any small wireless facility, or a new, modified, or replacement pole for collocation of a wireless facility, in rights-of-way without first obtaining a permit from the City of Newport.

*Staff: This Section addresses the permitted use and permission required components of the model ordinance.*

#### 9.25.020 Application Requirements

An application filed pursuant to this Chapter shall be made by the wireless provider or its duly authorized representative on forms provided by the city, and shall contain the following:

- A. The applicant's name, address, telephone number, and e-mail address; and
- B. The names, addresses, telephone numbers, and e-mail addresses of all duly authorized representatives and consultants, if any, acting on behalf of the applicant with respect to the filing of the application; and
- C. A general description of the proposed small wireless facility and associated pole, if applicable. The scope and detail of such description shall be appropriate to the nature and character of the work to be performed, with special emphasis on those matters likely to be affected or impacted by the physical work proposed; and
- D. Site plans and engineering drawings to scale that identify the proposed small wireless facility; and
- E. A copy of the wireless providers franchise agreement with the City of Newport; and
- E. A statement or other demonstration that the small wireless facility shall comply with all applicable codes, regulations and standards, including applicable FCC regulations for human exposure to RF emissions.

*Staff: This Section includes the submittal requirements recommended in the model code. It also includes a requirement that the provider possess a duly executed franchise agreement to operate within City rights-of-way.*

#### 9.25.025 Routine Maintenance and Replacement Exemption

An application for a permit pursuant to this Chapter shall not be required for routine maintenance or the replacement of a small wireless facility with another small wireless facility that is the same, or smaller in size, weight and height. The City may require a permit for work within the right of way as set forth in Chapter 9.10 or if the activity is regulated by building codes adopted by the City of Newport pursuant to Section 11.05.080.

*Staff: Similar to language in the model code. Removed the language "substantially similar" because its discretionary. Cross reference added to right-of-way permit chapter which lists regulated activities within the right-of-way and building codes to the extent that they are applicable.*

#### 9.25.030 Approval Criteria

An application filed pursuant to this Chapter shall be approved unless the proposed small wireless facility, or new, modified, or replacement pole:

- A. Materially and demonstrably interferes with the safe operation of traffic control equipment; or
- B. Materially and demonstrably interferes with sight lines or clear zones for transportation or pedestrians; or
- C. Materially fails to comply with the Americans with Disabilities Act or similar federal, state, or local laws, standards and regulations regarding pedestrian access or movement; or
- D. Fails to comply with applicable codes, standards and regulations, including the City's design standards for small wireless facilities as adopted by City Council resolution; or
- E. Fails to comply with the provisions in this Chapter.

*Staff: Standards are consistent with the model code. Compliance with city adopted design standards is picked up under this Section.*

#### 9.25.035 Batch Applications

Applicants may include the proposed installation of multiple small wireless facilities, or new, modified, or replacement poles in a single, consolidated permit application.

*Staff: The FCC small cell order requires that local governments allow applications to be batched in this manner. This approach is also more efficient.*

#### 9.25.040 Decorative Poles and Historic Districts

Small wireless facilities that are proposed to be placed on a decorative pole or any structure within a historic district shall be designed to have a similar appearance, including coloring and design elements, if technically feasible, of the structure upon which it is being installed. New poles required to support the collocation of small wireless facilities shall be designed to have a similar appearance, including coloring and design elements, if technically feasible, of other poles in the rights-of-way within 500 feet of the proposed installation. Concealment measures used to comply with the above requirements shall not be considered part of the small wireless facility for purpose of the size restrictions in the definition of small wireless facility in Section 9.25.010.

*Staff: This Section combines a couple of elements of the model code and requires that small cell deployments have a similar appearance, color, and design elements as the structures upon which they are being installed. This may need more work to clarify expectations (and reduce discretion).*

#### 9.25.045 Permit Review Procedures

- A. No later than 30 calendar days after receipt of an application filed pursuant to this Chapter, the city shall determine whether or not the permit application is complete and notify the applicant, in writing, of what information is missing. and allow the applicant to submit the missing information.
- B. Upon receipt of a complete permit application, the city shall either approve or deny the permit in accordance with the following timelines:
  - 1. Applications to collocate a small wireless facility on an existing structure: 60 days.
  - 2. Applications to collocate a facility other than a small wireless facility using an existing structure: 90 days.
  - 3. Applications to deploy a small wireless facility using a new structure: 90 days.
  - 4. Applications to deploy a facility other than a small wireless facility using a new structure: 150 days.
- C. Review timelines outlined in this Section begin at the time of application. If an application is determined to be incomplete, then the timeline is tolled (i.e. the clock stops) when the applicant is informed, in writing, that information is missing. The timeline restarts when the missing information is submitted. If an applicant believes they have submitted all required information, they may indicate as much in writing and a decision on the permit application will be rendered considering the information that has been submitted.

*Staff: This Section addresses the FCC shot clock review timelines.*

#### 9.25.050 Maximum Height Limitations

Any wireless provider that seeks to install, modify, or replace facilities on a pole in a right-of-way that exceeds 50-feet in height, shall be subject to applicable requirements of Title XIV of the Newport Municipal Code.



*Staff: Title XIV is the City of Newport Zoning Ordinance. Potential changes to the Zoning Ordinance that would apply to facilities of this nature will be presented at a future work session.*

#### 9.25.055 Authority Granted

A permit from the City authorizes an applicant to undertake only certain activities in accordance with this Chapter and does not create a property right or grant authority to the applicant to impinge upon the rights of others who may already have an interest in the rights-of-way.

*Staff: This language is recommended in the model code and will need to be reviewed by the City Attorney. This may be adequately addressed in the City's franchise code (NMC Chapter 9.05).*

#### 9.25.060 Permit Duration

- A. A permit for construction granted pursuant to this Section shall be valid for a period of 12-months after issuance unless the City agrees to extend this period for good cause, including but not limited to delay caused by the lack of commercial power or communications facilities, or by other events outside of the reasonable control of the wireless provider.
- B. The installed facility is subject to applicable relocation requirements, termination for material non-compliance after notice and a reasonable opportunity to cure, as outlined in Chapter 9.05. An applicant may terminate a permit at any time.

*Staff: The 12-month timeframe is consistent with the period of time that a right-of-way permit is valid (ref: Chapter 9.10). That provides administrative consistency, as a right-of-way permit will almost always be required in conjunction with the deployment of a small wireless facility. Issues under Subsection (B) are addressed in the City's franchise code. The same goes for Section 7 of the League of Oregon Cities Model Ordinance.*

#### 9.25.065 Collocation on City Owned Poles

- A. Small wireless facilities may be collocated on city owned poles in rights-of-way pursuant to this Chapter. No person will be permitted an exclusive arrangement or an arrangement which excludes otherwise qualified applicants to attach to city owned poles in the rights-of-way. A wireless provider seeking to collocate on a city owned pole is subject to the requirements of this Section.
- B. The City will provide a good faith estimate for any work reasonably necessary to make a specific city owned pole suitable for attachment of the requested small wireless facility ("make-ready work"), including pole



replacement if necessary, within 60 days after receipt of a completed request. Make-ready work including any pole replacement shall be completed prior to the installation of the requested small wireless facility.

- C. City's good faith estimate shall be limited to actual and direct costs required to meet applicable codes, or that may be reasonably necessary to avoid interference with other attachments on the pole.
- D. A wireless provider authorized to place a small wireless facility on a city-owned pole will pay to the City compensation for use of the rights-of-way and collocation at a rate established by City Council resolution.
- E. A wireless provider may remove one or more of its small wireless facilities at any time from a city owned pole with the required permits. The wireless provider will cease owing the City compensation, as of the date of removal, for such removed facilities.

*Staff: While most poles within rights-of-way are owned by non-city utilities, the City of Newport owns some light poles. They are located along the bayfront, SE 40<sup>th</sup> and SE Marine Science Drive. This Section was drafted specific to poles because other structures the City owns within the right-of-way, such as signs, will not be suitable for small cell deployment. The City's franchise code does not clearly address collocation, so this Section is needed. It is closely aligned with the model ordinance. The model ordinance notes that the FCC has established a "safe harbor" limit on use of right-of-way and collocation to an aggregate annual rate that is not to exceed \$270 per small wireless facility. Annual use of right-of-way fees are established in the franchise code at 5% of gross revenue. This "gross revenue" approach to calculating franchise fees, may need to be adjusted for small wireless deployments in order for the city to stay within the safe harbor limits.*

#### 9.25.070 Permit Fee

The fee for a permit application submitted in accordance with the provisions of this Chapter shall be due at the time the application is submitted, in the amount established by City Council resolution.

*Staff: This is consistent with the model ordinance and how the City establishes permit fees. The model ordinance notes that the FCC has established "safe harbor" limits on the fees local governments can charge. They are as follows: \$500 for up to the first five small wireless facilities in the same application, with an additional \$100 for each small wireless facility beyond five in the same application, or fees that are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3)*

*are nondiscriminatory. (2) \$1000 for the installation, modification or replacement of a pole together with the collocation of an associated small wireless facility in the rights-of-way that is a permitted use in accordance with this Chapter, or fees that are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are nondiscriminatory.]*

DRAFT

## Derrick Tokos

---

**From:** Pettis, Jacob <JPettis@cencoast.com>  
**Sent:** Tuesday, August 18, 2020 4:32 PM  
**To:** Derrick Tokos  
**Cc:** Beckham, Donna  
**Subject:** FW: Small Wireless (5G) Regulatory Update  
**Attachments:** EXHIBIT C - Construction Standards.pdf

Derrick,

We have read the document that you sent us, and Donna had a couple items (see below) that she highlighted. She has also attached a copy of our construction standards for these 5G installations. We have not actually had one installed, so there is a fair chance that we may have to make some slight modifications to these going forward if we discover any issues.

Please let us know if you need more help. Donna would be your best contact if you information regarding billing, permitting, or anything to do with the contract.

If you have any specific engineering questions, I can hopefully help you.

Thanks,

*Jake Pettis*

**Distribution Engineering Supervisor**

Office: (541) 574-3639

[jpettis@cencoast.com](mailto:jpettis@cencoast.com)




---

**From:** Beckham, Donna <DBeckham@cencoast.com>  
**Sent:** Tuesday, August 18, 2020 8:23 AM  
**To:** Pettis, Jacob <JPettis@cencoast.com>  
**Subject:** FW: Small Wireless (5G) Regulatory Update

Jake,

I have read thru the LOC Small Wireless Model document and find the following:

Under Small Wireless Facility Model Ordinance, Item (Q):

The definition of a small wireless facility

- (1) The facilities are mounted on structures 50 feet or less in height including the antennas, or mounted on structures no more than 10 percent taller than other adjacent structure.

I would suggest we give the City of Newport our Construction standards, showing how much spacing is required for placement of the wireless facility, noting that at times, the poles may need to be taller than 50 feet.

In the same document, Section 5, item (b) calls for collocations on or replacing decorative poles. This will be helpful if there are attachment requests for UG areas, such as the Bayfront or portions of downtown Newport. We will be able to work with the City to add attachments in these areas, if requested.

Let me know if you have any questions.

Donna Beckham  
Joint Use Coordinator  
Central Lincoln PUD

**From:** Hillebrand, Tyrell <[THillebrand@cencoast.com](mailto:THillebrand@cencoast.com)>  
**Sent:** Saturday, August 15, 2020 7:56 PM  
**To:** Derrick Tokos <[D.Tokos@NewportOregon.gov](mailto:D.Tokos@NewportOregon.gov)>  
**Cc:** Pettis, Jacob <[JPettis@cencoast.com](mailto:JPettis@cencoast.com)>; Beckham, Donna <[DBeckham@cencoast.com](mailto:DBeckham@cencoast.com)>  
**Subject:** RE: Small Wireless (5G) Regulatory Update

Derrick,

You will want to work with Jake Pettis and Donna Beckham on this matter. I have CCed them to the email. I am hopeful that we may be in front of it. We already had a contract developed for companies that inquire about attaching 5G to our poles. It covers our specifications and requirements to do so safely. I am hopeful that if we reference in your agreement that the companies are responsible to sign a pole space rental agreement with Central Lincoln then we can use our standards and not have to modify yours too much.

Ty

**From:** Derrick Tokos <[D.Tokos@NewportOregon.gov](mailto:D.Tokos@NewportOregon.gov)>  
**Sent:** Thursday, August 13, 2020 2:04 PM  
**To:** Hillebrand, Tyrell <[THillebrand@cencoast.com](mailto:THillebrand@cencoast.com)>  
**Subject:** Small Wireless (5G) Regulatory Update

CAUTION: This email originated from outside of Central Lincoln. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ty... the League of Oregon Cities recently released a model ordinance, design guidelines, and FAQ related to the deployment of small cell wireless technology. We had been waiting for this to happen before starting work on our own set of rules.

We have had 2-3 inquiries from providers that want to get franchise agreements in place to facilitate future deployment, so it is something we want to address sooner as opposed to later.



As you undoubtedly know, this will impact Central Lincoln PUD poles, since providers will have a right to install their equipment on them to achieve the spacing they need for their antennas.

Could you let me know who we should be coordinating with, as we will want to make sure your needs as well as ours are met within the sidebars outlined by the FCC.

Here is a link to the FAQ:

[https://www.orcities.org/application/files/8215/9682/8143/FAQ\\_on\\_Small\\_Wireless\\_Facilities.pdf](https://www.orcities.org/application/files/8215/9682/8143/FAQ_on_Small_Wireless_Facilities.pdf)

Thanks,

*Derrick I. Tokos, AICP*

Community Development Director

City of Newport

169 SW Coast Highway

Newport, OR 97365

ph: 541.574.0626 fax: 541.574.0644

[d.tokos@newportoregon.gov](mailto:d.tokos@newportoregon.gov)



## 1.0 SCOPE

- 1.1 This standard contains the requirements for typical communication antenna installations on CLPUD owned poles.

## 2.0 GENERAL REQUIREMENTS AND INFORMATION


- 2.1 Only one communication applicant's antenna is allowed on any CLPUD owned pole.
- 2.2 CLPUD poles that may be considered for installation of a communications antenna shall meet the following requirements:
- 2.2a Shall be located in the public right of way, not in a public utility easement.
  - 2.2b Shall be truck accessible.
  - 2.2c Shall not support transmission conductors.
  - 2.2d Shall not support more than one level of primary conductors, including corner pole with a single primary circuit and two sets of crossarms.
  - 2.2e Shall not support any equipment other than one single phase 7.2 kV primary transformer. Excluded equipment includes, but not limited to a three phase transformer, a bank of more than one single phase transformer, reclosure, capacitors, existing AMI routers and switches.
- 2.3 Communication equipment associated with the antenna may be mounted in the communications space on the pole provided it does not require an electric revenue meter, weighs no more than 550 lbs., and does not overload the pole nor impede the pole climbing space. When communications equipment is mounted on the ground, equipment shall be placed no closer than that shown to any CLPUD pole and be situated so as not to interfere with down guys and anchors.

## 3.0 APPLICATION TO CLPUD

- 3.1 CLPUD Cell Site Lease of Modification Application shall be requested and submitted through CLPUD's Joint Use Coordinator, CLPUD's contact for all communication/Joint Use inquiries.
- 3.2 Application for new electric service is required and shall be requested through CLPUD's Customer Service Department.

## 4.0 CODES AND PERMITS

- 4.1 Installations must meet CLPUD's requirements included in this standard, CLPUD's Policy and Procedures and all applicable CLPUD construction standards.
- 4.2 Communication applicant is responsible to ensure all applicable permits are obtained, local, city, county, state and Federal Aviation Agency (FAA) regulations are followed, and all zoning codes, applicable land use codes, environmental permits and pertinent City ordinances are met.
- 4.3 Communication antenna installation and electrical services associated with installation shall comply with all applicable requirements of the latest Edition of the National Safety Electrical Code (NESC)

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and National Electrical Code (NEC).

## 5.0 CLEARANCES

- 5.1 Antennas and associated equipment shall be installed to provide the minimum clearance shown from CLPUD conductors. All pertinent OSHA rules and regulations shall be adhered to while communication workers are working on or around CLPUD facilities.

## 6.0 BONDING AND GROUNDING

- 6.1 All metallic parts of the installation on pole shall be bonded together and bonded to the CLPUD provided pole ground.

## 7.0 CLIMBING SPACE

- 7.1 Climbing space shall be established and maintained from the ground line to the bottom of the communication antenna base in accordance with NESC Section 236 and CLPUD standard EC4-0.3800.

## 8.0 CONDUIT RISERS

- 8.1 Wood Distribution Poles:

8.1a Maximum size and number of conduits installed on a CLPUD wood distribution pole is (6) 4" conduits or an approved combination. Communication antenna conduits shall be installed on galvanized steel brackets, with a maximum bracket length of 24". Two conduit brackets shall be provided to CLPUD and CLPUD to install on a quadrant of the pole determined by CLPUD for the conduit location.

8.1b The CLPUD electric service conduit may be supported from applicant's communication antenna conduit pole dip brackets. If necessary, separate conduit brackets may be installed to support the CLPUD service conduit provided pole climbing space is maintained.


8.1c Communication conduits shall be rigid PVC colored gray bell end, Schedule 40 or 80 PVC and meet requirements of UL 651 and NEMA TC 2.

- 8.2 Communication applicant's installed substructure or trenching to a CLPUD electric facility (i.e. electric service pole dip substructure, transformer or secondary box) will require inspection by CLPUD, electric substructure and trenching installations must have CLPUD inspector's approval prior to backfilling.

- 8.3 It is the communication applicant's responsibility when installing electric substructure facilities to ensure full compliance with the permitting authority's Standards of Construction requirements. (i.e. local, city, county, state and Utility of Right of way permit, Construction within & use of the Public Way or Oregon Department of Transportation (ODOT) Oregon - Standard Construction Drawings.

## 9.0 IDENTIFICATION AND DAMAGE NOTIFICATION

- 9.1 Communication applicant shall install and maintain a pole tag/decal made of a non-corrosive and durable material, suitable for outdoor use and resistant to ultraviolet radiation on CLPUD's pole. The

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tag information shall identify the name of the owner, emergency 24-hour contact number, horizontal and vertical distance from antenna at which it is safe to work continuously and unique identifier for that antenna site. Pole Tag information is to be placed below CLPUD's pole tag number.

## 10.0 INSTALLATION AND MAINTENANCE

- 10.1 Communication applicant shall be responsible for installation and maintenance of the antenna and all associated equipment cables, conduits and conduit risers. Antenna installation and maintenance work performed in the supply space or within 10 feet of a primary conductor shall be done by workers qualified per OSHA 1910.332 to perform the work. All work shall be coordinated through CLPUD's Joint Use Coordinator and Distribution Operations. CLPUD will require prior notice for Distribution Operations work planning and scheduling and a pre-construction meeting per the requirements specified on the CLPUD design drawings for the job.
- 10.2 Applicant shall install and maintain a load-break, UL-listed disconnect switch located on the communication equipment to de-energize both the normal (utility) and backup power to the communication antenna(s). Disconnect switch shall be capable of being locked in either the open or closed position with standard CLPUD double hasp. Applicant shall provide a lock on one side of the hasp and CLPUD will install a CLPUD lock on the other side of the hasp which will allow either the applicant or CLPUD to remove one lock, remove the double hasp and open the disconnect switch. The disconnect switch blades, jaws and the air-gap between them shall all be clearly visible when the switch is in the open position.
- 10.3 CLPUD will furnish, install and maintain the following:
- 10.3a Pole and pole framing,
  - 10.3b Pole ground and bonding jumper from pole ground to antenna equipment ground.
  - 10.3c Upper portion of electric service pole dip,
  - 10.3d Disconnect switches on primary circuit required to de-energize the primary conductors supported from the antenna pole.

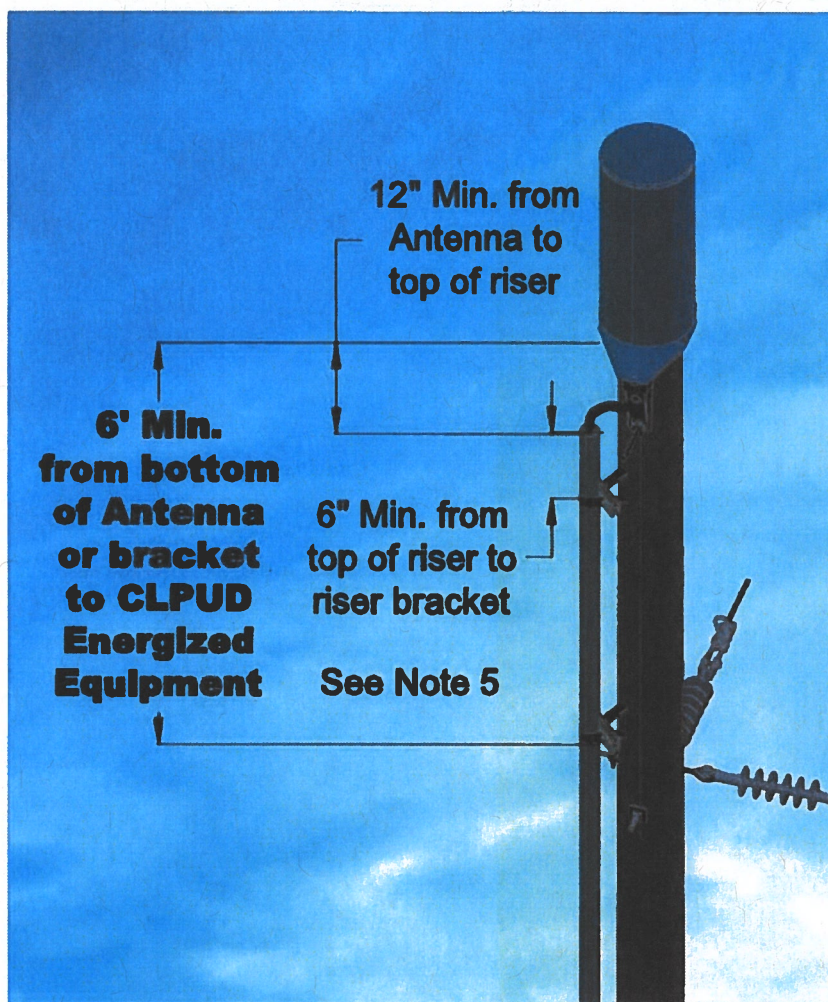
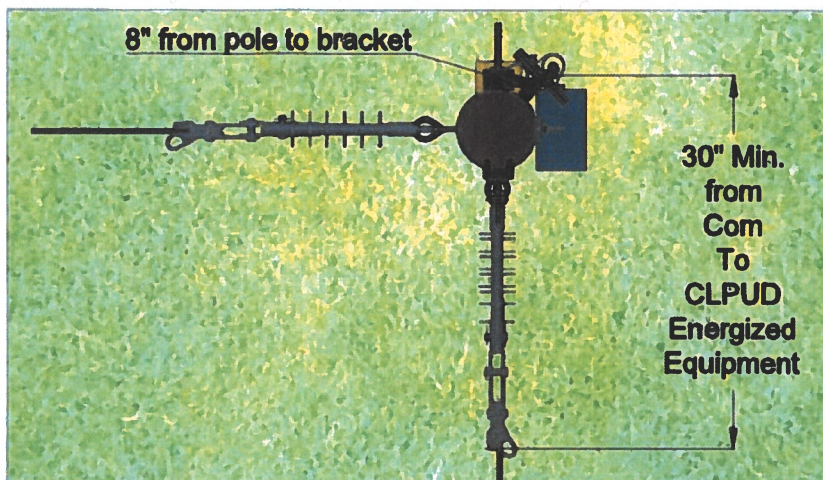
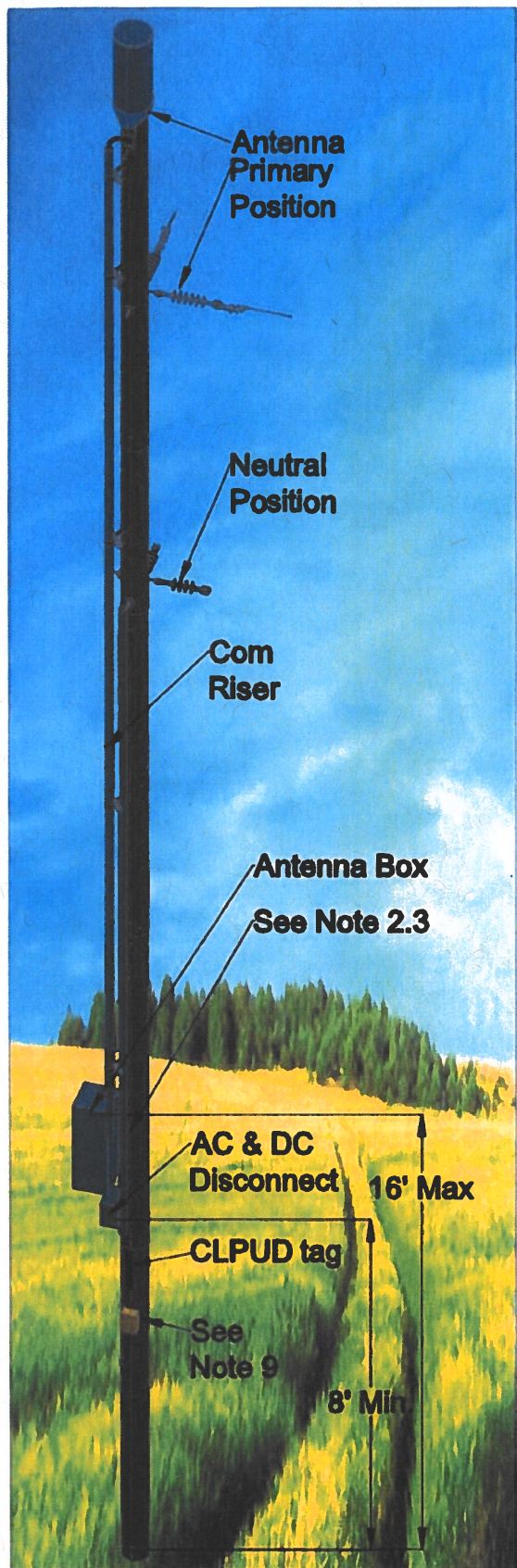


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**Communication  
Antenna Installation  
Guidelines**

Approved  
Rev.





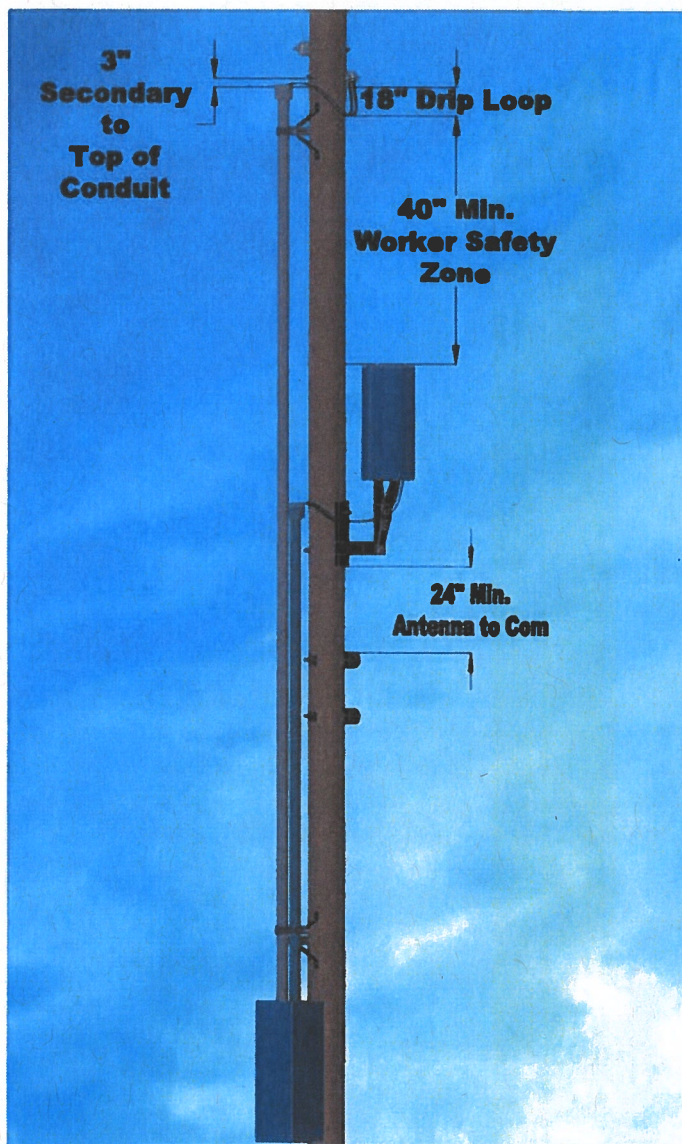
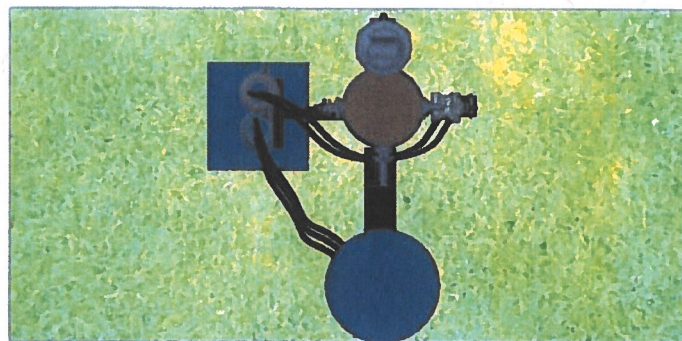
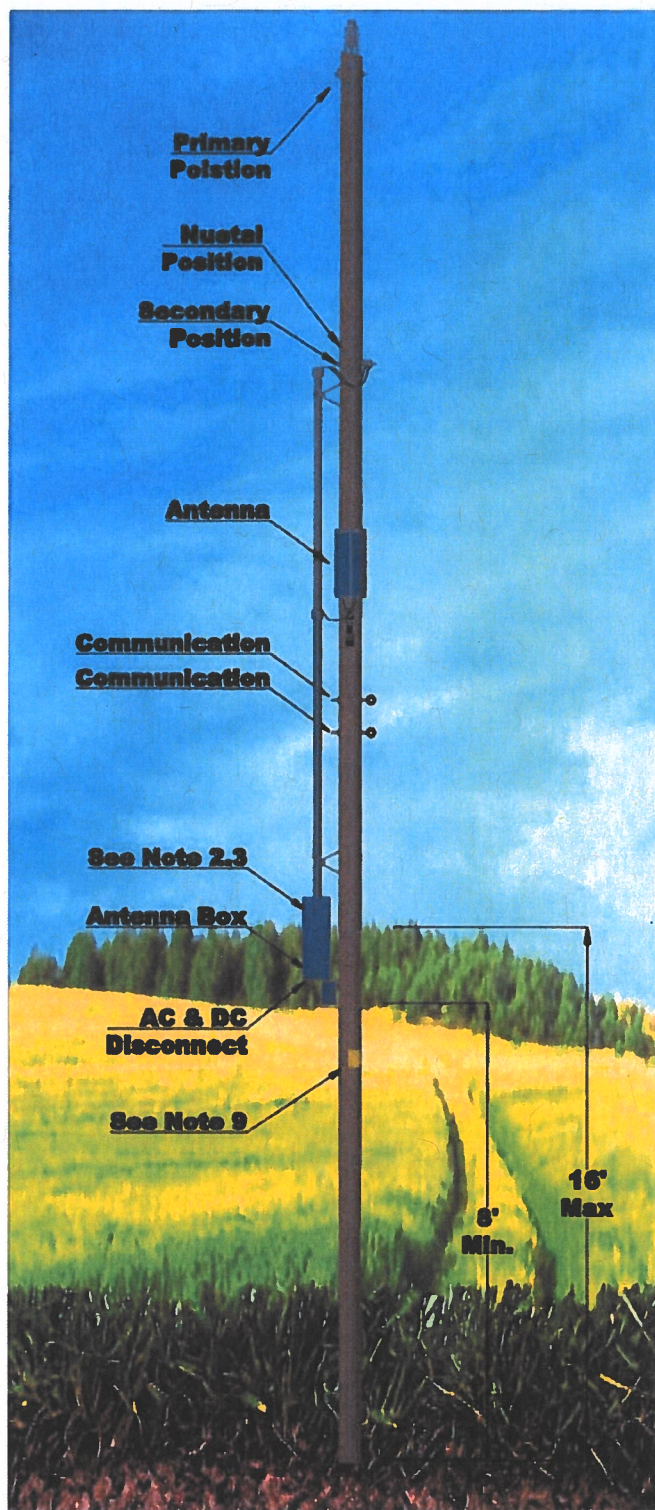
#### Notes:

1. Confirm allowable loading on any site specific poles and equipment with CLPUD engineer.

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**TOP POLE 1PH**





### Notes:

1. Confirm allowable loading on any site specific poles and equipment with CLPUD engineer.

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**MIDDLE**

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**ENGINEERING ASSEMBLY**

**Middle of Pole Below Secondary or Neutral**

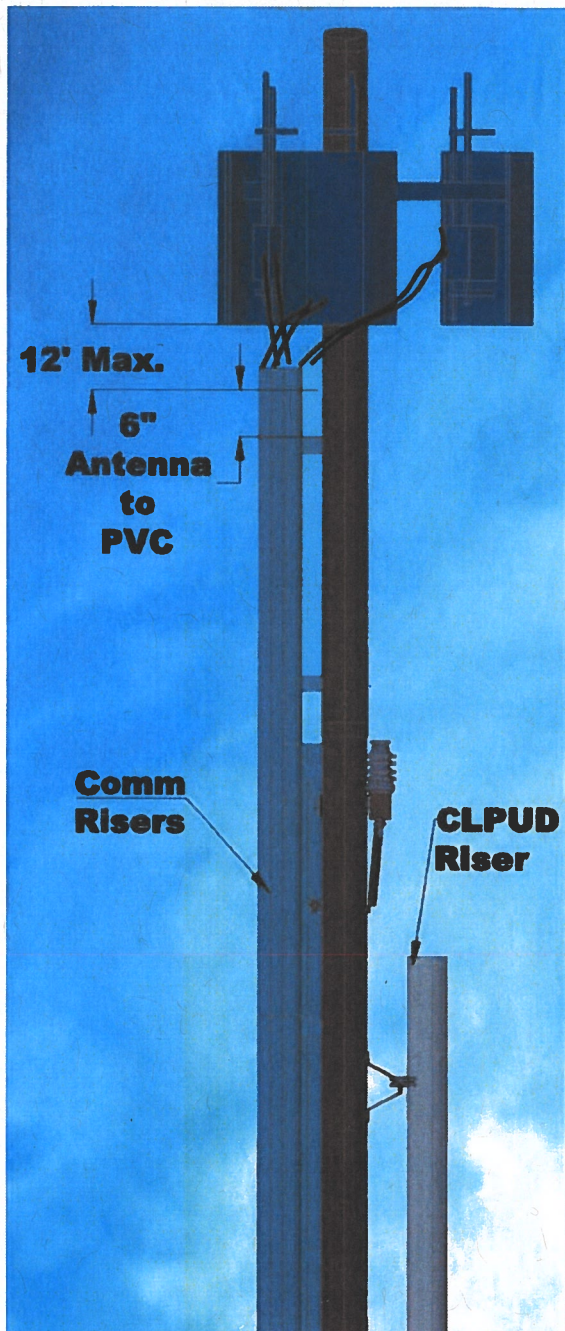
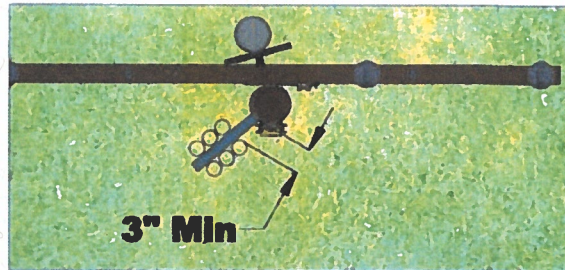
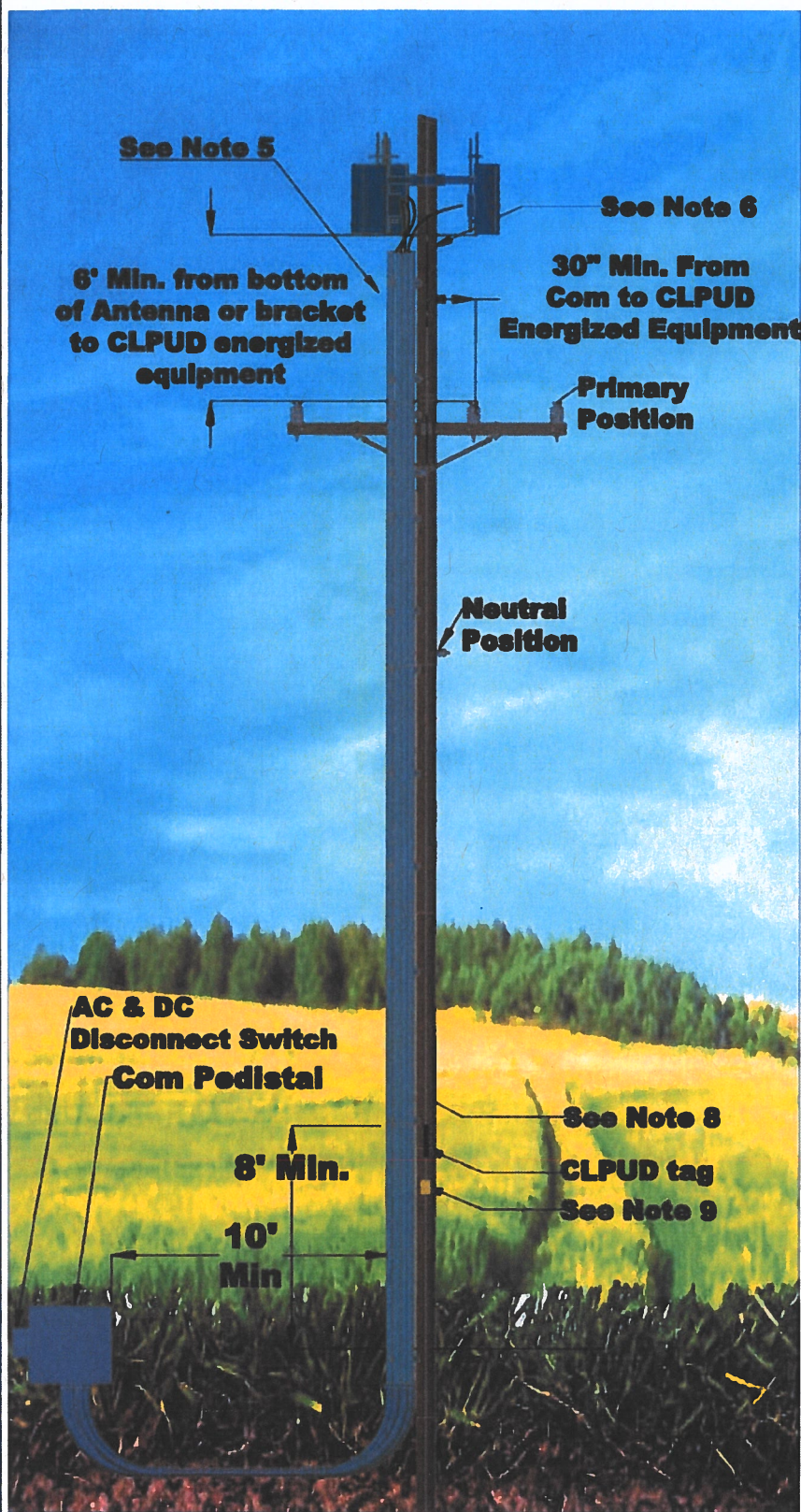
EFFECTIVE DATE

DESIGNED BY MN 2/19 APPROVED BY SJG 2/19 REV. NO. 1 2/19 Joint Use

2/19

REV. DESCRIPTION REVISION DESCRIPTION





#### Notes:

1. Confirm allowable loading on any site specific poles and equipment with CLPUD engineer.

Q:\SPEC\SPECDOCS\Handouts\Communication Attachments\Antenna\Top of Pole 3 phase.dwg

**Top 3 Phase**

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**ENGINEERING ASSEMBLY**

#### TOP OF POLE ANTENNA ABOVE 3 PHASE PRIMARY

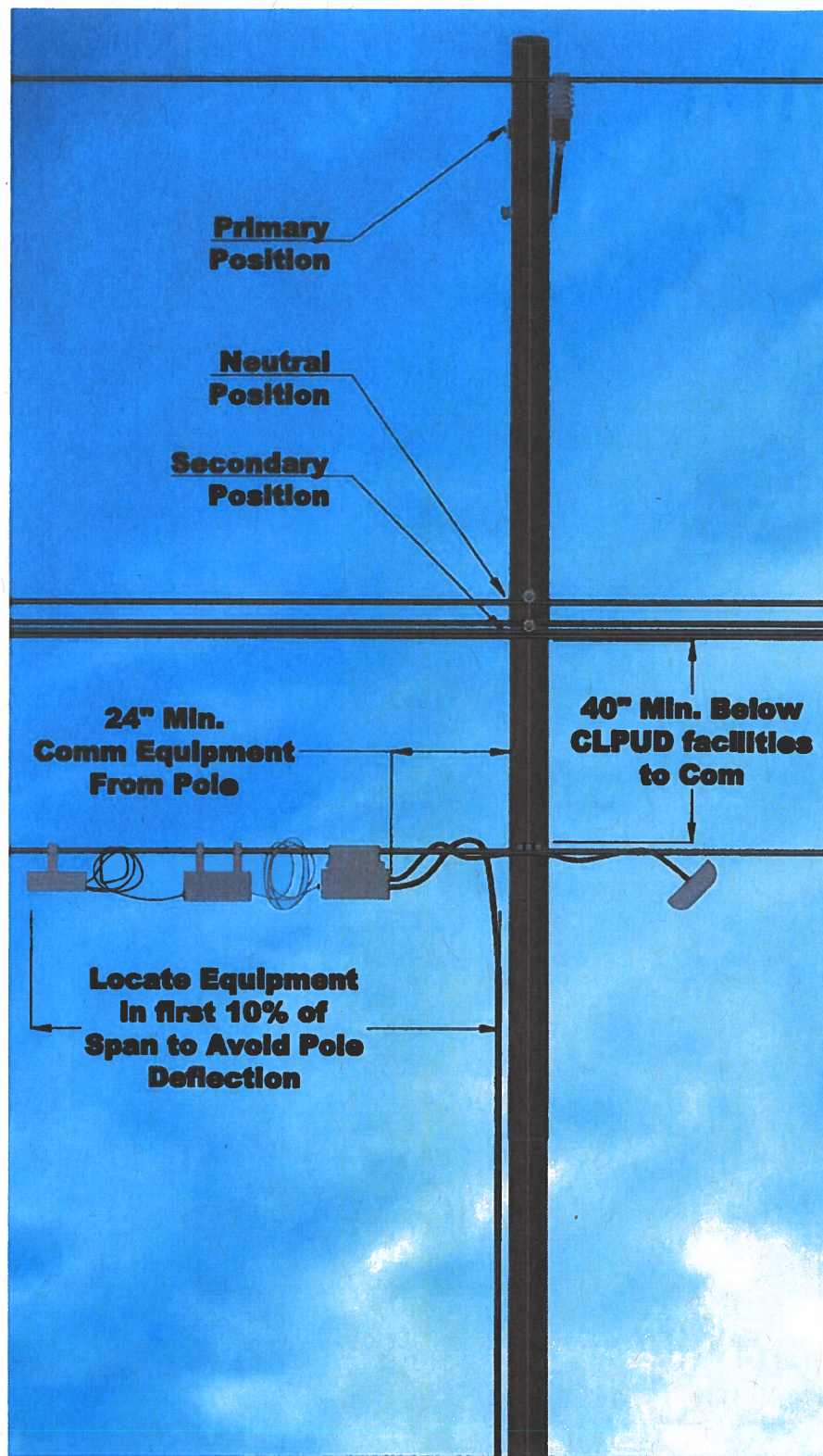
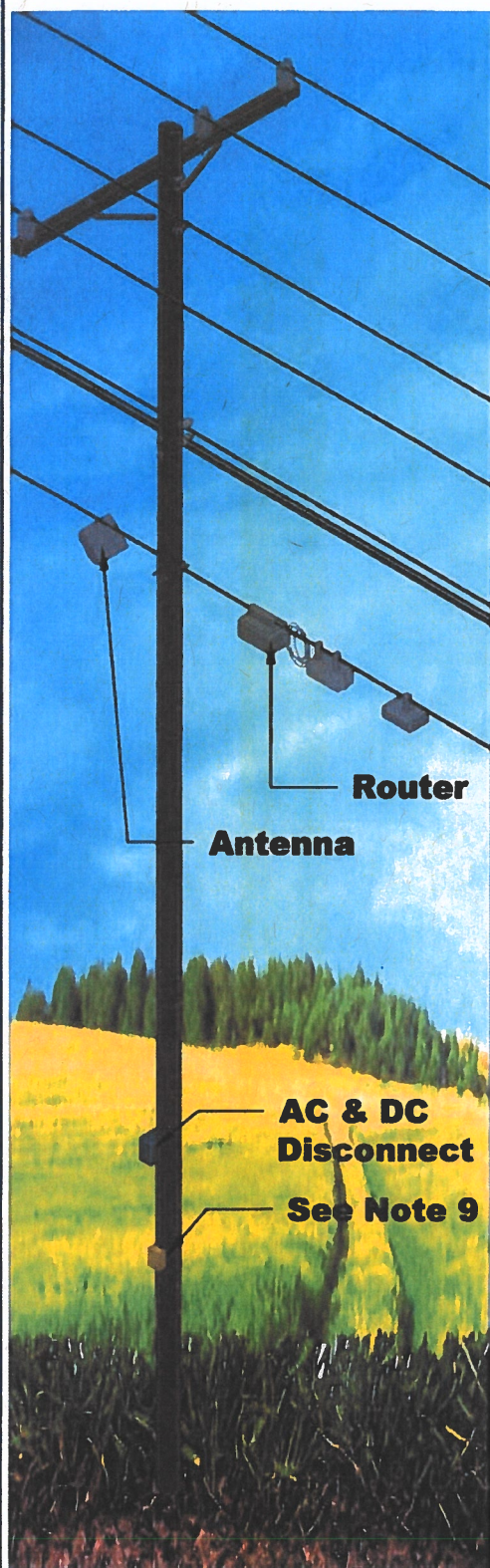
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DESIGNED BY APPROV. BY REV. NO. **JOINT USE**

02/19

MN 2/19 SJG 02/19 0 02/19 REV. DESCR. REVISION DESCRIPTION





#### Notes:

1. Confirm allowable loading on any site specific poles and equipment with CLPUD engineer.

Q:\SPEC\SPECDOCS\Handouts\Communication Attachments\Antenna\Strand Mounted.dwg **Strand Mount**

**CENTRAL LINCOLN**  
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**ENGINEERING ASSEMBLY**

#### STRAND MOUNTED ANTENNA BELOW CLPUD EQUIPMENT

EFFECTIVE  
DATE

DESIGNED BY APPROV. BY REV. NO. **JOINT USE**

2/19

MN 01/19 SJG 2/19 0 2/19 REV. DESCR. REVISION DESCRIPTION





# Small Wireless Facilities Model Ordinance

JUNE 2020

This model was produced in coordination with:



### **DISCLAIMER**

Any model document provided by the League of Oregon Cities (LOC) is intended to be used as a starting point in an individual city's development of its own documents. Each city is unique, and any adopted document or policy should be individually tailored to meet a city's unique needs. Furthermore, this model is not intended to be a substitute for legal advice. Cities should consult with their city attorney before adopting any small wireless facility policies to ensure that they comply with all aspects of federal, state, and local law.

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## Foreword

### Background

On January 31, 2017, Federal Communications Commission (“FCC”) Chairman Ajit Pai established a Broadband Deployment Advisory Committee (BDAC), which he tasked with making recommendations to the FCC on ways to accelerate the deployment of broadband by reducing or removing regulatory barriers to infrastructure investment. On September 27, 2018, the FCC released a Declaratory Ruling and Third Report and Order ([FCC 18-133](#), referred throughout the document as “Small Cell Order” or “FCC Order”) that significantly limits local authority over small wireless infrastructure deployment and fees for use of the rights-of-way (ROW). The FCC Order took effect January 14, 2019. The FCC order defines the size limitations for small wireless facilities (allowing antennas of up to 3 cubic feet each, with additional equipment not to exceed 28 cubic feet), and specifies that such facilities may not result in human exposure to radiofrequency radiation in excess of applicable standards in the FCC’s rules (federal statute preempts local regulation of RF emissions). “Small wireless facilities” are sometimes also called “small cells”. Throughout the model code, it is noted when language is mirrored in the FCC order.

### LOC Model Small Wireless Facilities Code

In coordination with many cities,<sup>1</sup> representatives from Verizon, AT&T, T-Mobile, and the LOC met from January 2019 to May 2020 to discuss and craft a model code, model design standards relating to small wireless facilities while there is pending litigation<sup>2</sup> on the FCC Order. The model code and model design standards are intended to be paired together.

There is no model that will work for every jurisdiction. As such, the LOC’s model is intended as a roadmap to assist local governments in adopting their code. While example language is included in the sections, the LOC does not intend to suggest these examples could work for every jurisdiction.

The LOC also recognizes there are many ways to structure a code. The appropriate structure will vary by jurisdiction. The intent is to allow each jurisdiction to draft the substantive provisions that best reflect local needs and interests. The LOC recommends that jurisdictions that own poles or other structures in the rights-of-way establish a clear code for small wireless facilities. The circumstances of each municipality may, and likely will, require modifications to the framework and/or example language of this model code.

### Placement Within Local Codes

Although many communities have historically handled wireless facility siting through the land use process, new FCC regulations effectively prohibit these procedures. As explained below, the most practicable location for small wireless facility regulations may be the city’s streets and highways code rather than its land development code.

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<sup>1</sup> See “Acknowledgements” section for full list of participants.

<sup>2</sup> In October 2018, the LOC in coordination with other municipalities and municipal leagues filed suit against the FCC in the U.S. Ninth Circuit Court of Appeals.

Oregon state law requires at least one hearing on a land use decision – either in the initial determination or as an appeal if the initial determination is made without a hearing. These hearings necessarily require advance public notice, which can add between 10 and 20 days to the review process.

However, the new shot clock regulations are not only shorter but encompass all appeals related to the small wireless facility application. The phrase “shot clock” refers to the presumptively reasonable time frame in which the state or local government should act on a request for authorization to place, construct, or modify personal wireless service facilities, as defined by the FCC. The shot clock is 60 days for small wireless facilities on any existing structure and 90 days for small wireless facilities on new structures. See Appendix A for current shot clocks. Moreover, the FCC allows for “batched applications” with multiple requests for authorization filed at the same time. It is simply not practicable to comply with the state’s land use requirements and the FCC’s regulations at the same time.

As a result, the current best practice is to place new regulations for small wireless facilities within the public rights-of-way in the city’s streets and highways code rather than its land development code. For those communities with existing regulations in their land development codes, an amendment to exempt small wireless facilities in the public rights-of-way from the land development code (and pointing the reader to the streets and highways code) will also be needed. Given that the process to amend a land development code is also a lengthy undertaking, interim regulations administered by the city engineer or public works director may be appropriate.

## **ROW Franchise and License Considerations**

The model code provisions are not intended to replace local regulations for ROW franchising and licensing. In most cases, a small wireless facility provider will need both a permit to construct the small wireless facility and a franchise or license to use the public ROW for the provision of communication services.

However, cities should note that certain aspects of the FCC’s new regulations will impact the applicability of existing franchise or license requirements to small wireless facilities. For example, the FCC restricts the annual recurring fees for access to the ROW to the reasonable approximation of the direct costs created by the small wireless facility. Although not expressly preempted, the FCC suggests that gross-revenue fees are likely to exceed this limitation.

Accordingly, cities should carefully examine their franchising or licensing requirements when they consider code amendments for small wireless facilities.

## **Additional Considerations**

The LOC model code only applies to small wireless facilities. Municipalities should review their existing ordinances, standards and policies to determine if this framework is appropriate. Municipalities may want to consider whether it would be preferable to adopt a utility-neutral code covering all utilities and communications providers. Differences in policy choices and existing standards, among other things, may impact the decision in how to proceed. It is recommended that cities consult their attorney, right-of-way specialists, engineers, master plans,

comprehensive plans, goals and/or wireless providers before final adoption of this code.

### **Understanding the Organization of the Model Code**

As stated above, the model is best described as an outline or roadmap to assist municipalities in drafting the appropriate code for their community. The model includes example language to illustrate the intent of the section. The example language, or a variation thereof, may be appropriate for final adoption in some jurisdictions.

Finally, there may be additional notes or issues for consideration within the subsections of the model, which are [bracketed] and in ALL CAPS. These notes are intended as guidance for municipal drafters, not for adoption in a final ordinance.

## **Small Wireless Facility Model Ordinance**

### **AN ORDINANCE ESTABLISHING STANDARDS FOR SMALL WIRELESS FACILITIES IN THE RIGHTS-OF-WAY IN THE CITY OF \_\_\_\_\_**

#### **Preamble**

WHEREAS, the City of \_\_\_\_\_ (“City”) desires to encourage wireless infrastructure investment by providing a fair and predictable process for the deployment of small wireless facilities, while enabling the City to promote the management of the rights-of-way in the overall interests of the public health, safety and welfare; and

WHEREAS, the City recognizes that small wireless facilities are needed to deliver wireless access and capacity to advanced technology, broadband and first responder services to homes, and businesses, as well as health care, public safety and educational services providers within the City; and

WHEREAS, the City recognizes that the wireless industry needs small wireless facilities, including facilities commonly referred to as small cells, deployed in the public rights-of-way; and

WHEREAS, the City further recognizes that the City must balance the benefits from small cell infrastructure with its aesthetic impact on the community in order to mitigate or avoid adverse visual impacts, encourage the deployment of infrastructure consistent with the surrounding built and natural environment, and preserve the City’s historic and environmental resources to the extent feasible; and

WHEREAS, the City intends to adopt a new code consistent with local, state and federal laws, standards and requirements.

NOW, THEREFORE, BE IT ORDAINED by the \_\_\_\_\_ that Title \_\_\_\_\_ of the Municipal Code of the City of \_\_\_\_\_ shall be amended by adding the following Chapter \_\_\_\_\_ that will read as follows:

#### **Section 1 – Purpose and Scope**

[NOTE: THIS SECTION SHOULD BE CONSISTENT WITH EXISTING ROW ORDINANCES.]

- (A) Purpose. The purpose of this Chapter is to establish reasonable and nondiscriminatory policies and procedures for the placement of small wireless facilities in rights-of-way within the City’s jurisdiction, which will provide public benefit consistent with the preservation of the integrity, safe usage, and reasonable aesthetic qualities of the City rights-of-way and the City as a whole.
- (B) Intent. In enacting this Chapter, the City is establishing uniform standards consistent

with federal law to address the placement of small wireless facilities and associated poles in the rights-of-way, including without limitation, to manage the public rights-of-way in order to:

- (1) prevent interference with the use of streets, sidewalks, alleys, parkways and other public ways and places;
- (2) prevent the creation of obstructions and other conditions that are hazardous to vehicular and pedestrian traffic;
- (3) prevent interference with the facilities and operations of facilities lawfully located in rights-of-way or public property;
- (4) protect against environmental damage, including damage to trees;
- (5) preserve the character of the community, historic districts or areas with decorative poles; and
- (6) facilitate technology advancements, such as deployment of small wireless facilities, to provide the benefits of wireless services.

[NOTE: IT IS SUGGESTED THAT CITIES REVIEW OTHER CHAPTERS OF CITY CODE TO MAKE SURE THERE IS NO CONFLICT AND CONSIDER WHETHER IT IS APPROPRIATE TO AMEND.]

## **Section 2 - Definitions**

- (A) “Antenna” means the same as defined in 47 C.F.R. § 1.6002(b), as may be amended or superseded. The term includes an apparatus designed for the purpose of emitting radio frequencies (RF) to be operated or operating from a fixed location pursuant to Federal Communications Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under [47 C.F.R. Part 15](#).
- (B) “Antenna Equipment” means the same as defined 47 C.F.R. § 1.6002(c), as may be amended or superseded, which defines the term to mean equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.
- (C) “Antenna Facility” means the same as defined in 47 C.F.R. § 1.6002(d), as may be amended or superseded, which defines the term to mean an antenna and associated antenna equipment.
- (D) “Applicable codes” means uniform building, fire, safety, electrical, plumbing, or mechanical codes adopted by a recognized national code organization or state or local amendments to those codes that are of general application and consistent with state and federal law.

- (E) “Applicant” means any person who submits an application as or on behalf of a wireless provider.
- (F) “Application” means requests submitted by an applicant (i) for permission to collocate small wireless facilities; or (ii) to approve the installation, modification or replacement of a structure on which to collocate a small wireless facility in the rights-of-way, where required.
- (G) “City Structure” means a structure located in the rights-of-way within the City’s jurisdictional boundaries that is owned, managed or operated by the City or any subdivision or instrumentality thereof, including municipal electric utilities. [Including, but not limited to streetlights, traffic signals, utility poles, building] [Consider excluding certain structures in a new section or in section 8]. [NOTE: THIS DEFINITION RECOGNIZES THAT NOT ALL STRUCTURES OWNED, MANAGED OR OPERATED BY A CITY OR CITY SUBDIVISION OR INSTRUMENTALITY THEREOF ARE LOCATED WITHIN THE SAME CITY’S JURISDICTIONAL BOUNDARIES. FOR EXAMPLE, MONMOUTH POWER & LIGHT SERVES THE CITY OF MONMOUTH AND PORTIONS OF THE CITY OF INDEPENDENCE. TO THE EXTENT THE CITY OF MONMOUTH ADOPTED THIS MODEL CODE, IT COULD NOT ISSUE PERMITS FOR ATTACHMENTS TO STRUCTURES LOCATED WITHIN THE CITY OF INDEPENDENCE. CONVERSELY, THE CITY OF INDEPENDENCE COULD NOT MANDATE ACCESS TO STRUCTURES OWNED BY MONMOUTH POWER & LIGHT.]
- (H) “Collocate” means the same as defined in 47 C.F.R. § 1.6002(g), as may be amended or superseded, which defines that term to mean (1) mounting or installing an antenna facility on a preexisting structure, and/or (2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. “Collocation” has a corresponding meaning.
- (I) “Day” means calendar day. For purposes of the FCC shot clock, a terminal day that falls on a holiday or weekend shall be deemed to be the next immediate business day. [NOTE: DAY IS IN REFERENCE TO FCC SHOT CLOCKS]
- (J) “Decorative pole” means a city structure that is specially designed and placed for aesthetic purposes.
- (K) “Historic district” means a group of buildings, properties, or sites that are either: (1) listed in the National Register of Historic Places or formally determined eligible for listing by the Keeper of the National Register in accordance with Section VI.D.1a.i-v of the Nationwide Programmatic Agreement codified at [47 C.F.R. Part 1, Appendix C](#); or, (2) a locally designated historic district as of the effective date of this Chapter or in a locally

designated historic district existing when an application is submitted. [NOTE: THIS IS NOT MEANT TO RETROACTIVELY AFFECT SWFs ALREADY IN PLACE WHEN A NEW DISTRICT IS CREATED].

- (L) “Permissions” means [list various permits, agreements and licenses needed for SWF deployment].
- (M) “Person” means an individual, corporation, limited liability company, partnership, association, trust, or other entity or organization, including the City.
- (N) “Pole” means a type of structure in the rights-of-way that is or may be used in whole or in part by or for wireline communications, electric distribution, lighting, traffic control, signage, or similar function, or for collocation of small wireless facilities; provided, such term does not include a tower, building or electric transmission structures.
- (O) “Rights-of-Way” or “ROW” means [insert a consistent definition across other codes. Example: “Right-of-way,” “rights-of-way,” “public right-of-way,” or “ROW” means and includes, but is not limited to, the space in, upon, above, along, across, over or under the public streets, roads, highways, lanes, courts, ways, alleys, boulevards, bridges, trails, paths, sidewalks, bicycle lanes, public utility easements and all other public ways or areas, including the subsurface under and air space over these areas, but does not include parks, parkland, or other City property not generally open to the public for travel.]
- (P) “Routine Maintenance” means inspections, testing, repair, and modifications subject to Section 6409(a) that maintain functional capacity, aesthetic and structural integrity of a small wireless facility and/or the associated pole or structure.
- (Q) “Small wireless facility” means a facility that meets each of the following conditions per 47 C.F.R § 1.6002(l), as may be amended or superseded:
  - (1) The facilities (i) are mounted on structures 50 feet or less in height including the antennas, or (ii) are mounted on structures no more than 10 percent taller than other adjacent structures, or (iii) do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater; and,
  - (2) Each antenna associated with the deployment, excluding associated antenna equipment, is no more than three cubic feet in volume; and,
  - (3) All other wireless equipment associated with the structure, including wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume; and,

- (4) The facilities do not result in human exposure to radio frequency in excess of the applicable safety standards specified in 47 C.F.R. § 1.1307(b).
- (R) “Structure” means the same as defined in 47 C.F.R. § 1.6002(m), as may be amended or superseded, which defines that term as a pole, tower, or base station, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of service).
- (S) “Wireless Infrastructure Provider” means any person, including a person authorized to provide communications service in the state, that builds or installs wireless communication transmission equipment, wireless facilities, but that is not a wireless services provider.
- (T) “Wireless Provider” means a wireless infrastructure provider or a wireless services provider.
- (U) “Wireless Services Provider” means a person who provides personal wireless services (whether or not it is comingled with other services).

### **Section 3 – Permitted Use; Application and Fees**

- (A) Permitted Use. The following uses within the rights-of-way shall be a permitted use, subject to compliance with the city’s applicable design standards [insert cross-reference here], administrative review only and issuance of a permit as set forth in this Chapter:
  - (1) Collocation of a small wireless facility; and,
  - (2) Placement of a new, modified, or replacement pole to be used for collocation of a small wireless facility.
- (B) Permissions Required. Except as otherwise provided in this Chapter, no person shall place any small wireless facility described in Section 3(A) in the rights-of-way, without first filing an application for the facility and obtaining [a permit, license, or agreement].
- (C) Application Requirements. [THIS SECTION CAN BE LEFT IN OR HANDLED ADMINISTRATIVELY. NOTE: THE FCC PROVIDES THAT APPLICATION REQUIREMENTS MUST BE IN A PUBLICLY STATED FORMAT. TO THE EXTENT THAT CITIES PREFER TO ADOPT ADMINISTRATIVE APPLICATION REQUIREMENTS, THEY SHOULD BE WRITTEN AS CHECKLISTS, GUIDELINES, WORKSHEETS, AND/OR OTHER HANDOUTS, AND BE MADE PUBLICLY AVAILABLE. AT A MINIMUM, CITIES SHOULD REQUIRE THE FOLLOWING MATERIALS.]



An application filed pursuant to this Chapter shall be made by the wireless provider or its duly authorized representative and shall contain the following:

- (1) The applicant's name, address, telephone number, and e-mail address;
  - (2) The names, addresses, telephone numbers, and e-mail addresses of all duly authorized representatives and consultants, if any, acting on behalf of the applicant with respect to the filing of the application.
  - (3) A general description of the proposed small wireless facility and associated pole, if applicable. The scope and detail of such description shall be appropriate to the nature and character of the work to be performed, with special emphasis on those matters likely to be affected or impacted by the physical work proposed;
  - (4) Site plans and engineering drawings to scale that identify the proposed small wireless facility.
  - (5) A statement or other demonstration that the small wireless facility shall comply with all applicable codes, regulations and standards, including applicable FCC regulations for human exposure to RF emissions.
  - (6) The application requirements shall not be more burdensome than those for any similarly situated small wireless facilities.
- (D) Routine Maintenance and Replacement. An application shall not be required for: (1) routine maintenance; or (2) the replacement of a small wireless facility with another small wireless facility that is the same, substantially similar or smaller in size and weight and height. The City may require a permit for work within the right of way. Such a permit must be issued to the applicant on a non-discriminatory basis upon terms and conditions applied to any other person performing similar activities, regardless of technology, in the ROW. [NOTE: CONSIDER INCLUDING A LIST OF ACTIVITIES THAT REQUIRE A PERMIT EITHER IN CODE, ON THE APPLICATION, IN AGREEMENTS, ETC. For example, *The City requires a permit for work within the ROW for activities that require excavation or closure of sidewalks or vehicular lanes.*]
- (E) Information Updates. Any amendment to non-material information contained in an application shall be submitted in writing to the City within thirty (30) days of the change. [NOTE: MATERIAL CHANGES MAY NECESSITATE A NEW APPLICATION.]
- (F) Application Fees. Application fees shall be set by [resolution].

[NOTE: THE FCC PRESCRIBED THE FOLLOWING SAFE HARBOR FEES BELOW IN THE SMALL CELL ORDER. CITIES MAY CHOOSE TO INCORPORATE THIS

LANGUAGE INTO THEIR CODE OR REFERENCE A FEE SCHEDULE SET BY RESOLUTION.

- (1) *\$500 for up to the first five small wireless facilities in the same application, with an additional \$100 for each small wireless facility beyond five in the same application, or fees that are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are nondiscriminatory.*
- (2) *\$1000 for the installation, modification or replacement of a pole together with the collocation of an associated small wireless facility in the rights-of-way that is a permitted use in accordance with this Chapter, or fees that are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are nondiscriminatory.]*

#### **Section 4 – Action on Administrative Permit Applications Subject to this Chapter**

- (A) The City must process all applications on a nondiscriminatory basis and may deny an application subject to this Chapter if the proposed small wireless facility or new, modified, or replaced pole:
  - (1) Materially and demonstrably interferes with the safe operation of traffic control equipment;
  - (2) Materially and demonstrably interferes with sight lines or clear zones for transportation or pedestrians;
  - (3) Materially fails to comply with the Americans with Disabilities Act or similar federal, state, or local laws, standards and regulations regarding pedestrian access or movement;
  - (4) Fails to comply with applicable codes, standards and regulations, including the City's design standards; or
  - (5) Fails to comply with the provisions in this Chapter.
- (B) The City must act on an application within the applicable shot clock and provide written notice to the applicant if the application is denied. The written notice shall state the reasons for denial, with reference to specific code provisions, ordinance, application instruction or otherwise publicly-stated procedures on which the denial was based, and be sent to the applicant within five (5) days after the City denies the application or before the applicable shot clock expires, whichever occurs first.
- (C) Batch Applications. [NOTE: FCC SMALL CELL ORDER ALLOWS APPLICANTS TO SUBMIT SWF APPLICATIONS IN BATCHES, WITHOUT NUMERICAL LIMITS.]

CITIES MAY CONSIDER TO BATCH APPLICATIONS. SOME MAY CHOOSE TO BATCH BY COMMON DESIGN ELEMENTS AND/OR VICINITY, AS WELL AS OTHER MEASURES TO PROMOTE EFFICIENCY.

A BATCH APPLICATION THAT INCLUDES DEPLOYMENT(S) THAT FALL WITHIN COLLOCATIONS ON EXISTING STRUCTURES AND DEPLOYMENT(S) ON NEW STRUCTURES SHALL BE SUBJECT TO A 90-DAY TIMEFRAME FOR APPROVAL AS OPPOSED TO A 60-DAY TIMEFRAME.]

#### **Section 5 – Small Wireless Facilities in the ROW; Maximum Height; Other Requirements**

- (A) Maximum Size of Permitted Use. Any wireless provider that seeks to install, modify, or replace facilities on a pole in the rights-of-way that exceeds the height limits contained in Section 2(R)(1), shall be subject to applicable requirements [or insert cross references to macro facilities code].

[CITIES MAY CONSIDER ADDING A SUBSECTIONS (B) – (D) HERE OR A SECTION IN THE DESIGN STANDARDS THAT HANDLES THE METHODS FOR DECORATIVE POLES, UNDERGROUND AND HISTORIC DISTRICTS. SECTION 5 IS ALSO AN APPROPRIATE PLACE TO INSERT DESIGN STANDARDS IF CITIES CHOOSE TO CODIFY SUCH STANDARDS.]

- (B) Decorative Poles. Subject to this code and applicable design standards, a wireless provider is permitted to collocate on or replace a decorative pole when necessary to collocate a small wireless facility; provided that any such replacement pole shall, to the extent feasible, replicate the design of the pole being replaced.
- (C) Underground District. [ACCORDING TO THE FCC ORDER, UNDERGROUNDING REQUIREMENTS ARE SUBJECT TO THE SAME CRITERIA AS OTHER AESTHETIC STANDARDS.

SOME COMPONENTS OF SMALL WIRELESS FACILITIES WILL OFTEN NOT WORK UNDERGROUND. THEREFORE, CITY UNDERGROUNDING REQUIREMENTS OR UNDERGROUND DISTRICTS MAY CREATE AN EFFECTIVE PROHIBITION. CITIES ARE ENCOURAGED TO REVIEW CURRENT UNDERGROUNDING REQUIREMENTS AND WORK WITH THEIR ATTORNEYS/ROW SPECIALISTS TO MAKE SURE THOSE REQUIREMENTS ARE NOT IN CONFLICT WITH THE FCC ORDER.]

- (D) Historic District. Small wireless facilities or poles to support collocation of small wireless facilities located in Historic Districts shall be designed to have a similar appearance, including coloring and design elements, if technically feasible, of other poles in the rights-of-way within 500 feet of the proposed installation. Any such design or

concealment measures may not be considered part of the small wireless facility for purpose of the size restrictions in the definition of small wireless facility.

[NOTE:(B) – (D) OF THIS SECTION CODIFY THE FCC SMALL CELL ORDER’S REQUIREMENT THAT AESTHETIC STANDARDS MUST BE: (1) REASONABLE, MEANING THEY ARE TECHNICALLY FEASIBLE AND REASONABLY DIRECTED TO AVOIDING OR REMEDYING THE INTANGIBLE PUBLIC HARM OF UNSIGHTLY OR OUT-OF-CHARACTER DEPLOYMENTS; (2) NO MORE BURDENSOME THAN THOSE APPLIED TO OTHER TYPES OF INFRASTRUCTURE DEPLOYMENT; (3) OBJECTIVE; AND, (4) PUBLISHED IN ADVANCE. THE REQUIREMENTS MAY NOT PROHIBIT OR HAVE THE EFFECT OF PROHIBITING WIRELESS SERVICE.]

## **Section 6 – Effect of Construction/Work Permit**

[NOTE: CITIES SHOULD CROSS-REFERENCE BACK TO PERMITTING CODE SO LANGUAGE WITHIN THIS SECTION IS CONSISTENT.]

- (A) Authority Granted. No Property Right or Other Interest Created. A permit from the City authorizes an applicant to undertake only certain activities in accordance with this Chapter and does not create a property right or grant authority to the applicant to impinge upon the rights of others who may already have an interest in the rights-of-way. [NOTE: IF YOUR CITY HAS A ROW LICENSE, CLARIFY THAT THIS DOES NOT GRANT A ROW LICENSE OR RIGHT TO PROVIDE SERVICES.]
- (B) Permit Duration.
  - (1) A permit for construction granted pursuant to this Section shall be valid for a period of \_\_\_\_\_ days after issuance unless the City agrees to extend this period for good cause, including but not limited to delay caused by the lack of commercial power or communications facilities, or by other events outside of the reasonable control of the wireless provider. [NOTE: IF YOUR CITY HAS A BUILDOUT PERIOD ALREADY ESTABLISHED FOR ROW CONSTRUCTION, THIS SUBSECTION SHOULD ALLOW A CONSISTENT PERIOD OF TIME. THE USE OF “DAYS” IN THIS SUBSECTION IS NOT INTENDED TO BE LIMITING; 180 TO 365 DAYS MAY BE APPROPRIATE IN THIS SUBSECTION. THE BUILDOUT PERIOD MUST REASONABLY ALLOW TIME FOR CONSTRUCTION.]
  - (2) The installed facility is subject to applicable relocation requirements, termination for material non-compliance after notice and a reasonable opportunity to cure, and an applicant’s right to terminate a permit at any time.

## **Section 7 – Removal, Relocation or Modification of Small Wireless Facility in the ROW**

[NOTE: IF YOUR CITY HAS REMOVAL, RELOCATION, ABANDONMENT, OR MODIFICATION SECTIONS IN OTHER ROW CODES, CONSIDER CROSS-REFERENCING TO THOSE SECTIONS HERE.]

- (A) Notice. The City shall provide the applicant reasonable advance notice, but no less than \_\_\_\_ days following written notice from the City, the wireless provider shall, at its own expense, protect, support, temporarily or permanently disconnect, remove, relocate, change or alter the position of any small wireless facilities within the rights-of-way whenever the City has determined that such removal, relocation, change or alteration, is reasonably necessary for the construction, repair, maintenance, or installation of any City improvement in or upon, or the operations of the City in or upon, the rights-of-way.
- (B) Emergency Removal or Relocation of Facilities. The City retains the right and privilege to cut or move any small wireless facility located within the rights-of-way of the City in the event of an emergency, as the City may determine to be necessary, appropriate or useful in response to any imminent danger to public health, safety, or property. If circumstances permit, the City shall notify the wireless provider and provide the wireless provider an opportunity to move its own facilities prior to cutting or removing a facility and shall notify the wireless provider promptly after cutting or removing a small wireless facility.
- (C) Abandonment of Facilities. [NOTE: MAKE CONSISTENT WITH THE CITY’S HANDLINGS OF ABANDONMENT IN OTHER CODES.]
- (D) Damage and Repair. The City may require a wireless provider to repair all damage to the rights-of-way directly caused by the activities of the wireless provider and return the rights-of-way to its functional equivalence before the damage pursuant to the competitively neutral, reasonable requirements and specifications. If the wireless provider fails to make the repairs within \_\_\_\_ days after written notice, the City may affect those repairs and charge the applicable party the actual, documented cost of such repairs.

## **Section 8 – Collocation on City Structures in the ROW**

[NOTE: NOT ALL CITIES MAY CHOOSE TO ALLOW SMALL WIRELESS FACILITIES TO BE COLLOCATED ON CITY STRUCTURES.]

- (A) Collocation on City Structures. Small wireless facilities may be collocated on city structures in the rights-of-way pursuant to this Chapter. No person will be permitted an exclusive arrangement or an arrangement which excludes otherwise qualified applicants to attach to city structures in the rights-of-way. A person who purchases or otherwise acquires a City structure is subject to the requirements of this section.

[NOTE: COLLOCATION ON CITY STRUCTURES OFTEN IMPLICATES MAKE-READY WORK TO PREPARE THE STRUCTURE FOR THE NEW ATTACHMENT. MAKE-READY PROVISIONS ARE TRADITIONALLY NEGOTIATED IN POLE ATTACHMENT AGREEMENTS BETWEEN THE PARTIES. TO THE EXTENT THAT THE CITY HAS CONTROL OVER SUCH NEGOTIATIONS OR SEEKS GENERAL GUIDANCE ON APPROPRIATE RATES, FEES, TERMS AND CONDITIONS, THE FOLLOWING SAMPLE LANGUAGE PROVIDES A USEFUL STARTING POINT:

*Make-Ready. The rates, fees, terms and conditions for the make-ready work to collocate a small wireless facility on a pole owned or controlled by the City must be nondiscriminatory, competitively neutral, reasonable, comply with this Chapter and be subject to the following:*

- (1) The City or any person owning, managing, or controlling the poles owned by the City will provide a good faith estimate for any make-ready work reasonably necessary to make a specific city pole suitable for attachment of the requested small wireless facility, including pole replacement if necessary, within 60 days after receipt of a completed request. Make-ready work including any pole replacement shall be completed within 60 days of written acceptance of the good faith estimate by the applicant.*
- (2) The City or any person owning, managing, or controlling the poles owned by the city shall not require more make-ready work than required to meet applicable codes or may be reasonably necessary to avoid interference with other attachments on the pole . Fees for make-ready work shall not include costs related to pre-existing or prior damage and non-compliance. Fees for make-ready work including any pole replacement shall not exceed actual and direct costs, or the amount charged to others for similar work and shall not include any revenue or contingency based consultant fees or expenses of any kind.]*

## **Section 9 – Rates for ROW and Collocation on City Structures in the ROW**

[NOTE: THE FCC PRESCRIBED THE FOLLOWING SAFE HARBOR FEES BELOW IN (A). CITIES MAY CHOOSE TO INCORPORATE THIS LANGUAGE INTO THEIR CODE, LICENSE, FRANCHISE, OR RIGHT-OF-WAY USE AGREEMENT OR MAKE REFERENCE HERE TO A FEE SCHEDULE SET BY RESOLUTION]

- (A) The recurring rate for use of the ROW and attachment of small wireless facilities to a city structure in the ROW shall be subject to the following requirements:
  - (1) Annual Rate. A wireless provider authorized to place small wireless facilities and any related pole in the rights-of-way will pay to the City compensation for use of the rights-of-way and collocation on city structures in the ROW a rate that is

based on (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are non-discriminatory. This rate, together with the one-time application fees, shall be the total compensation that the wireless provider is required to pay the city for the deployment of each small wireless facility in the ROW and any associated pole. The FCC's safe harbor rate is an aggregate annual rate not to exceed \$270 per small wireless facility. [NOTE: THE FCC DOES NOT PROVIDE DIRECTION REGARDING THE POTENTIAL ALLOCATION OF FEES CHARGED FOR THE USE OF THE ROW AND ATTACHMENT TO A CITY STRUCTURE, BUT THE TOTAL FEE CHARGED FOR EACH SMALL WIRELESS FACILITY MUST MEET THE CRITERIA IN THE 2018 FCC ORDER. IN OTHER WORDS, THE CITY MAY NOT CHARGE TWICE FOR THE REIMBURSEMENT OF THE SAME COSTS.]

- (2) Payment Obligation Upon or After Facility Removal. A wireless provider may remove one or more of its small wireless facilities at any time from the rights-of-way and city structures in the ROW with the required permits. The wireless provider will cease owing the City compensation, as of the date of removal, for such removed facilities.

#### **Section 10 – Effective Date**

This Ordinance shall take effect \_\_\_\_\_ days after its passage, approval and publication.

## **Acknowledgements**

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Reba Crocker, ROW Consultants LLC (formerly with the cities of Milwaukie and Gladstone)

Rich Roche, Formerly with AT&T

Robert “Tripp” May III, Telecom Law Firm

Ryan Zink, City of Salem

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Steve Coon, Verizon

Tegan Enloe, City of Tigard

Tim Halinski, T-Mobile



## Appendix A – Shot Clock Information

*Shot clock provisions that apply to small wireless facilities are codified in 47 C.F.R. Section 1.6003, which is provided below.*

### **§1.6003 Reasonable periods of time to act on siting applications.**

(a) *Timely action required.* A siting authority that fails to act on a siting application on or before the shot clock date for the application, as defined in paragraph (e) of this section, is presumed not to have acted within a reasonable period of time.

(b) *Shot clock period.* The shot clock period for a siting application is the sum of—

(1) The number of days of the presumptively reasonable period of time for the pertinent type of application, pursuant to paragraph (c) of this section; plus

(2) The number of days of the tolling period, if any, pursuant to paragraph (d) of this section.

(c) *Presumptively reasonable periods of time—*(1) *Review periods for individual applications.* The following are the presumptively reasonable periods of time for action on applications seeking authorization for deployments in the categories set forth in paragraphs (c)(1)(i) through (iv) of this section:

(i) Review of an application to collocate a Small Wireless Facility using an existing structure: 60 days.

(ii) Review of an application to collocate a facility other than a Small Wireless Facility using an existing structure: 90 days.

(iii) Review of an application to deploy a Small Wireless Facility using a new structure: 90 days.

(iv) Review of an application to deploy a facility other than a Small Wireless Facility using a new structure: 150 days.

(2) *Batching.* (i) If a single application seeks authorization for multiple deployments, all of which fall within a category set forth in either paragraph (c)(1)(i) or (iii) of this section, then the presumptively reasonable period of time for the application as a whole is equal to that for a single deployment within that category.

(ii) If a single application seeks authorization for multiple deployments, the components of which are a mix of deployments that fall within paragraph (c)(1)(i) of this section and deployments that fall within paragraph (c)(1)(iii) of this section, then the presumptively reasonable period of time for the application as a whole is 90 days.

(iii) Siting authorities may not refuse to accept applications under paragraphs (c)(2)(i) and (ii) of this section.

(d) *Tolling period.* Unless a written agreement between the applicant and the siting authority provides otherwise, the tolling period for an application (if any) is as set forth in paragraphs (d)(1) through (3) of this section.

(1) For an initial application to deploy Small Wireless Facilities, if the siting authority notifies the applicant on or before the 10th day after submission that the application is materially incomplete, and clearly and specifically identifies the missing documents or information and the specific rule or regulation creating the

obligation to submit such documents or information, the shot clock date calculation shall restart at zero on the date on which the applicant submits all the documents and information identified by the siting authority to render the application complete.

(2) For all other initial applications, the tolling period shall be the number of days from—

(i) The day after the date when the siting authority notifies the applicant in writing that the application is materially incomplete and clearly and specifically identifies the missing documents or information that the applicant must submit to render the application complete and the specific rule or regulation creating this obligation; until

(ii) The date when the applicant submits all the documents and information identified by the siting authority to render the application complete;

(iii) But only if the notice pursuant to paragraph (d)(2)(i) of this section is effectuated on or before the 30th day after the date when the application was submitted; or

(3) For resubmitted applications following a notice of deficiency, the tolling period shall be the number of days from—

(i) The day after the date when the siting authority notifies the applicant in writing that the applicant's supplemental submission was not sufficient to render the application complete and clearly and specifically identifies the missing documents or information that need to be submitted based on the siting authority's original request under paragraph (d)(1) or (2) of this section; until

(ii) The date when the applicant submits all the documents and information identified by the siting authority to render the application complete;

(iii) But only if the notice pursuant to paragraph (d)(3)(i) of this section is effectuated on or before the 10th day after the date when the applicant makes a supplemental submission in response to the siting authority's request under paragraph (d)(1) or (2) of this section.

(e) *Shot clock date.* The shot clock date for a siting application is determined by counting forward, beginning on the day after the date when the application was submitted, by the number of calendar days of the shot clock period identified pursuant to paragraph (b) of this section and including any pre-application period asserted by the siting authority; *provided*, that if the date calculated in this manner is a “holiday” as defined in §1.4(e)(1) or a legal holiday within the relevant State or local jurisdiction, the shot clock date is the next business day after such date. The term “business day” means any day as defined in §1.4(e)(2) and any day that is not a legal holiday as defined by the State or local jurisdiction.

## Appendix B – Code of Federal Regulations (C.F.R) Cited Throughout Document

### 47 C.F.R. Section 1.1307

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**§1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.**

[Link to an amendment published at 85 FR 18142, Apr. 1, 2020.](#)

[Link to a correction of the above amendment published at 85 FR 33578, June 2, 2020.](#)

(a) Commission actions with respect to the following types of facilities may significantly affect the environment and thus require the preparation of EAs by the applicant (see §§1.1308 and 1.1311) and may require further Commission environmental processing (*see* §§1.1314, 1.1315 and 1.1317):

(1) Facilities that are to be located in an officially designated wilderness area.

(2) Facilities that are to be located in an officially designated wildlife preserve.

(3) Facilities that: (i) May affect listed threatened or endangered species or designated critical habitats; or (ii) are likely to jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats, as determined by the Secretary of the Interior pursuant to the Endangered Species Act of 1973.

NOTE: The list of endangered and threatened species is contained in 50 CFR 17.11, 17.22, 222.23(a) and 227.4. The list of designated critical habitats is contained in 50 CFR 17.95, 17.96 and part 226. To ascertain the status of proposed species and habitats, inquiries may be directed to the Regional Director of the Fish and Wildlife Service, Department of the Interior.

(4) Facilities that may affect districts, sites, buildings, structures or objects, significant in American history, architecture, archeology, engineering or culture, that are listed, or are eligible for listing, in the National Register of Historic Places (*see* 54 U.S.C. 300308; 36 CFR parts 60 and 800), and that are subject to review pursuant to section 1.1320 and have been determined through that review process to have adverse effects on identified historic properties.

(5) Facilities that may affect Indian religious sites.

(6) Facilities to be located in floodplains, if the facilities will not be placed at least one foot above the base flood elevation of the floodplain.

(7) Facilities whose construction will involve significant change in surface features (e.g., wetland fill, deforestation or water diversion). (In the case of wetlands on Federal property, *see* Executive Order 11990.)

(8) Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

(b) In addition to the actions listed in paragraph (a) of this section, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA) if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency radiation in excess of the limits in §§1.1310 and 2.1093 of this chapter. Applications to the Commission for construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities must

contain a statement confirming compliance with the limits unless the facility, operation, or transmitter is categorically excluded, as discussed below. Technical information showing the basis for this statement must be submitted to the Commission upon request. Such compliance statements may be omitted from license applications for transceivers subject to the certification requirement in §25.129 of this chapter.

(1) The appropriate exposure limits in §§1.1310 and 2.1093 of this chapter are generally applicable to all facilities, operations and transmitters regulated by the Commission. However, a determination of compliance with the exposure limits in §1.1310 or §2.1093 of this chapter (routine environmental evaluation), and preparation of an EA if the limits are exceeded, is necessary only for facilities, operations and transmitters that fall into the categories listed in table 1, or those specified in paragraph (b)(2) of this section. All other facilities, operations and transmitters are categorically excluded from making such studies or preparing an EA, except as indicated in paragraphs (c) and (d) of this section. For purposes of table 1, *building-mounted antennas* means antennas mounted in or on a building structure that is occupied as a workplace or residence. The term *power* in column 2 of table 1 refers to total operating power of the transmitting operation in question in terms of effective radiated power (ERP), equivalent isotropically radiated power (EIRP), or peak envelope power (PEP), as defined in §2.1 of this chapter. For the case of the Cellular Radiotelephone Service, subpart H of part 22 of this chapter; the Personal Communications Service, part 24 of this chapter and the Specialized Mobile Radio Service, part 90 of this chapter, the phrase *total power of all channels* in column 2 of table 1 means the sum of the ERP or EIRP of all co-located simultaneously operating transmitters owned and operated by a single licensee. When applying the criteria of table 1, radiation in all directions should be considered. For the case of transmitting facilities using sectorized transmitting antennas, applicants and licensees should apply the criteria to all transmitting channels in a given sector, noting that for a highly directional antenna there is relatively little contribution to ERP or EIRP summation for other directions.

**TABLE 1—TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION**

Service (title 47 CFR rule part)	Evaluation required if:
Experimental Radio Services (part 5)	Power >100 W ERP (164 W EIRP).
Commercial Mobile Radio Services (part 20)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP). Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
	Consumer Signal Booster equipment grantees under the Commercial Mobile Radio Services provisions in part 20 are required to attach a label to Fixed Consumer Booster antennas that:
	(1) Provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transmitting antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
Paging and Radiotelephone Service (subpart E of part 22)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
Cellular Radiotelephone Service (subpart H of part 22)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).

	Building-mounted antennas: total power of all channels >1000 W ERP (1640 W EIRP).
Personal Communications Services (part 24)	(1) Narrowband PCS (subpart D):
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: total power of all channels >1000 W ERP (1640 W EIRP).
	(2) Broadband PCS (subpart E):
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >2000 W ERP (3280 W EIRP).
	Building-mounted antennas: total power of all channels >2000 W ERP (3280 W EIRP).
Satellite Communications Services (part 25)	All included.
	In addition, for NGSO subscriber equipment, licensees are required to attach a label to subscriber transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310 of this chapter.
Miscellaneous Wireless Communications Services (part 27 except subpart M)	(1) For the 1390-1392 MHz, 1392-1395 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz bands:
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >2000 W ERP (3280 W EIRP).
	Building-mounted antennas: total power of all channels >2000 W ERP (3280 W EIRP).
	(2) For the 698-746 MHz, 746-764 MHz, 776-794 MHz, 2305-2320 MHz, and 2345-2360 MHz bands:
	Total power of all channels >1000 W ERP (1640 W EIRP).
Broadband Radio Service and Educational Broadband Service (subpart M of part 27)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Building-mounted antennas: power >1640 W EIRP.
	BRS and EBS licensees are required to attach a label to subscriber transceiver or transverter antennas that:

	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
Upper Microwave Flexible Use Service (part 30)	Non-building-mounted antennas: Height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Antennas are mounted on buildings.
Radio Broadcast Services (part 73)	All included.
Auxiliary and Special Broadcast and Other Program Distributional Services (part 74)	Subparts G and L: Power >100 W ERP.
Stations in the Maritime Services (part 80)	Ship earth stations only.
Private Land Mobile Radio Services Paging Operations (subpart P of part 90)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
Private Land Mobile Radio Services Specialized Mobile Radio (subpart S of part 90)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: Total power of all channels >1000 W ERP (1640 W EIRP).
76-81 GHz Radar Service (part 95)	All included.
Amateur Radio Service (part 97)	Transmitter output power >levels specified in §97.13(c)(1) of this chapter.
Local Multipoint Distribution Service (subpart L of part 101) and 24 GHz (subpart G of part 101)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Building-mounted antennas: power >1640 W EIRP.
	LMDS and 24 GHz Service licensees are required to attach a label to subscriber transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
70/80/90 GHz Bands (subpart Q of part 101)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.

	Building-mounted antennas: power >1640 W EIRP.
	Licensees are required to attach a label to transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.

(2)(i) Mobile and portable transmitting devices that operate in the Commercial Mobile Radio Services pursuant to part 20 of this chapter; the Cellular Radiotelephone Service pursuant to part 22 of this chapter; the Personal Communications Services (PCS) pursuant to part 24 of this chapter; the Satellite Communications Services pursuant to part 25 of this chapter; the Miscellaneous Wireless Communications Services pursuant to part 27 of this chapter; the Upper Microwave Flexible User Service pursuant to part 30 of this chapter; the Maritime Services (ship earth stations only) pursuant to part 80 of this chapter; the Specialized Mobile Radio Service, the 4.9 GHz Band Service, and the 3650 MHz Wireless Broadband Service pursuant to part 90 of this chapter; the Wireless Medical Telemetry Service (WMTS), the Medical Device Radiocommunication Service (MedRadio), and the 76-81 GHz Band Radar Service pursuant to part 95 of this chapter; and the Citizens Broadband Radio Service pursuant to part 96 of this chapter are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§2.1091 and 2.1093 of this chapter.

(ii) Unlicensed PCS, unlicensed NII, and millimeter-wave devices are also subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§15.255(g), 15.257(g), 15.319(i), and 15.407(f) of this chapter.

(iii) Portable transmitting equipment for use in the Wireless Medical Telemetry Service (WMTS) is subject to routine environmental evaluation as specified in §§2.1093 and 95.2385 of this chapter.

(iv) Equipment authorized for use in the Medical Device Radiocommunication Service (MedRadio) as a medical implant device or body-worn transmitter (as defined in subpart I of part 95 of this chapter) is subject to routine environmental evaluation for RF exposure prior to equipment authorization, as specified in §§2.1093 and 95.2585 of this chapter by finite difference time domain (FDTD) computational modeling or laboratory measurement techniques. Where a showing is based on computational modeling, the Commission retains the discretion to request that supporting documentation and/or specific absorption rate (SAR) measurement data be submitted.

(v) All other mobile, portable, and unlicensed transmitting devices are categorically excluded from routine environmental evaluation for RF exposure under §§2.1091, 2.1093 of this chapter except as specified in paragraphs (c) and (d) of this section.

(3) In general, when the guidelines specified in §1.1310 are exceeded in an accessible area due to the emissions from multiple fixed transmitters, actions necessary to bring the area into compliance are the shared responsibility of all licensees whose transmitters produce, at the area in question, power density levels that exceed 5% of the power density exposure limit applicable to their particular transmitter or field strength levels that, when squared, exceed 5% of the square of the electric or magnetic field strength limit applicable to their particular transmitter. Owners of transmitter sites are expected to allow applicants and licensees to take reasonable steps to comply with the requirements contained in §1.1307(b) and, where feasible, should encourage co-location of transmitters and common solutions for controlling access to areas where the RF exposure limits contained in §1.1310 might be exceeded.

(i) Applicants for proposed (not otherwise excluded) transmitters, facilities or modifications that would cause non-compliance with the limits specified in §1.1310 at an accessible area previously in compliance must submit an EA if emissions from the applicant's transmitter or facility would result, at the area in question, in a power density that exceeds 5% of the power density exposure limit applicable to that transmitter or facility or in a field strength that, when squared, exceeds 5% of the square of the electric or magnetic field strength limit applicable to that transmitter or facility.

(ii) Renewal applicants whose (not otherwise excluded) transmitters or facilities contribute to the field strength or power density at an accessible area not in compliance with the limits specified in §1.1310 must submit an EA if emissions from the applicant's transmitter or facility results, at the area in question, in a power density that exceeds 5% of the power density exposure limit applicable to that transmitter or facility or in a field strength that, when squared, exceeds 5% of the square of the electric or magnetic field strength limit applicable to that transmitter of facility.

(c) If an interested person alleges that a particular action, otherwise categorically excluded, will have a significant environmental effect, the person shall submit to the Bureau responsible for processing that action a written petition setting forth in detail the reasons justifying or circumstances necessitating environmental consideration in the decision-making process. (See §1.1313). The Bureau shall review the petition and consider the environmental concerns that have been raised. If the Bureau determines that the action may have a significant environmental impact, the Bureau will require the applicant to prepare an EA (see §§1.1308 and 1.1311), which will serve as the basis for the determination to proceed with or terminate environmental processing.

(d) If the Bureau responsible for processing a particular action, otherwise categorically excluded, determines that the proposal may have a significant environmental impact, the Bureau, on its own motion, shall require the applicant to submit an EA. The Bureau will review and consider the EA as in paragraph (c) of this section.

NOTE TO PARAGRAPH (d): Pending a final determination as to what, if any, permanent measures should be adopted specifically for the protection of migratory birds, the Bureau shall require an Environmental Assessment for an otherwise categorically excluded action involving a new or existing antenna structure, for which an antenna structure registration application (FCC Form 854) is required under part 17 of this chapter, if the proposed antenna structure will be over 450 feet in height above ground level (AGL) and involves either:

1. Construction of a new antenna structure;
2. Modification or replacement of an existing antenna structure involving a substantial increase in size as defined in paragraph I(C)(1)(3) of Appendix B to part 1 of this chapter; or
3. Addition of lighting or adoption of a less preferred lighting style as defined in §17.4(c)(1)(iii) of this chapter. The Bureau shall consider whether to require an EA for other antenna structures subject to §17.4(c) of this chapter in accordance with §17.4(c)(8) of this chapter. An Environmental Assessment required pursuant to this note will be subject to the same procedures that apply to any Environmental Assessment required for a proposed tower or modification of an existing tower for which an antenna structure registration application (FCC Form 854) is required, as set forth in §17.4(c) of this chapter.

(e) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the regulations contained in this chapter concerning the environmental effects of such emissions. For purposes of this paragraph:

(1) The term *personal wireless service* means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;



(2) The term *personal wireless service facilities* means facilities for the provision of personal wireless services;

(3) The term *unlicensed wireless services* means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services; and

(4) The term *direct-to-home satellite services* means the distribution or broadcasting of programming or services by satellite directly to the subscriber's premises without the use of ground receiving or distribution equipment, except at the subscriber's premises or in the uplink process to the satellite.

[51 FR 15000, Apr. 22, 1986]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §1.1307, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.govinfo.gov](http://www.govinfo.gov).

EFFECTIVE DATE NOTE: At 85 FR 18142, Apr. 1, 2020, §1.1307 was amended by revising paragraph (b). At 85 FR 33578, June 2, 2020, this revision was delayed indefinitely.

## **47 C.F.R Section 1.6002**

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### **§1.6002 Definitions.**

Terms not specifically defined in this section or elsewhere in this subpart have the meanings defined in this part and the Communications Act of 1934, 47 U.S.C. 151 *et seq.* Terms used in this subpart have the following meanings:

(a) *Action* or *to act* on a siting application means a siting authority's grant of a siting application or issuance of a written decision denying a siting application.

(b) *Antenna*, consistent with §1.1320(d), means an apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under part 15 of this chapter.

(c) *Antenna equipment*, consistent with §1.1320(d), means equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.

(d) *Antenna facility* means an antenna and associated antenna equipment.

(e) *Applicant* means a person or entity that submits a siting application and the agents, employees, and contractors of such person or entity.

(f) *Authorization* means any approval that a siting authority must issue under applicable law prior to the deployment of personal wireless service facilities, including, but not limited to, zoning approval and building permit.

(g) *Collocation*, consistent with §1.1320(d) and the Nationwide Programmatic Agreement (NPA) for the Collocation of Wireless Antennas, appendix B of this part, section I.B, means—

(1) Mounting or installing an antenna facility on a pre-existing structure; and/or

(2) Modifying a structure for the purpose of mounting or installing an antenna facility on that structure.

(3) The definition of “collocation” in §1.6100(b)(2) applies to the term as used in that section.

(h) *Deployment* means placement, construction, or modification of a personal wireless service facility.

(i) *Facility or personal wireless service facility* means an antenna facility or a structure that is used for the provision of personal wireless service, whether such service is provided on a stand-alone basis or commingled with other wireless communications services.

(j) *Siting application or application* means a written submission to a siting authority requesting authorization for the deployment of a personal wireless service facility at a specified location.

(k) *Siting authority* means a State government, local government, or instrumentality of a State government or local government, including any official or organizational unit thereof, whose authorization is necessary prior to the deployment of personal wireless service facilities.

(l) *Small wireless facilities* are facilities that meet each of the following conditions:

(1) The facilities—

(i) Are mounted on structures 50 feet or less in height including their antennas as defined in §1.1320(d);  
or

(ii) Are mounted on structures no more than 10 percent taller than other adjacent structures; or

(iii) Do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater;

(2) Each antenna associated with the deployment, excluding associated antenna equipment (as defined in the definition of antenna in §1.1320(d)), is no more than three cubic feet in volume;

(3) All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;

(4) The facilities do not require antenna structure registration under part 17 of this chapter;


(5) The facilities are not located on Tribal lands, as defined under 36 CFR 800.16(x); and

(6) The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b).

(m) *Structure* means a pole, tower, base station, or other building, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services).

[83 FR 51884, Oct. 15, 2018, as amended at 84 FR 59567, Nov. 5, 2019]

# Memorandum

To: Planning Commission / Commission Advisory Committee  
From: Derrick I. Tokos, AICP, Community Development Director   
Date: October 8, 2020  
Re: DLCD Regional Housing Needs Analysis Report and Outreach

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Enclosed is a Regional Housing Needs Analysis Context Memorandum prepared by the Department of Land Conservation and Development along with an email from our Regional Representative, Lisa Phipps, with dates for webinars where they will be soliciting feedback from local stakeholders on how best to implement the final report.

A copy of the final report is being provided in an electronic format only, as it is a very large document (484 pages). As the title suggests, the Regional Housing Needs Analysis, required by HB 2003 (2019), was performed to estimate housing stock, and gauge housing need on a regional level. This information will be used by policy makers and staff engaged in developing statewide housing policies. They will also rely upon this information when reviewing housing production strategies proposed by local governments in the coming years.

These materials are being provided for informational purposes, and I don't anticipate spending a great deal of time on the topic at the work session. If for any reason Commission or Advisory Committee members want to delve into the issues in greater detail, we can schedule time at a future work session.

#### Attachments

Email from Lisa Phipps, DLCD Regional Representative, dated 10/1/20  
Regional Housing Needs Context Memorandum  
Regional Housing Needs Technical Report, dated August 2020 (electronic format only)

## Sherri Marineau

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**From:** Derrick Tokos  
**Sent:** Thursday, October 01, 2020 9:44 AM  
**To:** Sherri Marineau  
**Subject:** FW: RHNA Regional Meeting Invitation  
**Attachments:** 20200928\_RHNA\_Context\_Memo.pdf; 2020-RHNA-Technical-Report-Final.pdf

Hi Sherri... please include this email and the attachments under Director's comments for the next Planning Commission regular meeting. I'll be participating in the October 26<sup>th</sup> and October 29<sup>th</sup> webinars.

*Derrick I. Tokos, AICP*  
Community Development Director  
City of Newport  
169 SW Coast Highway  
Newport, OR 97365  
ph: 541.574.0626 fax: 541.574.0644  
[d.tokos@newportoregon.gov](mailto:d.tokos@newportoregon.gov)

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**From:** Phipps, Lisa <lisa.phipps@state.or.us>  
**Sent:** Tuesday, September 29, 2020 9:23 AM  
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**Cc:** Edging, Sean <sean.edging@state.or.us>  
**Subject:** RHNA Regional Meeting Invitation

Hello, All,  
Below is an invitation to discuss results from the **Regional Housing Needs Analysis (RHNA)** and how such an analysis can better identify and ultimately address housing need statewide.

**You are welcome to join any of the webinars but the October 29<sup>th</sup> and November 2<sup>nd</sup> workshops are geared at our region (although Newport may also be interested in the Cities above 10,000 population).**

Please don't hesitate to reach out if you have any questions!

For context, House Bill 2003 directed Oregon Housing and Community Services (OHCS) to develop a Regional Housing Needs Analysis (RHNA) and housing shortage analysis that estimates existing housing stock, conducts a housing shortage analysis, and estimates the housing necessary to accommodate growth for each city within each region of the state. This analysis was completed by OHCS on September 1, 2020 and the technical report is available here: <https://www.oregon.gov/ohcs/about-us/Documents/RHNA/2020-RHNA-Technical-Report-Final.pdf>

The bill also directed the Department of Land Conservation (DLC) to submit a report to the Legislature by March 1, 2021 that provides an assessment of the RHNA conducted by OHCS, a comparison of a RHNA to the existing statewide housing capacity analyses, and recommendations to how a RHNA could best be incorporated into the existing statewide housing planning framework. Currently, the Department is engaging in extensive dialogue with experts, stakeholders, and other interested persons throughout the state on the RHNA to determine how it could best be implemented to better meet housing needs throughout the state.

To discuss specific regional issues and solicit feedback from local governments and stakeholders, the Department has scheduled a series of five broader regional meetings. Meetings will be open for anybody interested in attending, but each will have a specific topic focus. The meetings will be held at the following date and times via Zoom (invitation details below):

<i>Housing Need in the <b>Metro Region</b></i>	– October 19, 2:30-4:30pm
<i>Housing Need for <b>Cities above 10,000 Population</b></i>	– October 26, 2-4pm
<i>Housing Need in the <b>Oregon Coast and Communities with Second Homes</b></i>	– October 29, 10am-12pm
<i>Housing Need for <b>Small and Rural Cities</b> (&lt;10,000 Population and Unincorporated Areas)</i>	– November 2, 1-3pm
<i>General Regional Housing Needs Analysis Meeting</i>	– November 10, 1-3pm

Attached is a four-page memorandum intended to better contextualize the discussion, including some of the key topics we have identified thus far. Please feel free to forward this invitation to parties who would be interested in joining the discussion.

If any of the scheduled times do not work for you, but you would still like to provide feedback for the RHNA or have any questions, please reach out to Sean Edging at [sean.edging@state.or.us](mailto:sean.edging@state.or.us).

Thank you,

---

Join Zoom Meeting

<https://us02web.zoom.us/j/3282565693?pwd=U3RTVmkzcm56QlVoTk8rWmx2SElpZz09>

Meeting ID: 328 256 5693

Passcode: 749647

One tap mobile

+16699006833,,3282565693#,,,,,0#,,749647# US (San Jose)

+12532158782,,3282565693#,,,,,0#,,749647# US (Tacoma)

Dial by your location

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 301 715 8592 US (Germantown)

+1 312 626 6799 US (Chicago)

+1 346 248 7799 US (Houston)

+1 646 876 9923 US (New York)

888 683 5191 US Toll-free

855 880 1246 US Toll-free

877 853 5257 US Toll-free

Meeting ID: 328 256 5693

Passcode: 749647

Find your local number: <https://us02web.zoom.us/j/kd8EzRqsSr>

Join by Skype for Business

<https://us02web.zoom.us/skype/3282565693>



**Lisa M. Phipps**

North Coast Regional Representative | Ocean/Coastal Services Division

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## Regional Housing Needs Analysis (RHNA) Context Memorandum

### *Legislative Context*

The Oregon Legislature adopted House Bill 2003 in the 2019 legislative session to address the statewide housing crisis. A key provision charges the Oregon Housing and Community Services (OHCS) Department to develop a regional housing needs analysis (RHNA) and housing shortage analysis that estimates existing housing stock, conducts a housing shortage analysis, and estimates the housing necessary to accommodate growth for each city within each region of the state. This analysis was completed by OHCS on September 1, 2020.

The bill also directs the Department of Land Conservation and Development to develop a report to the Legislature that provides an assessment of the RHNA conducted by OHCS, a comparison of a RHNA to the existing statewide housing capacity analyses, and recommendations for how a RHNA could best be incorporated into the existing statewide housing planning framework. There are various elements required in the report outlined by the bill, but fundamentally, the report will address three questions:

1. How the OHCS recommended RHNA methodology compares to the existing statewide housing planning framework.
2. How a RHNA could be best implemented to support the legislative intent of better achieving affordable, fair, and equitable housing outcomes.
3. If a RHNA is not implemented, what alternatives to a RHNA could be implemented that support the legislative intent of better achieving affordable, fair, and equitable housing outcomes.

### *Land Use Regulatory Context*

Housing capacity analyses, otherwise known as “Housing Needs Analyses” or “HNAs”, are the current primary document local jurisdictions use to fulfill statewide planning Goal 10 obligations related to housing. At its core, an HNA consists of a housing projection over a 20-year horizon based on a population forecast, an inventory of lands available for housing, an analysis of the suitability of residential lands to accommodate needed housing, and a list of actions a local jurisdiction may consider to accommodate needed housing if there is an identified deficiency.

House Bill 2003 includes a variety of changes to the existing statewide planning context. First, it directs the Land Conservation and Development Commission to adopt a schedule for cities above 10,000 population to update their HNAs, either once every six years for cities within the Metro boundary or once every eight years for cities outside the Metro boundary. Additionally, it creates a new requirement for cities to adopt a Housing Production Strategy report within a year after the deadline for an HNA. The report must list specific actions a city will take – such as revising regulations or providing financial incentives – to promote the development of housing to address all identified housing needs.

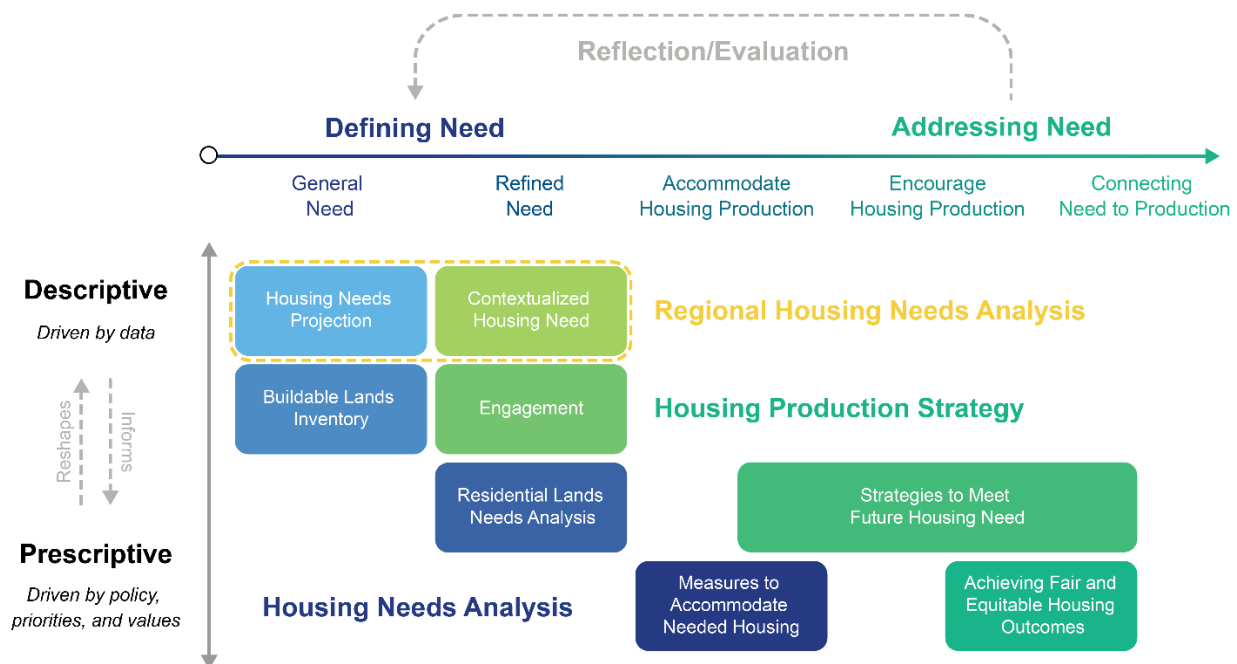
### *RHNA Methodology*

One significant theme in the rulemaking process for Housing Production Strategies is the inadequacy of Housing Needs Analyses in comprehensively identifying housing need over a 20-year planning horizon. Proposed rules address this inadequacy, in part, by including additional requirements for Housing Production Strategy reports to further “contextualize” housing need by



utilizing additional information on populations with disproportionate housing need, specifically for people experiencing homelessness, people living with disabilities, and communities of color. However, there are still lingering concerns that HNAs remain inadequate to fully satisfy the requirements of Goal 10.

A RHNA, if incorporated into the statewide planning framework, could provide a consistent methodology and regional context that more comprehensively defines housing need over a 20-year planning horizon, while leaving policy decisions, such as where and what types of housing to build to accommodate need, up to local jurisdictions. This is depicted in the following illustration.



### Opportunities and Challenges of a RHNA

The OHCS recommended RHNA methodology includes provisions to more comprehensively define both market and publicly-supported housing need over a 20-year horizon in consideration of regional factors, current housing underproduction, and disproportionate housing needs for demographic groups that are often overlooked in typical HNAs, such as housing need for people with low income, people over 65, people with disabilities, people with limited English proficiency, and people experiencing homelessness. As many of these factors are now required in the contextualization of housing need in the Housing Production Strategy, a RHNA could serve as a significant resource for local jurisdictions that would otherwise be required to conduct this analysis individually. Additionally, results between cities could be meaningfully compared to one another, which is impossible today because the underlying methodology between HNAs varies drastically.

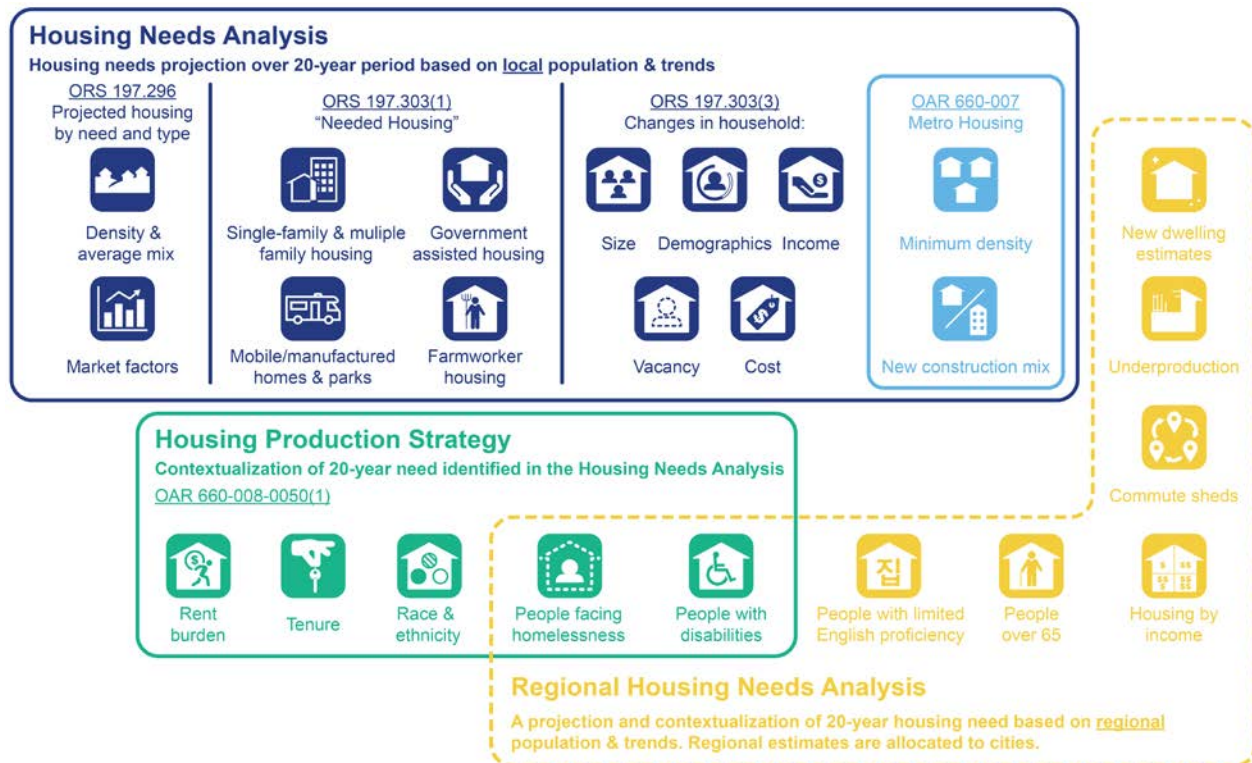
Of course, there are challenges to the successful implementation of a RHNA. One of the largest is data availability and quality in less populated regions, especially for smaller demographic groups. Because this analysis is reliant on existing American Community Survey data, the





statistical samples that inform the analysis become less reliable at smaller geographic scales with fewer total people. It may require additional resources to improve the granularity and specificity of housing need in a RHNA. However, one advantage that a RHNA offers is the ability to improve and refine the methodology as better data sources are developed, whereas methodological changes implemented by the state through local jurisdictions must occur through rule, which make further refinement less flexible.

Additionally, there are significant policy considerations that are important to consider in the implementation of a RHNA. For example, allocations of housing units will require careful consideration to ensure they are not reinforcing existing patterns of exclusion by extrapolating current conditions into the future. Additionally, House Bill 2003 tasked OHCS to include housing type in the 20-year housing need estimate, but one challenge of that requirement is the absence of a clear state policy on a desired future mix of housing types that may be different than the existing distribution. There should also be consideration as to how the methodology could be structured to accommodate areas with richer sources of data such as the Metro or Rogue Valley Council of Governments. Finally, any RHNA will need to have a system in place for feedback and transparency to ensure the methodology, estimates, allocation, and implementation are responsive to new information and feedback from stakeholders.



### Implementation and Accountability

The RHNA identifies a substantial number of needed housing units to accommodate growth over a 20-year horizon, compensate for current underproduction of housing, and provide housing for people experiencing homelessness. A clear follow-up question to this identified need is how local jurisdictions would be held accountable for the production of needed housing



units. While they are a key partner in the development of housing, there are many other factors outside of a local jurisdiction's control that can affect housing production, including market trends, readiness of local market rate and affordable housing developers, and availability of state and federal resources.

Through rulemaking for Housing Production Strategies (HPS), a similar tension arose regarding how local jurisdictions could be held accountable while recognizing that they are only one actor among many in the development of housing. Through discussion, DLCD ultimately developed an approach that required local jurisdictions to develop strategies that comprehensively address all identified housing needs but would not be required to meet specific numerical thresholds in terms of housing units developed. Similarly, if a strategy fails in its implementation, local jurisdictions are required to ensure that the housing need that the strategy fulfilled is met, either through a new strategy or combination of existing strategies. Such an approach could be adapted for the implementation of the RHNA, where local governments have a responsibility to accommodate and promote the development of housing units identified in the RHNA but are recognized as one of many partners in the development of needed housing units.

### *Outreach*

Developing a comprehensive legislative report will require extensive dialogue with experts, stakeholders, and other interested persons throughout the state. The complete 2020 RHNA, and related background information, can be reviewed at this website:

<<https://www.oregon.gov/ohcs/about-us/Pages/housing-needs.aspx>>. If you would like to provide written feedback on the RHNA, please send it to Sean Edging at [housing.dlcd@state.or.us](mailto:housing.dlcd@state.or.us). More information regarding DLCD's outreach efforts and future opportunities to participate can be found at this website:  
<<https://www.oregon.gov/lcd/UP/Pages/Housing-Needs.aspx>>

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# Implementing a Regional Housing Needs Analysis Methodology in Oregon: Approach, Results, and Initial Recommendations

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August 2020

Prepared for: Oregon Housing and Community Services

Technical Report

**ECONorthwest**  
ECONOMICS • FINANCE • PLANNING

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# Acknowledgements

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Oregon Housing and Community Services staff and ECONorthwest prepared this report. OHCS and ECONorthwest thank the many people who provided feedback and helped form the methodology for the Regional Housing Needs Analysis for Oregon.

Coordination with DLCD and the Department of Administrative Services (DAS) was a requirement of the legislation for the development of the RHNA. Within DAS, the Office of Economic Analysis (OEA) was the key player as part of the coordinated project team that led this work and consulted together on a regular basis, with other members from DAS contributing as well. The Governor's Office provided significant support. Other state agencies consulted on or involved in this work included the Oregon Department of Transportation (ODOT), Department of Human Services (DHS), Geospatial Enterprise Office (GEO), Oregon Employment Department (OED), and Regional Solutions Centers.

The contributions of stakeholders to this process and weight of their advice and consultation in the choices that were made to develop the project are woven into the Recommended version of the RHNA methodology presented in this report. We acknowledge that engagement was limited by the time requirements of the project and *we know that there is more engagement needed* (see Chapter 7 Recommendations). We are grateful for the amount of involvement and input this project received in the interest of creating a product that is useful to Oregon in the long run.

## Technical Advisory Committee

Members of the technical advisory committee included:

Andres Lopez, Coalition Communities of Color  
Becky Knudson, ODOT  
Damian Syrnyk, City of Bend  
David Williams, Opportunity Insights  
Dennis Yee, Metro  
Dustin Nilsen, City of Hood River  
Marisa Zapata, Portland State University  
Matthew Gebhardt, Portland State University  
Michael Boquist, City of La Grande

Nikki Hart-Brinkley, Rogue Valley Council of Governments  
Rebecca Lewis, University of Oregon  
Taylor Smiley Wolfe, Home Forward (formerly worked for Speaker of the House, the Chief Sponsor of HB 4003 (2019), during the 2019 Legislative Session)  
Ted Reid, Metro  
Tyler Bump, ECONorthwest

## Other stakeholders involved

A broader group of stakeholders were invited to listen in on meetings of the technical advisory committee and provide input through other stakeholder meetings. Stakeholders, including those not on this list, were also invited to submit written comments about the RHNA. Not all participants listed below provided input. Invitees and participants of the stakeholder engagement process included people from the following organizations, as well as some individual citizens:

1000 Friends of Oregon	Home Builders Association Metropolitan Portland
Angelo Planning	Housing Authority Clackamas County
Association of Oregon Counties	Housing Authority of Jackson County
Association of Realtors	Housing for All
Burns Paiute Housing Authority	Housing Land Advocates
Central City Concern	Human Solutions
Central Oregon Builders Association	Klamath Tribes Housing
City of Albany	Landye Bennett
City of Bend	Law Office of Mike Reeder
City of Corvallis	League of Oregon Cities
City of Eugene	League of Women Voters of Oregon
City of Grand Ronde	Metro
City of Hillsboro	Mid-Willamette Council of Governments
City of Hood River	Mid-Willamette Valley Homeless Alliance
City of La Center	Multifamily Northwest
City of Madras	North Bend City/Coos-Curry Housing Authorities
City of McMinnville	Northwest Economic Research Center - PSU
City of Newport	Northwest Housing Alternatives
City of Portland	Oregon Cascades West Council of Governments
City of Redmond	Oregon Home Builders Association
City of Salem	Oregon Housing Alliance
City of Tualatin	Oregon Smart Growth
City of Turner	Portland Community Reinvestment Initiatives
Clackamas County	Portland State University
Commonworks Consulting	Reach CDC
Community Partners for Affordable Housing	Sabin CDC
Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians	Siletz Tribal Housing
Confederated Tribes of the Umatilla Indian Reservation	Specialized Housing, Inc.
Coquille Indian Housing Authority	St. Vincent de Paul Society of Lane County, Inc.
Cow Creek Tribe	Think Real Estate
Energy Trust of Oregon	United Way Mid-Willamette Valley
Fair Housing Council of Oregon	University of Oregon
Farmworker Housing Development Corporation	Warm Springs Housing Authority
Hacienda CDC	Washington County



# 1. Introduction

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House Bill 2003, adopted in the 2019 legislative session in the midst of a statewide affordable housing crisis, suggests a transformation of Oregon’s approach to planning for housing. Tina Kotek, speaker of the Oregon House of Representatives, said this of the bill during deliberations:<sup>1</sup>

“The state’s housing crisis has continued for far too long and demands a bold set of solutions from the Legislature... We must publicly finance more affordable housing across Oregon. We must create more housing choice in exclusively single-family neighborhoods. And we must smooth the way for more construction at the local level. This is the goal of House Bill 2003.”

This landmark legislation, if fully adopted as a new practice in Oregon, would require local governments to tie new data and analysis about housing need, especially for lower income Oregonians, to a commitment to meet that need in land use plans and housing policies.

Oregon Housing and Community Service (OHCS) is charged with the initial research to develop what could become a cornerstone of Oregon’s housing implementation framework: a methodology for quantifying regional and local housing need by income that can inform targets or goals for local government housing implementation efforts. ECONorthwest is collaborating with OHCS to lead this initial research. But there are many steps to be taken before implementation, including this report’s exploration of whether and how a methodology for projecting regional housing need by income can lead to better housing planning outcomes.

This technical report meets the House Bill 2003 requirement to develop a methodology for projecting regional housing need and allocate that need to local jurisdictions. It presents the results of applying that methodology for all regions and cities in Oregon along with recommendations for next steps and future research.

Throughout this report, we refer to the “project team,” which consists of staff from OHCS and ECONorthwest staff.

## How House Bill 2003 Changes Oregon’s Housing Implementation Framework

Oregon has long been a national leader in planning to accommodate growth. The state mandates local government compliance with 19 statewide planning goals, which include public engagement, planning for natural areas, and planning for adequate land to support economic development and industry growth, among others. Oregon’s Goal 10 requires each city to

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<sup>1</sup> March 5, 2019. Testimony in Support of House Bill 2003, House Committee on Agriculture and Land Use, Speaker of the House Tina Kotek.

develop a Housing Needs Analysis, which must tie twenty years of projected household growth to units of varying densities, and then determine whether there is adequate land inside the city's urban growth boundary to accommodate those units. Goal 10 directs cities to plan for "...housing that meets the housing needs of households of all income levels." Oregon's statewide land use planning system requires one of the most comprehensive approaches to planning for housing in the country.

While Oregon's land use planning approach remains a model in the nation, House Bill 2003 takes aim at some of its shortcomings. In the current system, regulatory authority focuses on land use and land availability – ensuring a sufficient supply of land zoned to accommodate need – without providing sufficient guidance or requirements for the actual production of the housing units needed by income. Local governments each independently lead attempts to understand and plan to accommodate housing need, without recognition of the regionality of jobs and housing markets. People seeking affordable rent do not pay attention to jurisdictional boundaries. And finally, some communities have enacted exclusionary zoning and other regulatory impediments that limit the overall supply of housing, especially multi-family and affordable housing, while still complying with the requirements of the land use planning system. The current system therefore reinforces existing residential segregation patterns by failing to affirmatively further fair housing access.

The overall result is that, to varying degrees, communities have failed to produce the housing units needed to accommodate regional growth, especially for the state's lowest income residents and communities of color, in the locations where they are most needed.

The number of total units as well as the diversity of price points, unit types, and publicly supported affordable units varies from city to city, resulting in inequities in access to housing and jobs, especially for Oregon's lowest income residents.<sup>2</sup>

Adding regionally-derived, income-based housing unit production targets or goals to the current system is one of the ways that House Bill 2003 envisions helping local governments improve unit production outcomes and reduce disparities in access to housing. The legislation requires the creation of a new methodology for quantifying regional and local housing need for the full range of incomes that leads to increased cross-jurisdictional equity in affordable housing production. It also requires local governments to address regulatory barriers to housing production, and to develop and adopt strategies (called Housing Production Strategies) for meeting housing need.

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House Bill 2003 envisions Oregon's housing planning system reformed from a singular focus on ensuring adequate available land to a more comprehensive approach that also achieves these critical goals:

1. Support and enable the construction of sufficient units to accommodate current populations and projected household growth
  2. Reduce geographic disparities in access to housing, especially affordable and publicly-supported housing.
- 

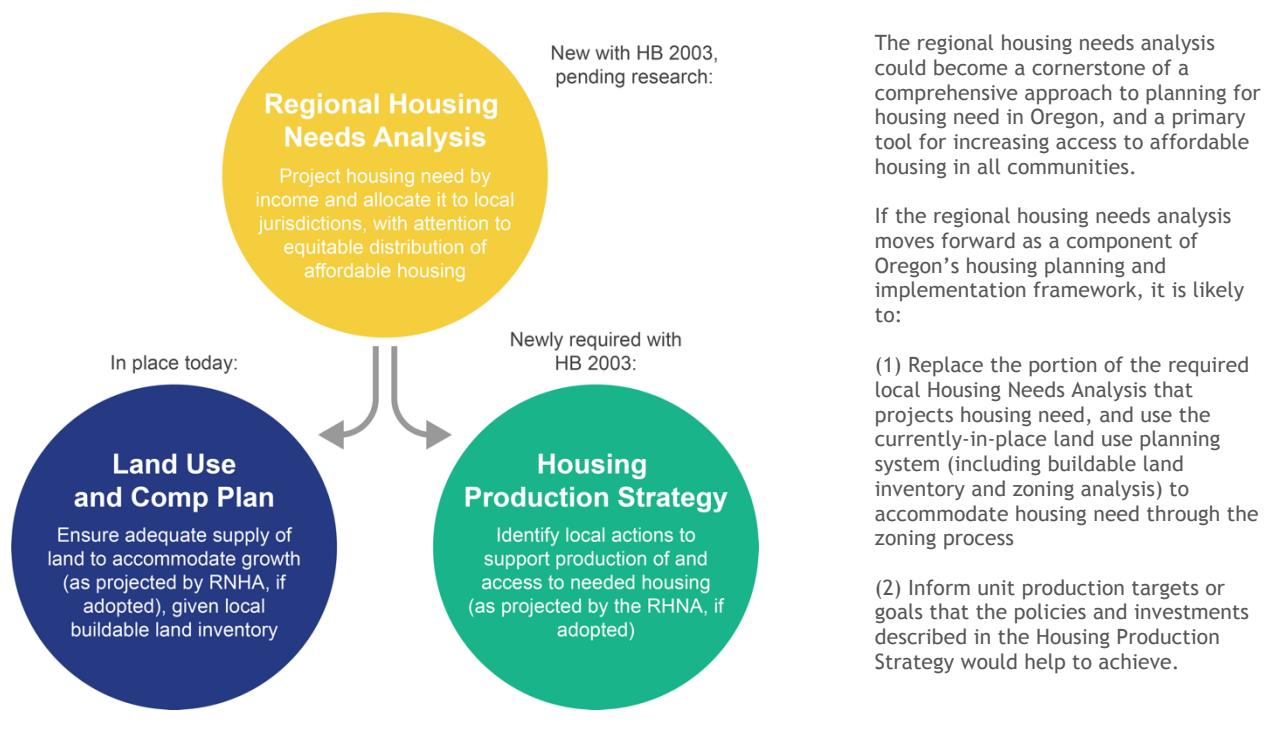
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<sup>2</sup> Throughout this report, we talk about publicly supported affordable housing. This term refers to units that are funded with public money and are income-restricted to meet affordable housing needs, including housing that has public funding from a wide range of local, state, or federal programs. Chapter 6 discusses publicly supported housing need in more detail.

As of the writing of this report, this framework remains a work in progress. Some of its components already exist through local land use planning authorities, including Oregon’s Goal 10 and local housing need analysis requirements. Some of the components are new requirements with the passage of House Bill 2003 that expand local government responsibilities for planning to meet housing need by requiring cities to develop and adopt Housing Production Strategies and periodically measure progress. Regulatory guidance is under development. And the regional housing needs analysis, or RHNA, (the focus of this report and of OHCS and ECONorthwest’s work) is one exploratory component of the framework that could become a critical part of the framework in the future.

## Exhibit 1. Evolving Housing Planning and Implementation Framework in Oregon

Source: ECONorthwest (with graphic design support from DLCD)



## What is this Report?

This report fulfills the House Bill 2003 directive to develop a methodology and then use that methodology to produce findings about housing need for every region and every city in Oregon. In its simplest terms, to meet this requirement, the methodology must **estimate the number of households in each income category and in each region that will need dwelling units that are affordable to them, now and over the next 20 years, and allocate those units down from the regional to the city level. The result is an estimate of the number of needed housing units by income for each of Oregon’s 241 cities (which this report sometimes refers to as the local *allocation* of housing need).** The methodology and complete requirements are

described in Exhibit 2, which also details the process used to develop the methodology and provides recommendations for advancing this methodology to statewide use.

## Exhibit 2. Requirements of HB 2003: A Methodology for RHNAs

Source: HB 2003 (2019), Section 1.

Source: HB 2005 (2013), Section 1.

Develop a methodology for calculating a <b>Regional Housing Needs Analysis</b> that identifies the total number of housing units necessary to accommodate anticipated populations in a region over the next 20 years based on:			
<b>1</b> Trends in density and in the average mix of housing types of urban residential development	<b>2</b> Demographic and population trends	<b>3</b> Economic trends and cycles	<b>4</b> Equitable distribution of publicly supported housing within a region
The methodology must:			
Estimate existing housing stock for each city and Metro (the Portland area regional government responsible for land use planning)	Estimate housing shortage for each city and Metro	Estimate the number of housing units necessary to accommodate anticipated population growth over the next 20 years for each city and Metro	
Housing estimates must be classified in two ways:	<b>1 Housing Type</b>  Including single-family detached housing, single-family attached housing, multifamily housing, and manufactured dwellings or mobile homes.		
	<b>2 Affordability</b>  Using four affordability categories. Housing that is affordable to households that are:  (a) Very low income (<50% of Area Median Income (AMI)) (b) Low income (50-80% of AMI) (c) Moderate income (80-120% of AMI) (d) High income (120% of AMI or greater)		

## The Role of this Report

The legislature envisioned the RHNA development process as a test, to determine whether a method of estimating regional housing need could be developed that would improve and support local housing production and planning, and whether that method could be cost-effectively replicated on a regular basis statewide. As such, the project team's research process is as important to document and explore as its findings.

To allow the greatest opportunity to test methodological options, the project team designed a process that intentionally included a Beta version of the methodology and results. The purpose of this step in the process is to understand how the team's initial methodological choices affected housing need results, to allow stakeholders to react to an initial draft of a methodology and findings, and to create an opportunity to revisit and improve key assumptions and choices.<sup>3</sup> These Beta results (which we have documented and included in full in Appendix C) informed the Recommended RHNA described in this report. Ultimately, the state Department of Land Conservation and Development (DLCD) will be responsible for taking the contents of this report and recommending a specific course of action to the legislature.

Exhibit 3 explains the overall process.

### Exhibit 3. Review Process of the RHNA Methodology

Source: ECONorthwest.



In that context, the purpose of this report goes beyond meeting the requirements of HB 2003. It also provides the research context and other documentation necessary for both DLCD and the legislature to evaluate the Recommended RHNA methodology's effectiveness. To support discussion with stakeholders and to inform next steps, it thoroughly documents each methodological step, the options considered and abandoned and the rationale for doing so, and conclusions about the usefulness and likely accuracy of its findings. And, because the RHNA can only be effective if it integrates with an existing system of housing implementation and

<sup>3</sup> Appendix G provides a detailed description of the stakeholder engagement process.

provides useful and appropriate information to local governments, the report also provides initial recommendations about other key aspects of housing need that DLCD and the legislature should consider as it determines whether or not to advance the RHNA to statewide implementation.

This report is technical in nature. It is written for an audience familiar with Oregon's current land use planning system, housing market function, and the data that are generally used to understand and project housing need. Future deliverables will summarize the results for decision-makers and other interested parties, and provide an updated set of recommendations from OHCS regarding the use of the RHNA in the context of Oregon's housing implementation framework that incorporates the results stakeholder engagement that will occur after the publication of this report.

## Contents of the Report

The report includes the following chapters and appendices:

- **Chapter 2. Approach to Addressing Equity.** This chapter explains ways that the RHNA methodology incorporates equity consideration and our vision of how this work can support more equitable housing outcomes in Oregon if the RHNA is adopted.
- **Chapter 3. Methodology.** This chapter summarizes the Recommended RHNA methodology, with a focus on the primary methodological decisions and key assumptions used. Appendix B provides details of the methodology used to develop both the Beta and Recommended methodologies for the RHNA.
- **Chapter 4. Results of the Recommended RHNA.** This chapter presents the results of the Recommended RHNA methodology for the state of Oregon and each region. It presents a sampling of results for some cities within the Willette Valley region, with the remaining city results presented in Appendix D. The chapter compares results of the Recommended RHNA with cities that developed local HNAs in 2019 or 2020.
- **Chapter 5. Distribution of Unmet Housing Needs Across Demographic Categories.** This chapter provides information about housing disparities by select demographic categories, to support the locally-driven and comprehensive approach to addressing housing inequity that is needed in Oregon and envisioned in HB 2003. More detailed results by region and other geographies are included in Appendix F.
- **Chapter 6. Additional Considerations.** This chapter describes how the RHNA considered trends in density and housing mix, demographic and population trends, economic trends and cycles, and the equitable distribution of publicly supported housing within a region.
- **Chapter 7. Initial Recommendations.** This chapter provides initial recommendations regarding why the RHNA should advance to implementation, a vision of how it can be integrated into an existing system, and details of what additional work would be helpful



to improve the RHNA in the near future and over time. These initial recommendations will be tested with stakeholders before they are finalized in later deliverables.

- **Appendix A. Data Source Evaluation.** This appendix outlines potential tradeoffs and notes important considerations about each of the data sources evaluated for use in the RHNA.
- **Appendix B. Detailed Methodology.** This appendix presents the methodologies used to develop the RHNA, including selection of regions, developing the regional forecasts of housing need, and allocation of housing need to cities.
- **Appendix C. RHNA Beta Version Results.** This appendix presents the results of the Beta version of the RHNA by region and city. It shows the results by housing type.
- **Appendix D. Recommended RHNA Results.** This appendix presents the results of the Recommended version of the RHNA by region and city. *This is the appendix where all cities can find their results of the RHNA.*
- **Appendix E. Housing Supply by Income and Affordability Analysis Results.** This appendix presents a version of a housing shortage analysis that shows the shortage of units by income and affordability and involves the development of a cross tabulation that compares two variables: (1) housing stock (affordable to households in different income groups) and (2) households by income groups.
- **Appendix F. Regional Distribution of Unmet Housing Needs Across Demographic Categories.** This appendix presents information about the housing disparities by select demographic categories for each of the regions in the RHNA by region. It uses the same approach to understanding unmet housing need that is used in Chapter 5 for the statewide analysis.
- **Appendix G. Stakeholder Engagement.** This appendix summarizes the process of engagement of stakeholders external to OHCS as part of the HB 2003 RHNA development project.

## 2. Approach to Addressing Equity

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HB 2003 was passed to address a history of federal, state, and local planning efforts that have harmed people of color, low-income households, and other marginalized populations in Oregon. The State's planning structures have permitted and emboldened discriminatory actions of investors in our state's housing stock, exacerbating the negative housing outcomes. Through choosing to center the needs of those with power and generational wealth, the State's current approach to housing planning reinforces systemic discrimination, allowing some cities and counties to create and maintain barriers to affordable housing production that marginalizes diverse communities. These policies and practices further institutionalized harm by asking communities to focus policy solutions on zoning and land supply rather than questions of affordable housing supply.<sup>4</sup>

OHCS is committed to addressing inequities in all of its work, including in the development of a methodology for the RHNA. Oregon's Statewide Housing Plan, published in 2019 was developed with equity and racial justice principles as a key priority. The agency is currently piloting a Racial Equity Toolkit from the Government Alliance on Race and Equity (GARE), which it hopes to use to evaluate programs and policies in the future. When HB 2003 was passed, the Toolkit was not yet in place within OHCS. The equity lens used in this project was therefore developed and adjusted in parallel with the development of the project. This chapter explains where we started, the work we've done to incorporate various equity considerations into the Recommended methodology, and our vision of how this work can support more equitable housing outcomes in Oregon if the RHNA is adopted.

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This chapter was jointly authored by OHCS and ECONorthwest; OHCS staff directly contributed much of the language. Both parties are committed to the statements it contains, though some of the language pertains only to OHCS and its internal equity lens. The chapter describes the equity approach developed jointly for the purposes of executing this project, in the context of OHCS's evolving equity lens.

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<sup>4</sup> For current and historical context on the role of land use planning in Oregon in creating and reinforcing patterns of racial segregation, see: (1) *Invisible Walls: Housing Discrimination in Clackamas County* (2019, Portland State University Public History Seminar); (2) *Will States Take Back Control of Housing from Local Governments* (2020, white paper by Edward J. Sullivan). There are many examples of research into the role that zoning and land use planning have played nationally, including *Zoned Out: Race, Displacement, and City Planning in New York City* (2017, Angotti and Morse); *Local Land Use Regulation and the Chain of Exclusion* (2000, Pendall); and others.



## Legislative Intent for Equity in HB 2003

HB 2003 seeks to increase the availability of and access to affordable housing through a new approach to estimating housing need by income affordability. Its focus is on achieving equitable opportunity for people of all incomes to have the choice and the ability to live where they want to live. Achieving this intent requires an explicit focus on accounting for the needs of the lowest income Oregonians, and in a way that accounts for the geographic differences in the historic under-production of affordable housing.

### Exhibit 4. Household Income Distribution, Selected Demographic Characteristics, Oregon, 2018

Source: U.S. Census 2018 ACS 1-year PUMS estimates

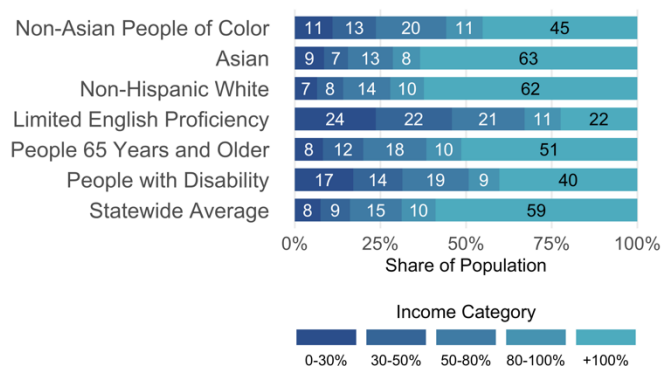
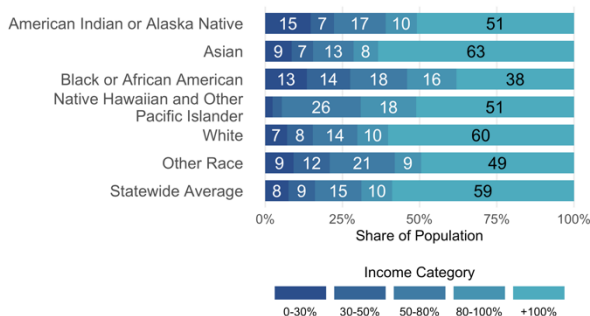


Exhibit 4, Exhibit 5, and Exhibit 6 provide examples of the analysis included in Chapter 5, which provides data about the distribution of housing need by race, ethnicity, and other categories. Exhibit 4 shows that non-Asian people of color, and particularly those with limited English proficiency, are more likely to have incomes in the lowest end of the spectrum. The example data are for the state of Oregon; Chapter 5 and Appendix F also contains data and information about housing characteristics at the regional and local levels, where data quality allow.

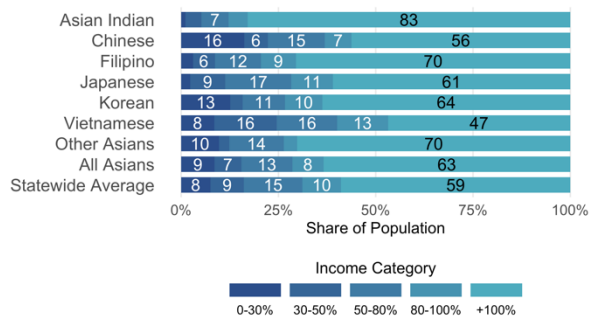
### Exhibit 5. Household Income Distribution, Population by Race, Oregon, 2018

Source: U.S. Census 2018 ACS 1-year PUMS estimates



### Exhibit 6. Household Income Distribution, Asian Population by Subgroups, Oregon, 2018

Source: U.S. Census 2018 ACS 1-year PUMS estimates



The charts above (Exhibit 4, Exhibit 5, and Exhibit 6) explain why the state legislature may have overlapped an intent for more equitable racial outcomes with an intent for more equitable outcomes by income affordability. It demonstrates the overrepresentation of Black, indigenous, and Latinx populations in the lower income categories. It is undeniable: income in Oregon is patterned by race.

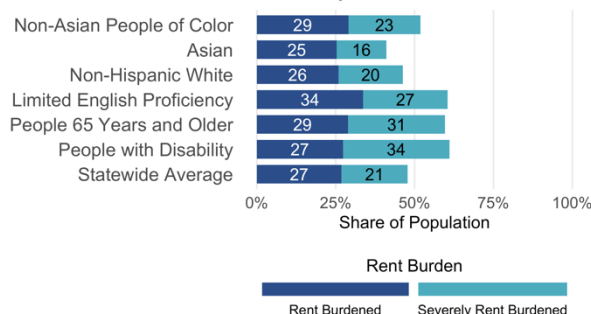
## Why OHCS Leads with Race

Addressing needs of lower-income Oregonians begins a process of correcting for past injustices. However, income alone is an insufficient focus, because it fails to acknowledge the role that racial discrimination has played in our state's housing history. While a focus on income affordability is critically important to understanding and addressing housing need, the OHCS project team recognized the need to introduce a *racial equity* lens as well. Housing need differs across the population not only because of income but also because of systemic racism, discrimination, barriers to housing access, and exclusionary planning policies. For example, Exhibit 7 and Exhibit 8 show how rent burden and severe rent burden vary by race and other demographic characteristics

The housing market is not color blind. Ignoring differences in housing outcomes by race will lead only to incomplete (and therefore inequitable) policy solutions.

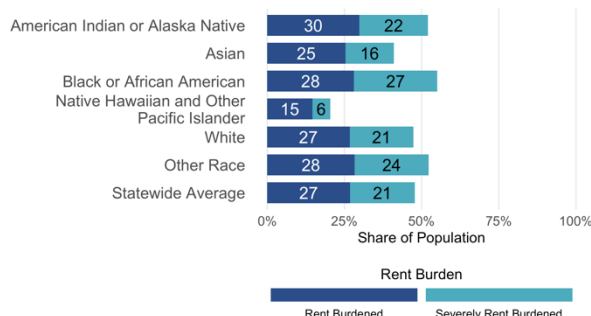
**Exhibit 7. Rent Burdened and Severely Rent Burdened, Selected Demographic Characteristics, Oregon, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 8. Rent Burdened and Severely Rent Burdened, Population by Race, Oregon, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



After participating in a GARE nine-month learning cohort, OHCS adopted the position of the Alliance to *lead with race*, “with the recognition that the creation and perpetuation of racial inequities has been baked into government, and that racial inequities across all indicators for success are deep and pervasive. We also know that other groups of people are still marginalized, including based on gender, sexual orientation, ability and age, to name but a few. Focusing on racial equity provides the opportunity to introduce a framework, tools and resources that can also be applied to other areas of marginalization.”<sup>5</sup>

As a starting place for the conversation about the prevalence of more than just affordability inequities in housing outcomes, we built into our research program a deliverable (contained in Chapter 5 of this document) that provides data and information detailing inequities in cost burden, housing type, tenure, and homelessness across demographic categories, including race and ethnicity, people over 65, people with disabilities, and people with limited English

<sup>5</sup> Full statement from GARE available at: <https://www.racialequityalliance.org/about/our-approach/race/>

proficiency. Based on input from DLCD and stakeholders, we believe that this analysis can support local planning and housing production strategies to acknowledge and address those inequities.

### Role of the RHNA in supporting equitable outcomes in the housing planning system

With an intent to lead with race, the project team focused on the task of developing the Regional Housing Needs Analysis (RHNA) methodology. Racism contributed to the current geographic distribution of people in an area in a variety of ways. One of those is that certain populations' housing choices were not considered when making policy and other choices. The solution for these problems has to include housing choice now. Today's solutions cannot recreate or reinforce these challenges by determining where any particular populations "should" live with some formula. Rather, they must strive to make opportunity available to everyone. The project team therefore wanted to preserve the right for every person's geographic housing preferences to be met through the RHNA. As such, we focused the RHNA on achieving equity in housing affordability geographically, with the intention of ensuring an adequate supply of housing that is affordable in a range of price points in every city within a region. This aligns with the original intention of the legislation: the goal of incorporating the RHNA into our state's housing implementation framework is that a household should be able to afford to live in any city in Oregon regardless of its income.

In reality, questions of local access to available housing are determined by many factors other than a household's ability to afford a unit. If income were the only factor, we would not see communities of color disproportionately represented among the cost-burdened. For this reason, in addition to the emphasis on geographic equity in affordability, it is also important to understand and confront the inequities experienced across demographic categories, as shown in the work of Chapter 5. It is furthermore critical that this analysis support local efforts to address and correct for the racial inequities in the plans they make for land use, zoning, and future housing production.

After weighing the issue with its advisory committee and broader stakeholders, the project team believes that this is the role of the RHNA in supporting the integration of equity into the housing planning system: **a methodology that aims for geographic equity in housing affordability within all Oregon cities that also provides consistent data to inform local efforts to address barriers to housing access for diverse marginalized populations.** Such an analysis exposes inequities in housing outcomes without presupposing any differences in geographic housing preferences based on demographic categories.

## Challenges in this work

Data quality and availability, especially for more rural parts of our state, are among the biggest challenges faced in completing the work of analyzing differences in housing outcomes effectively. While we made choices early in the research process to use Census derivatives (PUMS<sup>6</sup>) that allow for relatively granular analysis, we could not provide detailed breakdowns by demographic category for many small and rural communities. The analysis in Chapter 5 therefore contains the results at the most granular geographic level possible without reaching the limitations of unworkable margins of error. This does, however, leave us with questions about how evaluation of local jurisdictions' performance on improving racial equity should best happen. It seems most reasonable that this be taken up in the Housing Production Strategies called for in HB 2003, but those questions lie outside the purview of the work assigned to the RHNA project team in the legislation. These questions should be taken up in the next stage of stakeholder engagement work moving forward. This need for additional work is described in Chapter 7.

## Geographic equity of income affordability in housing

Turning to the questions of income affordability in housing, the project team sought to create a methodology that would fully account for the needs of the lowest-income Oregonians in future housing production, while also making strides toward overcoming past failures to meet housing need. To accomplish this, throughout the process of developing the methodology, the project team made choices to better focus on the needs of the lowest-income Oregonians. These choices are described in detail in Chapter 3. Following is a high-level summary of some of the key aspects of the methodology that center equity of income affordability in the need estimates:

- We reviewed other statewide and regional housing need methodologies<sup>7</sup> as a starting place, and quickly added two components to more clearly focus on the needs of low-income Oregonians: the inclusion of housing need for those currently experiencing homelessness, and a focus on addressing underproduction of housing (which has led to rapidly rising home prices in many Oregon communities).
- We disaggregated the lowest income categories described in the legislation to provide estimates for households at the 0 – 30% income category, to allow an implementation focus that addresses the needs of this particularly vulnerable group of households.
- We chose to adjust income by household size, to better align the results with major state and federal programs that provide financial support to low-income households, and to ensure that unit production targets better match actual household incomes, especially for larger household sizes.

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<sup>6</sup> Public Use Microdata Sample. For more detail, see Appendix A.

<sup>7</sup> In particular, we built from California's methodology, which is similar in many ways to the methodology required in HB 2003. California's methodology does not explicitly account for homeless population, and addresses underproduction differently from the approach recommended for Oregon's methodology.

- HB 2003 asks us to create a methodology “based on an equitable distribution of publicly-supported housing”. We have tied this requirement to our RHNA findings, and have provided an approach to estimating the total number of units that would need to be publicly supported to meet the needs of each community’s current and future population. This provides data and information that can influence state and local-level funding priorities. Chapter 6 provides details.
- We tested options in both the Beta and Recommended versions of our methodology to find the best path to allocating housing to cities within a region, to better meet need and to improve the allocation of all affordable units, not just those that are publicly-supported. To accommodate future housing needs, our recommended methodology sets income-based targets for cities based on regional (not local) income distributions, to avoid projecting past local trends into the future. It also accounts for historic underproduction of housing at the regional level, and distributes those units to income categories proportionate to current patterns of cost-burdening. This approach ensures that more housing is allocated at the lower end of the income spectrum (where greater rates of cost-burdening are experienced as a result of housing underproduction). If the RHNA is implemented as part of the statewide system, this choice would result in a requirement that cities in regions with larger shares of their population experiencing cost burdening must plan to accommodate proportionately greater production of units at the lower end of the income spectrum.

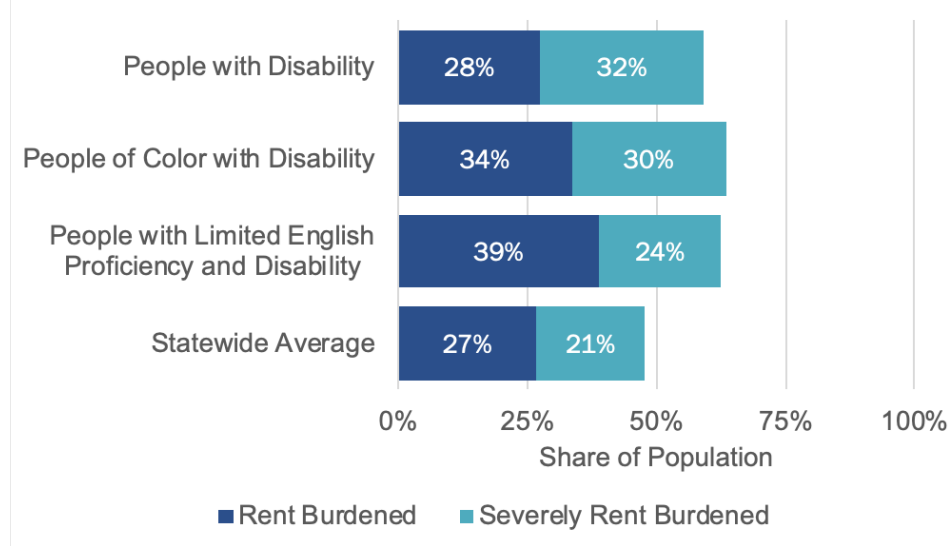
### Other issues considered

The data in Chapter 5 make clear that that housing outcomes differ by demographic category. We also recognize that some characteristics of the unit need vary by demographic categories. Examples of this include peoples with disabilities and seniors.

- **People with a disability.** Many, but not all, people with a disability have a distinct need for an accessible unit. Exhibit 9 shows rent burden for people with one or more disability. On average 48% of Oregon households are rent burdened or severely rent burdened, compared with 60% of people with one or more disability. In comparison 64% of people of color with disability are rent burdened or severely rent burdened, as are 63% of people with limited English proficiency and a disability.

**Exhibit 9. Rent Burdened and Severely Rent Burdened, People with One or More Disability by Selected Demographic Characteristics, Oregon, 2018**

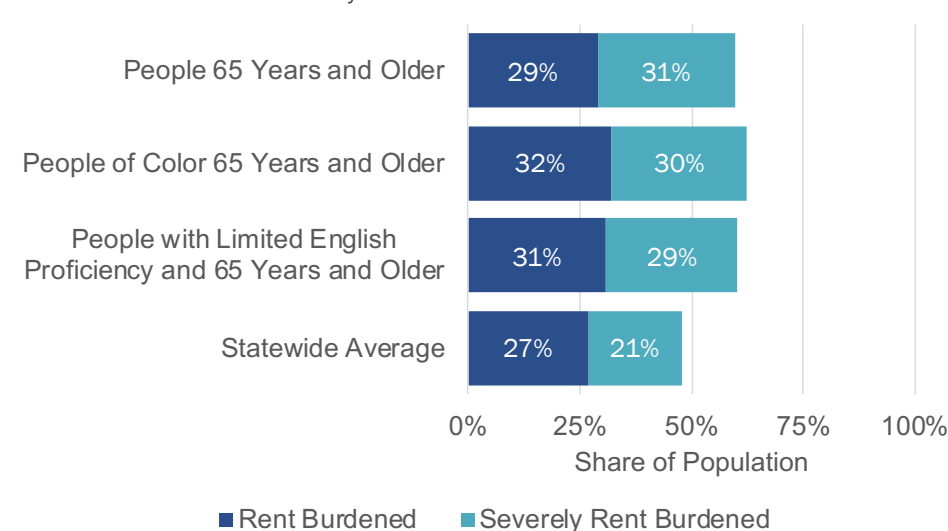
Source: U.S. Census 2018 ACS 1-year PUMS estimates



- Seniors.** Exhibit 10 shows rent burden for seniors. Rent burden and severe rent burden is higher for people of color who are seniors (62%), than all seniors (60%). About 60% of seniors with limited English proficiency are also rent burdened or severely rent burdened.

**Exhibit 10. Rent Burdened and Severely Rent Burdened, People 65 years and Older by Selected Demographic Characteristics, Oregon, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



- Tribal populations.** Oregon has nine Federally Recognized Tribes, each with a designated service area that is often multiple counties. Tribal members living on reservations or trust lands may have different housing needs than tribal members living in urban areas. Tribes are sovereign nations and tribal areas do not fit the definition of a city, and typically their populations are included within county estimates. We recognize that tribal areas may have different housing needs than the rest of the area outside of a



UGB in a county, however the State does not have access to tribal data at the same level as city data. While lacking much of the same quantitative data as was used in this project, the tribes have a more informed understanding of their housing needs than the State currently has. Housing needs for these communities are therefore difficult to understand without a methodology that derives from data specifically collected for the purpose of evaluating tribal housing needs.

- **People of color.** People of color on average have larger household sizes, lower median incomes, are a younger demographic, are growing at a faster rate than the white non-Hispanic population, and are more likely to live in intergenerational housing, and we understand that those characteristics impact housing need for this population.

To the extent that we were able, we have incorporated adaptations to the methodology to help account for these differences. For example, the adjustment to incomes for household sizes and to unit affordability for number of bedrooms paints a more realistic picture of affordability for large household sizes. In other cases, as with how to accurately account for tribal housing need in Oregon, the lack of a population forecast that specifies future populations in tribal areas does not allow us to even attempt to properly account for potentially diverse needs. Likewise, the lack of complete data on accessible housing stock hampered our ability to incorporate an estimate for that unmet need into our methodology.

In some cases, qualitative research is needed to inform statewide policy with the lived experiences of communities that experience housing disparities while quantitative data needs to be improved. Chapter 7 specifically recommends improved data and outreach to better understand tribal housing need, housing need for people with disabilities, agricultural workforce housing needs, a need for improved data about people experiencing homelessness, and improved data about communities of color, especially in more rural parts of the state.

With more accurate and complete information about communities of color, and those with specialized housing needs, our current stock of housing, and market rents, this analysis could have been more precise and comprehensive. We have provided documentation of known issues with Census data, in particular for counting communities of color, in Appendix A. And, we have provided recommendations about how more complete data that the State of Oregon could produce would improve future analyses in Chapter 7.

It is also important to remember the RHNA as an instrument used to estimate housing unit need for *use by local planners in planning for housing production*, and to consider the limited impact that planners can have on housing development with specific characteristics. In this sense, many issues may be more appropriately addressed through local implementation efforts, rather than through this statewide quantitative effort to understand the need for housing units by income category. Such issues include specialized housing need for older populations, an improved understanding of the availability of naturally occurring affordable housing (or low-cost market-rate housing), an improved understanding of the quality of affordable housing, and housing needs for student populations. These issues are documented in detail in Chapter 7.

## More is needed going forward

We believe the methodology described in this report significantly advances our State's understanding of housing need as well as how that need differs across demographics and should be part of a transformation of our housing planning and implementation framework to a best-in-the-nation model. Chapter 7 (Recommendations) provides more details about why and how this methodology improves upon the current system.

At the same time, we acknowledge that the research contained in this report remains focused most clearly on the geographic equity of affordability, and that more work is needed to improve access to housing across all demographics. A focus on affordability equity may be appropriate for the RHNA, which is limited to counting needed units by income as a useful starting point for local housing production targets, but is insufficient to transform our housing planning system to meet the needs of all Oregonians. Our demographic analysis seeks to provide local jurisdictions with information about the reality of where racial and other forms of discrimination are leading to housing challenges for communities of color and other demographic groups, recognizing that jurisdictions may not be aware of these inequities.

Providing additional information about inequity through the RHNA, however, would not *require* any particular action from local jurisdictions. In the absence of a regulatory requirement, some jurisdictions may take no action to eliminate these inequities. Eliminating this disparate access will require local implementation action. In ongoing collaborative work with DLCD, the team believes the RHNA analysis can support the goals of including equity in the housing planning process by providing information on regional trends to local jurisdictions for those jurisdictions to respond to in their local regulations and policies. OHCS has committed to a process of engagement with the DLCD and with broader stakeholders to determine how this equity work can appropriately fit into the state's land use and planning framework, as well as to identify if further analysis is needed from the RHNA to support that work.

It is clear that more conversations are needed. While we explored each methodological step for options that would best lead to estimates that accomplished our goals, truncated outreach (see Appendix G for full details of the timelines for stakeholder engagement) means that the research was most heavily influenced by the project team, which is composed largely of white, urban, and middle to upper-income individuals. Our initial recommendations therefore reflect that perspective, despite our best attempts to maintain our research focus and incorporate input from stakeholders. Chapter 7 contains our recommendations for future steps, which include further outreach with affected communities and explorations into parts of the methodology that would benefit from additional research. OHCS looks forward to continuing the conversation about meeting the needs of all Oregon residents with DLCD, other state partners, and affected communities across the state.



### 3. Recommended RHNA Methodology

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In its simplest terms, HB 2003 requires the development of a methodology that estimates the number of households in each income category and in each region that will need dwelling units that are affordable to them, now and over the next 20 years, and allocate those units down from the regional to the city level. The result is an estimate of the number of needed housing units by income for each of Oregon's 241 cities (which this report refers to as the local *allocation* of housing need). This chapter summarizes the project team's recommended methodology for accomplishing this goal, with a focus on the primary methodological decisions and key assumptions used.

The process of developing this methodology was a journey, with many avenues explored and abandoned. To allow the greatest opportunity to test methodological options, the project team designed a process that intentionally included a Beta version of the methodology and results. The purpose of this step in the process is to understand how the team's initial methodological choices affected housing need results, to allow stakeholders to react to an initial draft of a methodology and findings, and to create an opportunity to revisit and improve key assumptions and choices. From that Beta version, the project team made adjustments and improvements to arrive at the Recommended version summarized in this chapter. Appendix B provides the detailed methodology for both the Beta and Recommended Versions of the RHNA, including the process and key decisions made, the methods and assumptions that we considered and abandoned in the process of developing the Recommended methodology, and details of the rationale for our choices. This chapter provides a summary of only the final Recommended version of the RHNA that was used to produce the results presented in the main body of this report (Chapter 4 and Appendix D).

#### Framework

The following principles informed and guided each of our methodological choices:

- **Use data sets that are reliable, reproducible, and available.** To achieve the goal of a method that can be consistently applied across the state on a regular basis, data must be available statewide, and must geographically align with selected regions.
- **Consider capacity for implementation in the development of the methodology.** The Recommended methodology should build from data and processes that are implementable in the future, given: (1) limited ability to produce new data and (2) the capacity of OHCS to replicate the methodology on an ongoing basis. Furthermore, the data and housing unit targets must be able to be integrated into an existing and new components of Oregon's housing implementation framework (local land use planning and Housing Production Strategies).
- **Account for regional differences in housing need across Oregon's diverse housing markets.** The methodology identified regions that are reflective of broad housing

markets, commuting patterns, and economic and demographic factors, so that regional differences in housing need can be accounted for as the methodology is deployed.

- **Quantify regional and local housing need, with a focus on low-income housing needs.**

The methodology quantifies regional and local housing needed to accommodate expected household growth for cities in a way that responds to regional market dynamics. In development of the methodology, we focused on including targets that specifically increase access to:

- Publicly-supported housing<sup>8</sup>
- Housing that is affordable to all Oregonians, including those with low incomes

## Overview of Methodology

The methodology describes the Recommended approach to the RHNA for estimating regional need that has three components: projected need, underproduction, and housing for the homeless. These components are described first, followed by an overview of the steps in the methodology, and then details about each of the steps.

### Regions and datasets

The choice of regions and primary dataset are fundamental to the methodology's ability to achieve its guiding principles. The concept of a RHNA is a deviation from the existing housing need analysis and land use planning process Oregon cities currently use, as it first considers housing need at the *regional* rather than the *local* level. Choosing regional boundaries required consideration of a range of technical factors including: review of data availability for various geographies; margins of error based on the number of people in a region; comparison of housing markets in a region; and commuting flows. ECONorthwest and OHCS worked to evaluate available data sources and the combination of regions that best fit these factors. We determined that the most appropriate data source is 1-year Public Use Microdata Sample from Census (PUMS), as it provides annually updated data that is more accurate and reliable than other options available statewide. PUMS provides more current data than other sources we considered such as the Comprehensive Housing Affordability Strategy (CHAS) or the 5-year sample of the American Community Survey (ACS).

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House Bill 2003 requires an allocation of housing to Metro. There is no Census geography that fits with the Metro urban growth boundary (UGB). As a result, the RHNA starts with a region that includes only the three-county area where the Metro UGB is, the Portland Metro region.

The allocations for housing for areas within the Metro UGB are to each of the cities within the UGB, plus the urban unincorporated areas of each of the three counties within the UGB. These allocations are presented for each of these geographies in Appendix D.

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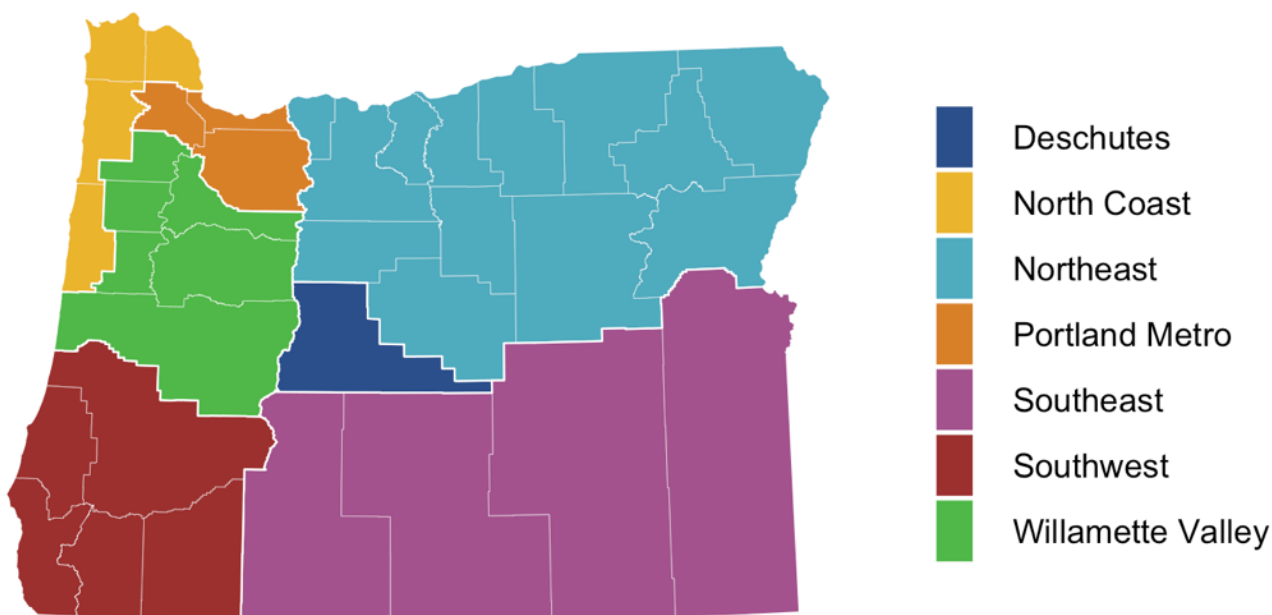
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<sup>8</sup> Chapter 6 provides a longer discussion of publicly supported housing. In brief, this term refers to units that are funded with public money and are income-restricted to meet affordable housing needs, including housing that has public funding from a wide range of local, state, or federal programs.

Exhibit 11 shows the regions used in the RHNA. Appendix B provides an extensive discussion of the considerations involved in establishing the regions.

Exhibit 11. Regions used in the Recommended RHNA, Oregon, 2020

Source: ECONorthwest.



## Components of regional need

Exhibit 12 shows the methodological steps we used to develop the estimation of total regional need, which can be summed to the total units needed statewide. Total regional need derives from three component parts:

- Projected need:** the number of units needed to accommodate future population growth over 20 years. Statewide, this sums to 443,000 units, or 76% of the total needed units. To project need, we used the regional population forecasts from Portland State University's Population Research Center, and transformed the population forecast to a number of households using PUMS data for the current average number of people per household in each region. Household growth was then projected over a 20-year period and multiplied by the national ratio of housing units per households (1.14) as the target ratio.
- Underproduction:** the number of units that have not been produced to date in the region, but are needed to accommodate current population. Regional underproduction sums to 110,000 units, or 19% of the total needed units in the state. We estimated

The use of a national ratio of housing units to households is a defining feature of the RHNA methodology and is used in each of the components of regional need.

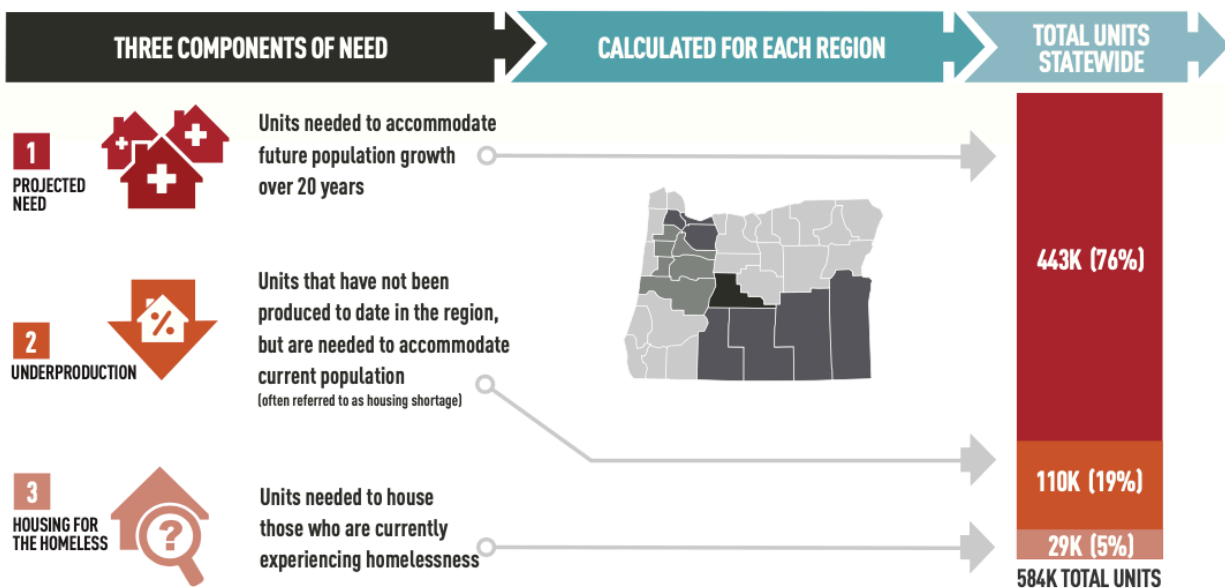
Housing markets need more than one unit for each new household to allow for vacancy, demolition, and second home production. For every household in the U.S., our national housing stock has 1.14 units. Oregon's communities will need to maintain at least this ratio in its housing market to accommodate future growth.

underproduction relative to the ratio of households to units nationally, adjusted in some regions to account for second homes. Regions with a housing units-to-households ratio below the national ratio have produced fewer housing units than are needed to accommodate the region's current population.

- **Housing for people experiencing homelessness:** the number of units needed to house those who are currently experiencing homelessness and are otherwise unaccounted for in the data. These households need units right now, and without this component, would be captured in neither the projected need nor the underproduction components described above. Statewide, this sums to 29,000 units, or 5% of the total needed units.

Exhibit 12. Components of the Estimation of Total Housing Units Needed by Region

Source: ECONorthwest, 2020



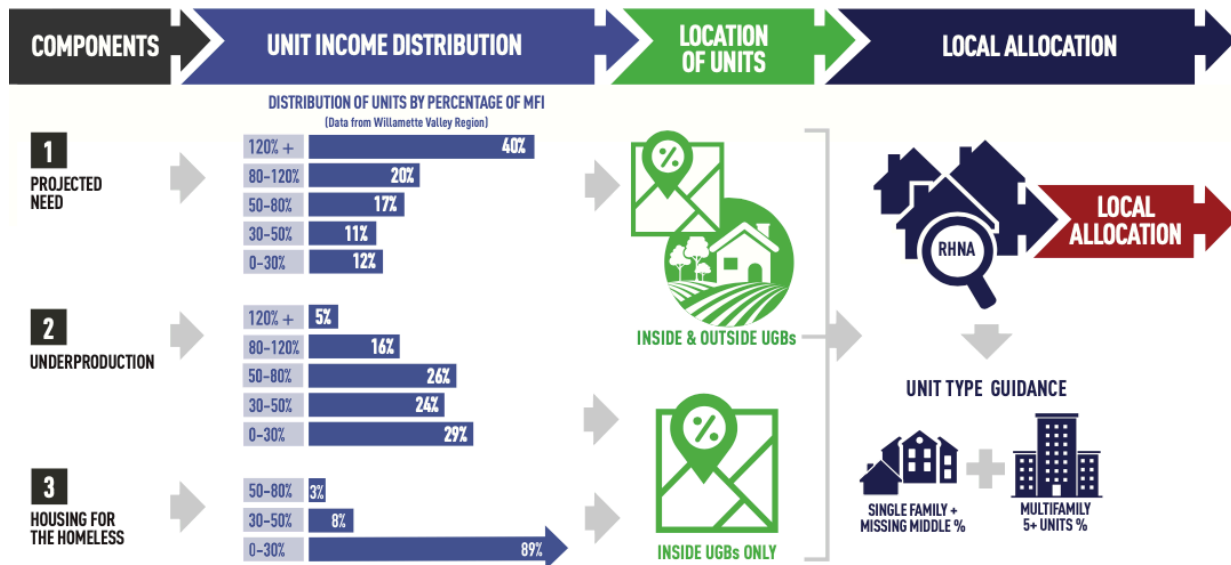
### Steps in methodology

Exhibit 13 shows an overview of the steps in the full RHNA methodology (details of each step follow in later sections). It builds from the components of regional need (projected need, underproduction, and housing for the homeless), shows how each of those components are distributed by income and geography, and then indicates the next steps, which are allocation of units to cities with guidance provided regarding the types of units that might be needed. Each of the steps in this overview required more detailed choices and assumptions. These details are summarized in the next sections of this chapter following this overview, organized to show how each of the components of regional need work through each of the steps described in Exhibit 13.

## Exhibit 13. Recommended Version Methodology Overview

Source: ECONorthwest, 2020

Note: MFI is Median Family Income



After calculating total regional need (derived from the components of projected need, underproduction, and housing for people currently homeless), the methodology has the following steps:

- **Distribute each of the components of total need to income categories.** The income categories are based on the regional Median Family Income (MFI) categories, which take into account household size and the number of bedrooms and differ for each component (Exhibit 14).
- **Determine location of units relative to the urban growth boundaries of cities within each region.** The methodology recognizes the importance of Oregon's land use context of Urban Growth Boundaries (UGBs) in determining where and how growth will occur by limiting the amount of growth that will occur in rural areas. Most, but not all future, growth will occur inside of city urban growth boundaries and some growth will occur outside of those boundaries. Specifically, only housing needed to accommodate future population growth is allocated outside of UGBs, based on population forecasts from PSU—inside UGBs units are distributed based on forecasted population growth and the number of current jobs. Each UGB in a region is allocated units based on their share of the forecasted growth for all UGBs in the region (50% weight), and based on their current share of all jobs inside UGBs in the region (50% weight).
- **Local Allocation.** Finally, each component of regional need is allocated to local jurisdictions (cities), within the income categories appropriate to that component. For allocation inside UGBs, units are distributed based on the jurisdiction's regional share of either forecasted or current population (50% weight) and current jobs (50% weight). The population weight for projected need is based on forecasted population growth, and for underproduction units and housing for the homeless, it is based on current population.

The incorporation of jobs into the allocation methodology was a result of discussions with stakeholders and State staff. The purpose of including jobs data is to prioritize access to employment opportunity, account for a needed balance between the location of housing and jobs, and recognize that housing demand is related to job growth. Many factors were considered for measuring access to opportunity, such as transportation proximity, income distribution, live/work commute flows etc. Ultimately the distribution of jobs was selected because the data is readily available, can consistently be applied statewide, and is appropriate to understanding how regional housing growth might be distributed to cities (rather than to neighborhoods or transportation corridors). Access to transit, for example, would be difficult to apply within regions across the state as the level of service varies within and across regions. Access to transit may be more relevant in local housing needs planning than in intraregional planning.

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A defining feature of the Recommended RHNA methodology is that, across the entire methodology, **all income categories are adjusted to account for household size.**

To better align with our guiding principle to focus on the needs for low-income households, we included this adjustment in the Recommended Version. Regional MFI is based on a 4-person household, in order to align the household size and number of bedrooms in a unit, HUD provides guidance on adjustment factors. OHCS follows the HUD guidance, therefore the resulting adjustments of the qualifying income and unit affordability align with current policies as well as the guiding principle of focus on the needs of low-income households.

#### Exhibit 14. Household and Unit Size Income Adjustment factors

Source: HUD



*\*Unit adjustment factors only apply to apartments*

Using this approach makes it clear that a studio unit with rent above what is affordable to a one-person household at 70% MFI is not an affordable unit, even though it may appear so based on overall average rents.

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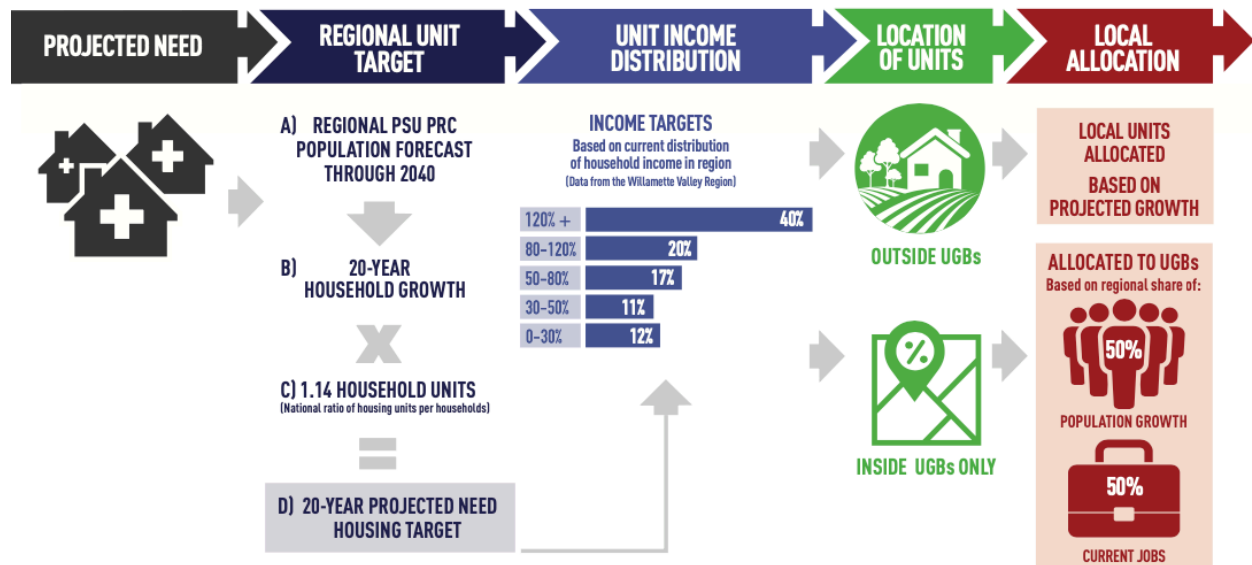
## Details of Each Component of Regional Need

### Projected need

This component of the RHNA conceptually functions similarly to the current HNA approach, which focuses on estimating the projected need for housing units. An important distinction from the current local HNA process is that need is first calculated for a region, then allocated to local jurisdictions. Exhibit 15 provides an overview of how each region's projected need moves through the steps of the RHNA methodology, and the key assumptions made at each step.

Exhibit 15. Projected Need Methodology

Source: ECONorthwest, 2020



To project need, we begin with the population forecast from Portland State University's Population Research Center (PRC) for each region. We convert the population forecast to a forecast of household growth, using PUMS data for the current average number of people per household. Consistent with other parts of this methodology, we then assume that each new household will need 1.14 units, to allow for vacancy, demolition, and second home production. We then have a projection of the total number of units that are needed in each region over 20 years.

To distribute those units by income, we use the regional distribution of household income based on the 2018 ACS 1-year PUMS estimates for each region, shown in Chapter 4 in Exhibit 28.

To determine how much of the projected growth will occur inside and outside of UGBs, we use PRC data on estimated population growth at the city and unincorporated county levels and aggregate to our selected region. The units located inside and outside of UGBs each have the same income distribution, matching the region.

## Underproduction

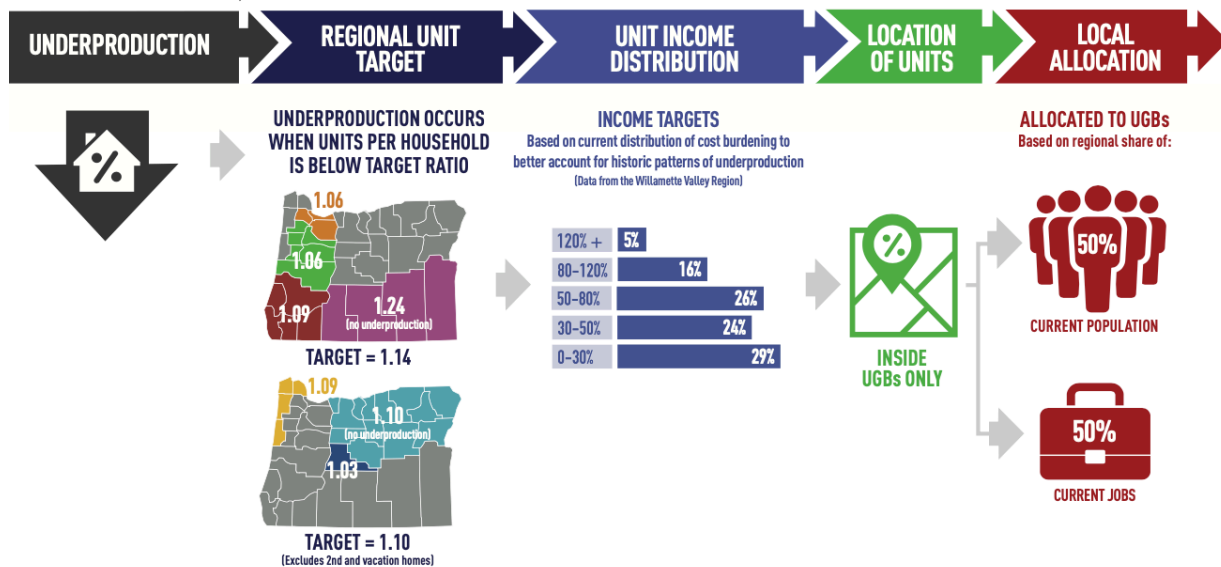
Underproduction, or the lack of sufficient units to meet demand, is a key reason that housing markets experience rising prices. Accounting for current underproduction is a key feature of the RHNA methodology that is not a part of current local HNA rules. This component accounts for the number of housing units that are not available in a region, but should be if the region met at least the national ratio of units to households of 1.14. If a region has less than 1.14 units per household, housing is too scarce and prices will rise. When this occurs, households with the lowest incomes will struggle most to find scarce units, cost burdening will increase, and rates of homelessness may also increase. In other words, underproduction leads to cost burdening.

House Bill 2003 requires an analysis of housing shortage at the city level without specifying a requirement at the regional level. We considered multiple approaches to estimating the current shortage of production of housing, as discussed in Appendix B. We define shortage as the amount of housing needed, at particular price points, to “eliminate” cost burdening.

Underproduction is intended to address the existing shortage of housing through building more housing, with a focus on housing affordable to households with lower incomes who are rent-burdened.

Exhibit 16. Underproduction Methodology

Source: ECONorthwest, 2020



Current underproduction (Exhibit 16) is calculated using the following steps:

- **Regional unit need.** The current number of housing units per household is calculated in each region. Underproduction occurs when units per household is below the target ratio, which is adjusted in some regions to account for the prevalence of second homes in the market.

When calculating the target ratio, each region has one of two target numbers of housing units per household. In the Portland Metro, Southeast, Southwest, and Willamette Valley, the national ratio of 1.14 units is used as the target. In North Coast, Northeast, and Deschutes regions, where there is a prevalence of second and vacation homes, the



alternative ratio of 1.1 units (excluding second and vacation homes) per household is used as the target. When the current ratio of units is below the target, underproduction is the number of units that are required to increase the number of units to the target ratio.

- **Unit income distribution.** Underproduced units are allocated based on the current need for units by household income. Because underproduction in a market leads to cost-burdening in the market, the impacts of underproduction are most acutely felt by those with lower incomes who need access to affordable housing now in today's market. Underproduced units are therefore distributed proportionate to rates of regional cost burdening.
- **Location of units.** Underproduced units are allocated inside UGBs only, to reflect statewide land use goals prioritizing development inside of urbanized areas.

Underproduction is the analysis of housing shortage required in House Bill 2003. Housing shortage is defined in House Bill 2003 as "...the difference between the estimated housing units of different affordability levels and housing types needed to accommodate the existing population and the existing housing stock, measured in dwelling units."<sup>9</sup> There are a few approaches to identifying a shortage. One way, and one that is commonly used because it can be completed at a city-level given available data sources, is to identify all households that are cost burdened in each geography, with an assumption that each cost-burdened household needs a unit that is affordable to them. Appendix E presents that analysis. However, simply summing the number of cost-burdened households and calling that a 'housing shortage' would project an oversupply of housing in the market, because cost-burdened households do have existing units, even if they are not sorted into those units by income in ways that they can afford. (see Appendix B in Exhibit 124). This is the reason that the RHNA does not use this method to identify the shortage of housing. This analysis is a useful way to understand how many households are cost burdened, and the shortage of affordable units in a market, and adds helpful information for local implementation efforts. However, it is not a satisfactory way to understand the number of units that are needed in an entire housing market.

The Recommended methodology takes a different approach to the shortage analysis: it identifies the number of units that would be needed *regionally* to achieve a sufficient balance of units to current residents, and then allocates that to cities relative to regional cost-burdening, in recognition that underproduction in a housing market results in cost-burdening for lower-income households. The analysis of underproduction and housing for the homeless serves the purpose of estimating housing not yet produced but needed to meet unmet housing needs, primarily for the lowest-income residents.

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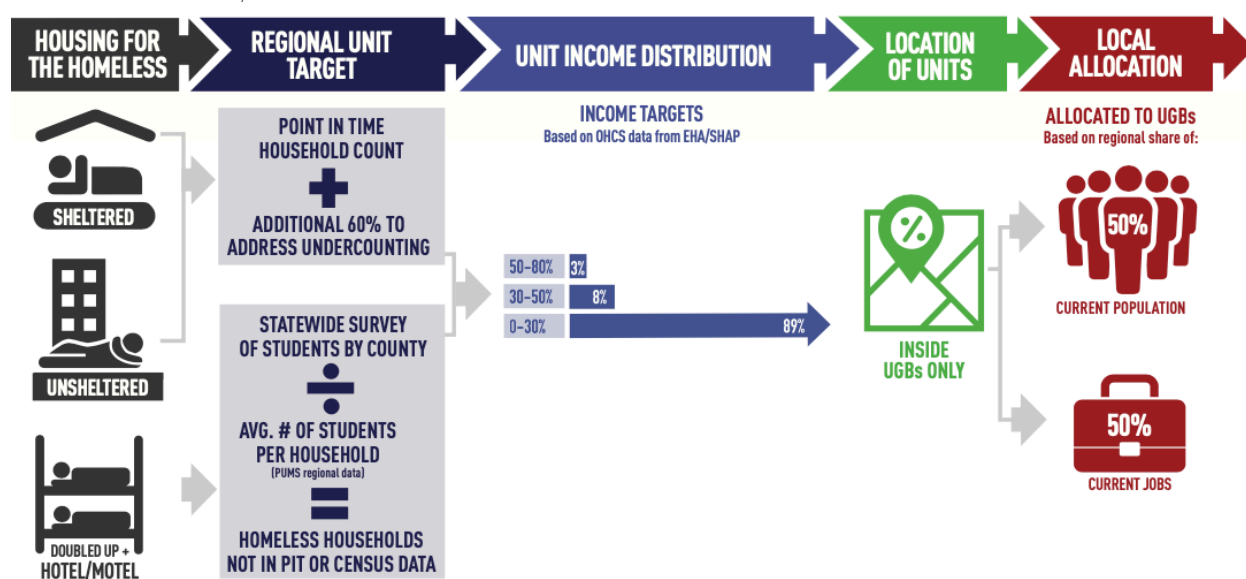
<sup>9</sup> HB 2003 section 1, 1(d).

## Housing for the homeless

The third, and final, component of regional need is the calculation of units needed for the population currently experiencing homelessness. This is a key feature for the Recommended methodology. Populations experiencing homelessness are generally not captured in foundational datasets derived from the Census, and so are not included in the projections of need. They are also not accounted for in estimates of underproduction that rely on a national ratio – nationally, many communities experience homelessness despite the overall ratio of 1.14 housing units for every household. Exhibit 17 provides an overview of how the population was estimated regionally, distributed to income categories, and allocated to cities. Details follow.

Exhibit 17. Housing for the Homeless Methodology

Source: ECONorthwest, 2020



Determining regional unit need for housing for the homeless required particular attention, because available datasets have many known limitations (including undercounting populations). We relied heavily on the limited research that is available on this topic, and discussion and feedback from stakeholders with deep expertise in research and service provision for those experiencing homelessness in Oregon. Despite these attempts, more research and better data are needed to improve this portion of the RHNA methodology. Recommendations for improving data are included in Chapter 7. Appendix B describes the key analytical issues in estimating the amount of housing need to accommodate the population of people experiencing homelessness in Oregon.

We used two main datasets to estimate regional populations of people experiencing homelessness, as follows:

- **Point-in-Time (PIT) count:** The PIT count is a snapshot of individuals experiencing homelessness on a single night in a community. It records the number and characteristics (e.g., race, age, veteran status) of people who live in emergency shelters,

transitional housing, rapid re-housing, Safe Havens, or Permanent Supportive Housing (PSH) as well as those who are unsheltered. In addition, the Housing Inventory Count (HIC) estimates the number of beds available. HUD requires that communities and Continuums of Care (CoC) perform the PIT count during the last ten days of January on an annual basis for sheltered people and on a biennial basis for unsheltered people. Though the PIT count is not a comprehensive survey, it serves as a measure of homelessness at a given point of time and is used for policy and funding decisions. The literature is clear that PIT counts undercount people experiencing homelessness. The counts simply miss some individuals and households at the time that the count is conducted—and the limited research on this topic suggests that the actual number of people experiencing homelessness (either sheltered or unsheltered homelessness) may be 130-160% higher than PIT estimates.<sup>10</sup> We applied a multiplier of 160% (the higher end of the 130-160% undercount range) to the PIT Count to estimate sheltered and unsheltered people experiencing homelessness.

- **McKinney Vento data:** The McKinney Vento Homeless Assistance Act authorized, among other programs, the Education for Homeless Children and Youth (EHCY) Program to support the academic progress of children and youths experiencing homelessness. The U.S. Department of Education works with state coordinators and local liaisons to collect performance data on students experiencing homelessness. The data records the number of school-aged children who live in shelters or hotels/motels and those who are doubled up, unsheltered, or unaccompanied. This is a broader definition of homelessness than that used in the PIT.

This estimate cannot account for households without children who are living in overcrowded situations, therefore this methodology is likely still undercounting the overall population experiencing homelessness. In evaluating improvements of the RHNA methodology, we recommend further work on this topic to better estimate the population experiencing homelessness.

We then distribute regional unit need by income. There is no existing, high quality dataset with information about the incomes of people who are experiencing homelessness, but we know that many households that are experiencing homelessness have incomes and still cannot find an available home that is affordable to them. To provide a starting place for understanding the distribution of households experiencing homelessness by income, we used OHCS administrative data from Community Action Agencies that receive state Emergency Housing

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<sup>10</sup> The estimate of a 130% undercount in the PIT is based on the following report:

Kim Hopper, Marybeth Shinn, Eugene Laska, Morris Meisner, and Joseph Wanderling, 2008: Estimating Numbers of Unsheltered Homeless People Through Plant-Capture and Postcount Survey Methods. American Journal of Public Health 98, 1438\_1442, <https://doi.org/10.2105/AJPH.2005.083600>.

The estimate of a 160% undercount in the PIT is based on the following report:

Wilder Research, Homelessness in Minnesota - Findings from the 2015 Minnesota Homeless Study (2016). <http://mnhomeless.org/minnesota-homeless-study/reports-and-fact-sheets/2015/2015-homelessness-in-minnesota-11-16.pdf>

Assistance (EHA) and State Housing Assistance Program (SHAP) funds.<sup>11</sup> A large portion (89%) of households whose income is captured in the EHA / SHAP administrative data have incomes in the lowest income categories.

Finally, we allocate all units inside UGBs only, reflecting Oregon's land use planning goals to concentrate development inside of UGBs and proximate to existing infrastructure and services.

## Additional Considerations in the Methodology

### Housing unit type guidance

HB 2003 requires results to be provided by income and by unit type. Specifically, the legislation requires the methodology to classify housing by "housing type, including attached and detached single-family housing, multifamily housing and manufactured dwellings or mobile homes."<sup>12</sup>

To meet this requirement, the RHNA methodology provides the historic distribution of housing unit types at the regional level, based on PUMS data reflecting development patterns for the past 10 years<sup>13</sup>. The project team and stakeholders expressed the following concerns about using this information as part of a production target for local planning efforts, especially if unit type distributions were provided within each income category.<sup>14</sup>

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<sup>11</sup> Please note that OHCS just began receiving this particular data point this fiscal year and these numbers are based on the first 3 quarters of fiscal year 2020 only. This calculation will need to be revisited and refined in the future.

<sup>12</sup> House Bill 2003, Section 1(3)(a)

<sup>13</sup> Rather than current distribution in the entire housing stock, with the expectation that future development patterns would look more similar to recent development.

<sup>14</sup> The Beta Version of our methodology did just this: it allocated unit types by income category to cities, based on the regional distribution by unit type. Those results are included in Appendix C. In reacting to these initial results, stakeholders raise the concerns outlined in this chapter.

First, the data available to understand trends in housing type are a poor starting place. Unit type data in the Census are based on self-reported survey information and are often inaccurate and incomplete, and other data sets are not available in a consistent format across the entire state. Some regions (Metro and Rogue Valley) have invested in improved data about unit type. Our comparison of the information in these data sets to the Census unit types showed meaningful differences in results.

Beyond challenges with understanding trends in housing mix, a further challenge is that we do not expect the state's future housing mix to look like past housing mix, and do not have a reasonable way to project future housing mix across the many diverse markets in the state. Housing preferences have evolved, and housing markets and the local and state regulatory contexts are changing along with them. The legislature passed HB 2001 in 2019, which disallows exclusively single-family zoned neighborhoods. This legislation is just beginning to result in zoning changes, so it is unclear how it will affect development patterns, but the intent behind the legislation was to allow a greater mix of unit types and increase the availability of duplexes, townhomes, and other missing middle housing types. Without some stated regional or legislative policy objective for future housing mix, it is difficult for this analysis and report to determine how targets should be established.

#### Distribution of unit types in the Portland Metro Area based on various datasets

The table below compares possible datasets available to calculate the unit type distribution for units built since 2010, using the Metro region as an example. Regional data (such as RLIS) is limited in its availability statewide, but is generally accepted as the most accurate source of data in the Portland Metro area. HUD data, which is available statewide, does not align well with the regional or PUMS data geographies.

The differences illuminate the challenges with using Census-derived PUMS data as targets for production by unit type.

	Single Family & Missing Middle	Multifamily
PUMS	49%	51%
RLIS	44%	56%
HUD Permits	35%	65%

Connecting unit type targets to incomes, especially if that target is based on past trends in the data, creates further challenges. Lower-income households are more likely to be renters in multi-family developments, but this may not be reflective of their housing preferences. Creating targets that assume that lower-income households should be housed in multifamily developments risks perpetuating a lack of housing choice for lower-income households.

Given all of these challenges, using unit type mix, especially within income categories, is not advisable. The decision about housing mix should be part of the local HNA and HPS process. This is based on ECONorthwest's experience with conducting local HNAs and on stakeholder feedback during the RHNA development. The changes to Oregon's housing policy framework made by House Bill 2001, requiring that cities allow missing middle housing types in areas zoned for single-family detached housing, and the requirement in House Bill 2003 for cities to produce HPS will both ensure that cities are planning for a wider range of housing types and are planning for housing affordable to residents at all income levels. Trying to determine the mix of housing types through a process like the RHNA is likely not supportive of implementation of these new laws.

Even with all of these challenges, we heard from some stakeholders a desire for unit type information and requirements to help advance local conversations about supporting the development of a wider range of housing types. We therefore opted to provide data about regional unit type mix as part of the RHNA methodology, but recommend that this information be used only as a guideline for local jurisdictions and not as a prescription for future housing type distribution. And, we have opted to include the information across all income categories, rather than within each income category.

If improved data about current housing mix and clear policy objectives about desired mix were available, it would certainly be possible to revisit the approach to addressing unit mix in future versions of the RHNA.

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Absent a policy goal for future housing mix, we struggled to find a useful proxy for a desired future unit mix.

In the Beta Version of our methodology, we tested using regional housing mix as a goal for each city, as a way to encourage a more balanced mix of unit types in each city. However, we found that some cities are developing with more multifamily housing than the region. For these cities, the RHNA would have projected less multi-family development than those cities are seeing developed now.

For example, the RHNA Beta version forecast only 14% of Bend's new housing as multi-family (all allocated to the 0-30% MFI income category). In 2018, multifamily housing accounted for more than 20% of Bend's total housing stock. Another example was for City of Portland, where 50% of new housing was forecast to be single-family detached or manufactured housing by the Beta version of the RHNA. Portland's 2015 HNA showed that 77% of new housing would be multi-family housing. We ultimately abandoned this approach.

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## Geographic distribution of affordable housing

Increased equity in the geographic distribution of affordable housing was a guiding principle in the development of this methodology. Our methodology improved between the Beta and Recommended versions with increased focus on identifying approaches that would better reflect historic underproduction of affordable and publicly-supported housing, as described in more detail in Chapter 6 and Appendix B. We sought to improve the distribution of units that are affordable to low-income Oregonians through the creation of targets that reflect regional (rather than local) income distributions, the distribution of underproduction proportionate to regional rates of cost burdening by income category, and housing for the homeless proportionate to incomes of households experiencing homelessness. These methodological decisions advance conversations about local needs at the lowest end of the income spectrum and, if implementation efforts result in increased production to meet this need, will help to increase the availability of units that are affordable in all communities.

## 4. Results of the Recommended RHNA

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This chapter presents the results of the Recommended version of the RHNA for the State of Oregon, the RHNA regions, and select cities. Appendix D presents the full results of the Recommended RHNA methodology for every city in Oregon.

This report focuses on presenting the results that HB 2003 requires and drawing out some initial observations about how the methodological assumptions flow through to results. It is data heavy, to provide the widest sampling of required results possible.

Many additional findings may also be interesting to many stakeholders, and may be helpful for supporting a final set of recommendations about whether and how to move forward with the RHNA as part of a comprehensive housing implementation framework in Oregon. Later reports may include additional research into these findings to inform final policy recommendations.

### Key Findings

The RHNA projects more overall need for new housing and more housing at that is affordable at the lower end of the income spectrum than is typically found in a local HNA. The key findings of the RHNA that explain this difference are:

- **The RHNA shows a need for about 583,600 new dwelling units between 2020 and 2040.** This is growth of 25% in units from the 2018 housing stock or a percent change of 33% over existing housing stock. The regions that are forecast to grow the most are the Portland Metro region, Willamette Valley region, and Deschutes region, which together account for 86% of housing need in the state.
- **The RHNA methodology results show an increase in housing affordable to households with income below 50% of MFI.** Exhibit 23 shows that, in all regions, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. In regions with the smallest amount of growth in the RHNA (Northeast and Southeast), the shift is smaller. In regions with more growth in the RHNA (Portland Metro and Willamette Valley), the shift is larger, meaning that a larger percentage of housing stock should be affordable to households with income below 50% of MFI in 2040.
- **The RHNA projects need for housing to address historical underproduction and housing needed for those experiencing homelessness.** This is the first housing needs analysis that has addressed need for housing to address historical shortages of housing production and housing needed for people experiencing homelessness. These housing needs are not documented in local HNAs. These housing needs account for nearly 140,000 new units or about 24% of statewide housing needs.

- **The RHNA shows substantial need for housing affordable to lower-income households.** About 47% of need for new housing (about 273,000 units) are needed by households with income below 80% of MFI. For example, in the Willamette Valley region, this would be housing affordable to a household with an income of about \$51,000 or less. Such a household could afford a unit with a rent of \$1,275 or less per month. In most cases, newly built housing cannot be built without public subsidy that is affordable to a household with income below 80% of MFI.
- **The RHNA results reflect the decision to consider the location of jobs in allocating housing to cities.** In each part of the RHNA (projected need, underproduction, and housing for the homeless), the location of current jobs is an important weighting factor in the allocation of new housing from the region to cities. Cities with substantial amount of employment are likely to be allocated more housing than cities with less employment. For example, the RHNA allocation for projected need for Tualatin is more than three times larger than the forecast for unit growth in Tualatin's recently completed local HNA (Exhibit 55). One reason for this difference is that Tualatin has a comparatively high concentration of employment in the Portland Metro region. In contrast, the RHNA allocation for projected need for Dallas is 22% less than the forecast for unit growth in Dallas' recently completed local HNA (Exhibit 55). Again, the primary difference is that Dallas has a comparatively low concentration of jobs within the Willamette Valley region.
- **The results of the RHNA are very different from the results of local HNAs.**
  - *Comparing results of HNAs is challenging.* While there is state guidance on conducting an HNA, there is not one method for doing so. As a result, it is challenging to compare results of HNAs among cities. The RHNA provides a consistent approach that allows for comparisons between cities and clearer interpretation of results. The primary advantage to a consistent approach to forecasting future housing need, especially one that incorporates underproduction and housing need for people experiencing homelessness, would be an ability to understand the housing needs of two or more cities relative to each other. This would make it clearer whether a city was meeting its responsibilities to support housing production and accommodate an equitable distribution of publicly supported housing (as discussed in Chapter 6).
  - *The RHNA accounts for underproduction and housing needed for people experiencing homeless, in addition to projected need.* Local HNAs forecast growth only based on the official forecast of population growth, such as the Oregon Population Forecast Program at Portland State University. The RHNA used these forecasts as part of the forecast for projected need but also included new units necessary to account for historical underproduction and to meet the needs of people experiencing homelessness.
  - *The RHNA generally shows more need for housing affordable to lower-income households.* There are a number of reasons for this. In local HNAs, the distribution of new

housing by income grouping is generally based on local income distributions in the city. The RHNA used the regional income distribution for all cities within the region for projected need. In addition, the allocation of housing for underproduction and housing need for the homeless assumed that most new housing would be in lower income groupings (i.e., less than 80% of MFI), rather than higher income groupings. Finally, the RHNA adjusted the income distribution in each region to account for household size as described in Appendix B and Exhibit 28. But local HNAs use median family income for a household of four people, not accounting for household size.

## Overview of Housing Need

Exhibit 18 and Exhibit 19 show that the RHNA results in need for 583,559 new dwelling units statewide between 2020 and 2040.

### Exhibit 18. Summary of Housing Need by Regions and State, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Region	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
Portland Metro	224,683	59,488	10,683	294,853	51%
North Coast	14,731	295	2,309	17,335	3%
Willamette Valley	101,704	35,913	8,972	146,589	25%
Southwest	34,896	10,287	4,579	49,761	9%
Deschutes	49,856	4,837	1,194	55,887	10%
Northeast	16,731	-	899	17,630	3%
Southeast	965	-	538	1,503	0%
Oregon	443,566	110,819	29,174	583,559	100%
% of Units	76%	19%	5%	100%	

### Exhibit 19. Summary of Total Housing Need by Regions by Component of Need, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

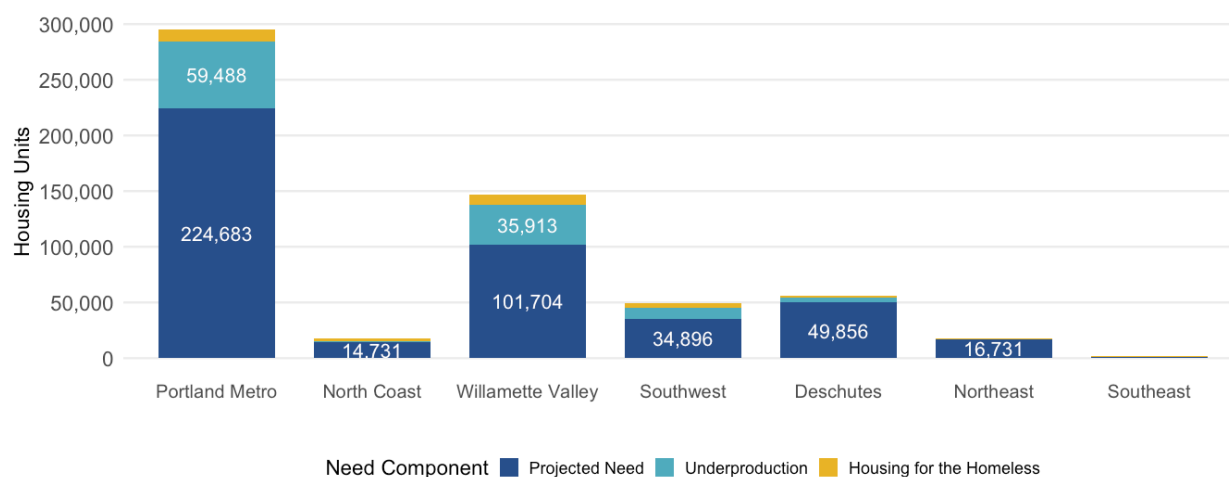


Exhibit 20 shows the percentage of housing need in each region by component. The Northeast and Southeast do not show need for new housing as a result of underproduction, as discussed in Chapter 3. This suggests that, on average, production of new housing in these regions has kept up with household growth. In the Southeast region, however, 36% of need is for housing for people experiencing homelessness (538 new units). Units to address housing need for the

homeless in the Southeast is such a large percent of needed units because growth in the region is relatively modest, with only 965 new units of growth forecast for the 20-year period.

#### Exhibit 20. Housing Need by Percentage of Units Needed in Each Region by Component of Need, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

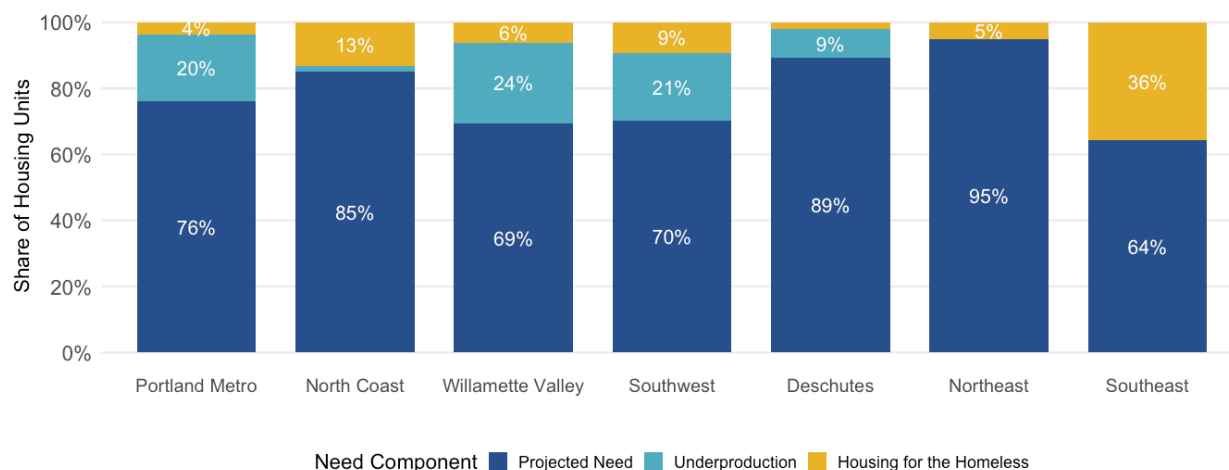




Exhibit 21 shows that, in most regions, the housing stock added over the 2020 to 2040 period (the total number of units shown in Exhibit 18) will account for less than a 25% increase over the existing housing stock in each region in 2018.

#### Exhibit 21. Total Housing Need by Regions for 2020-2040 Compared with Existing Housing Stock in 2018

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

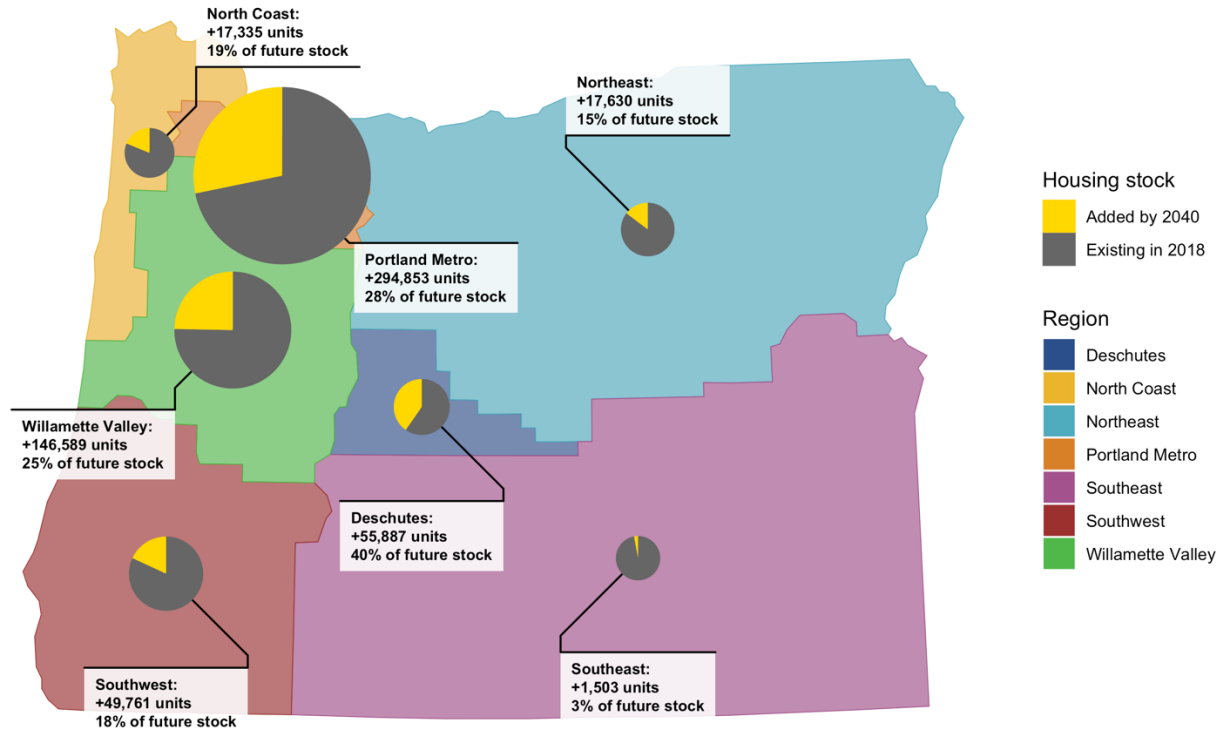


Exhibit 23 and Exhibit 24 show an estimate of change in the housing stock in each region that is affordable to households with income below 50% of MFI in 2018 and 2040, for the regions (Exhibit 23) and for selected cities (Exhibit 24). Chapter 6 includes a discussion of the varying types of publicly-supported housing in Oregon, which includes units that are funded with public money and are income-restricted to meet affordable housing needs, including housing that has public funding from a wide range of local, state, or federal programs. In Exhibit 22, Exhibit 23, and Exhibit 24 the current stock of publicly-supported housing refers only to publicly supported housing funded through OHCS, which accounts for the majority (but not all) of publicly supported housing across Oregon.<sup>15</sup>

Exhibit 22 shows how to read the information in Exhibit 23 and Exhibit 24, using the results for the Willamette Valley as an example.

- The yellow circle with the “1” in it shows total 2018 publicly supported stock (23% of total stock)<sup>16</sup> and therefore likely to be affordable to households with income below 50% of MFI.
- The dark blue square with the “2” in it shows the percentage of housing stock that the RHNA projects to meet the needs of households with income below 50% of MFI, which is 35% of all of the new housing in the RHNA for the Willamette Valley. These units would almost certainly need to be publicly-supported to be construction.
- The teal circle with the “3” in it estimates of total housing stock in 2040 (current + new), that would be affordable to those making less than 50% of MFI, if all of the units that the RHNA projects as needed are built in the projected income categories. In the Willamette Valley, 26% of all housing is expected to be affordable to households with income below 50% of MFI, a modest increase over the existing 23% of existing housing in 2018.

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<sup>15</sup> The source of information from OHCS about publicly supported housing is the Oregon Affordable Housing Inventory. This is currently the best available source of information about publicly supported housing available by county or city.

<sup>16</sup> Based on OHCS data from the Oregon Affordable Housing Inventory about units that are rent-restricted and publicly-supported. Other units that are publicly supported by local funding sources (without OHCS funding) and naturally occurring housing affordable at below 50% of MFI are not included in these estimates.

## Exhibit 22. Illustration of change in publicly supported housing as a percentage of housing stock, Willamette Valley region, 2018 to 2040

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing

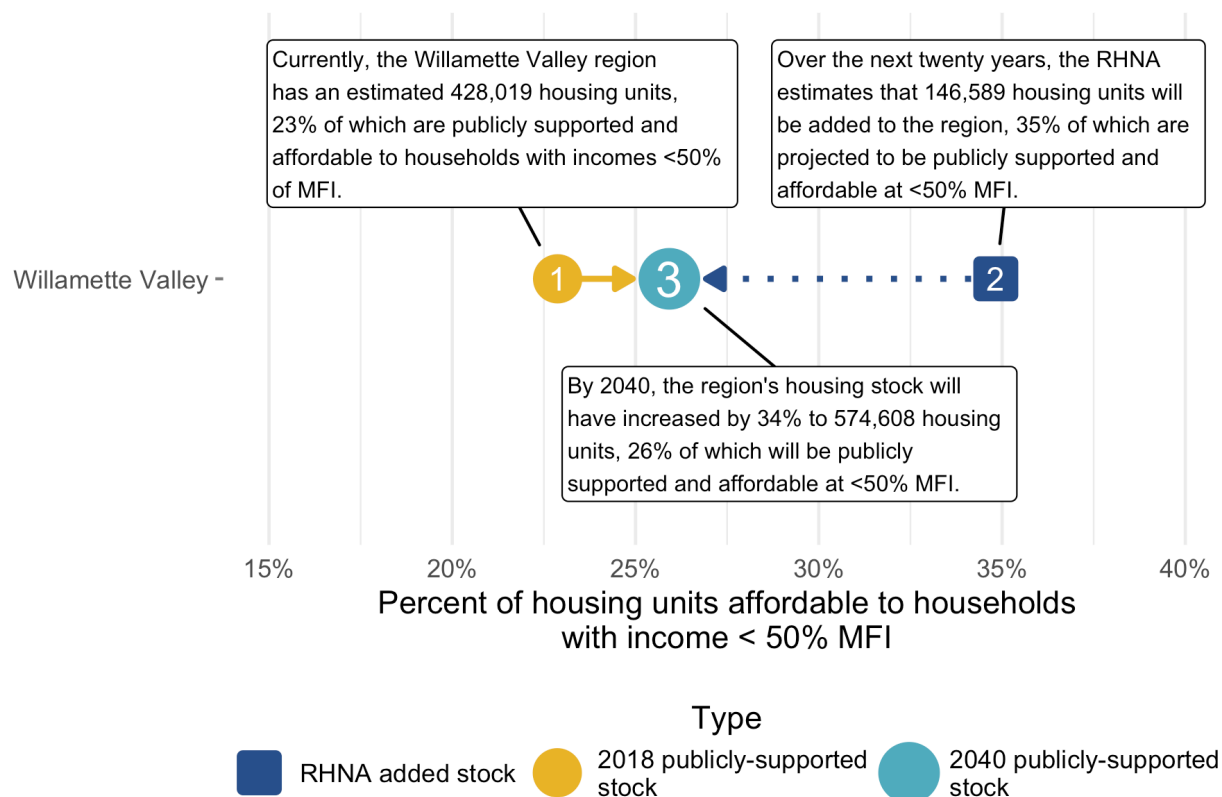


Exhibit 23 shows that, in all regions, **the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI.** In regions with the smallest amount of growth in the RHNA (Northeast and Southeast), the shift is smaller. In regions with more growth in the RHNA (Portland Metro and Willamette Valley), the shift is larger, meaning that a larger percentage of housing stock should be affordable to households with income below 80% of MFI in 2040. Overall, the shift in housing stock towards affordability is relatively small because the amount of growth forecast in the RHNA is small compared to the existing housing stock. This emphasizes the importance of local implementation efforts to maintain a focus on building new units that are publicly-supported, and provide rent supports to lower-income households.

Exhibit 23. Estimated in Percent of Housing Stock Affordable to Households with Income **Below** 50% of MFI by Region, 2018 to 2040

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing

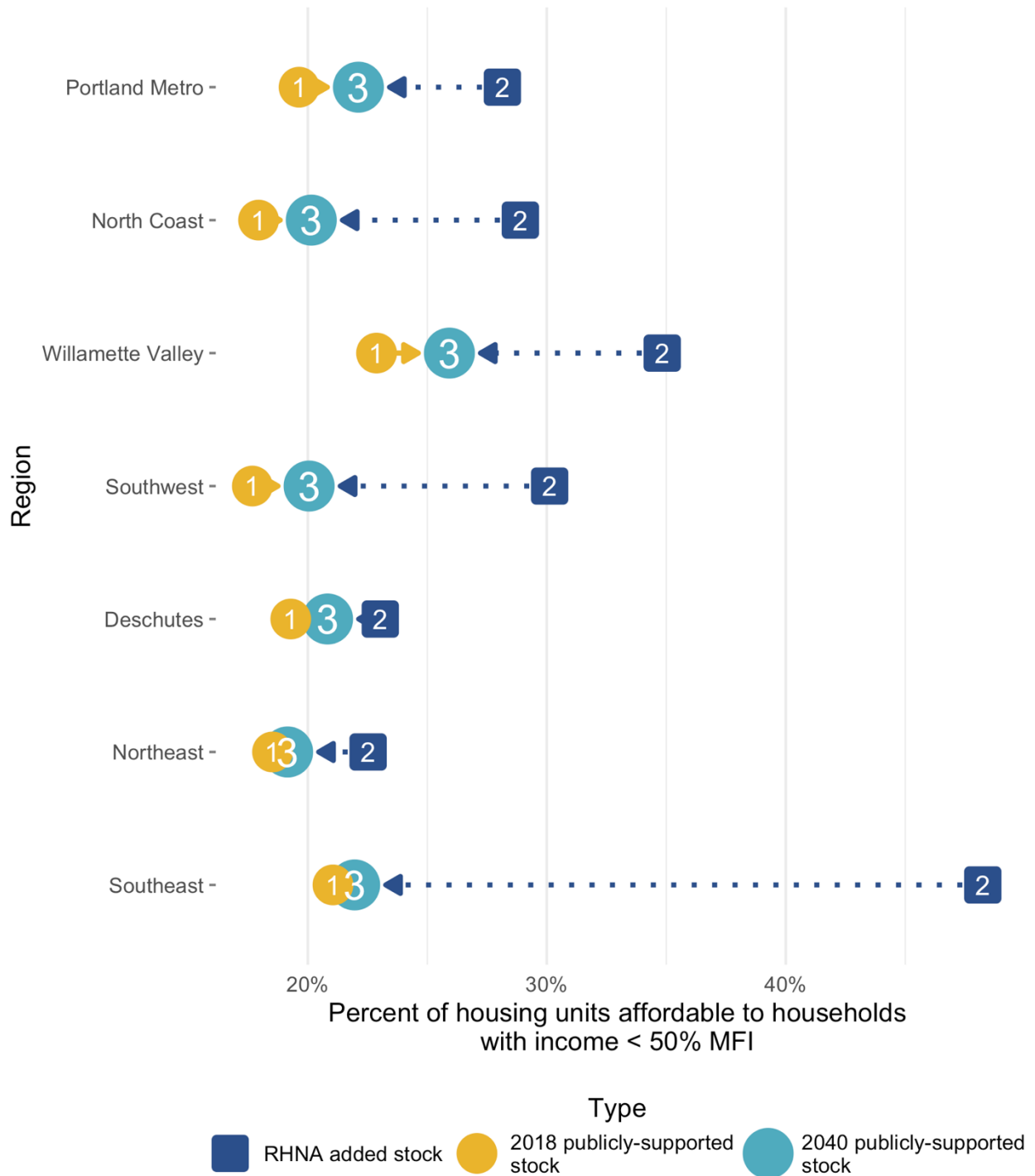
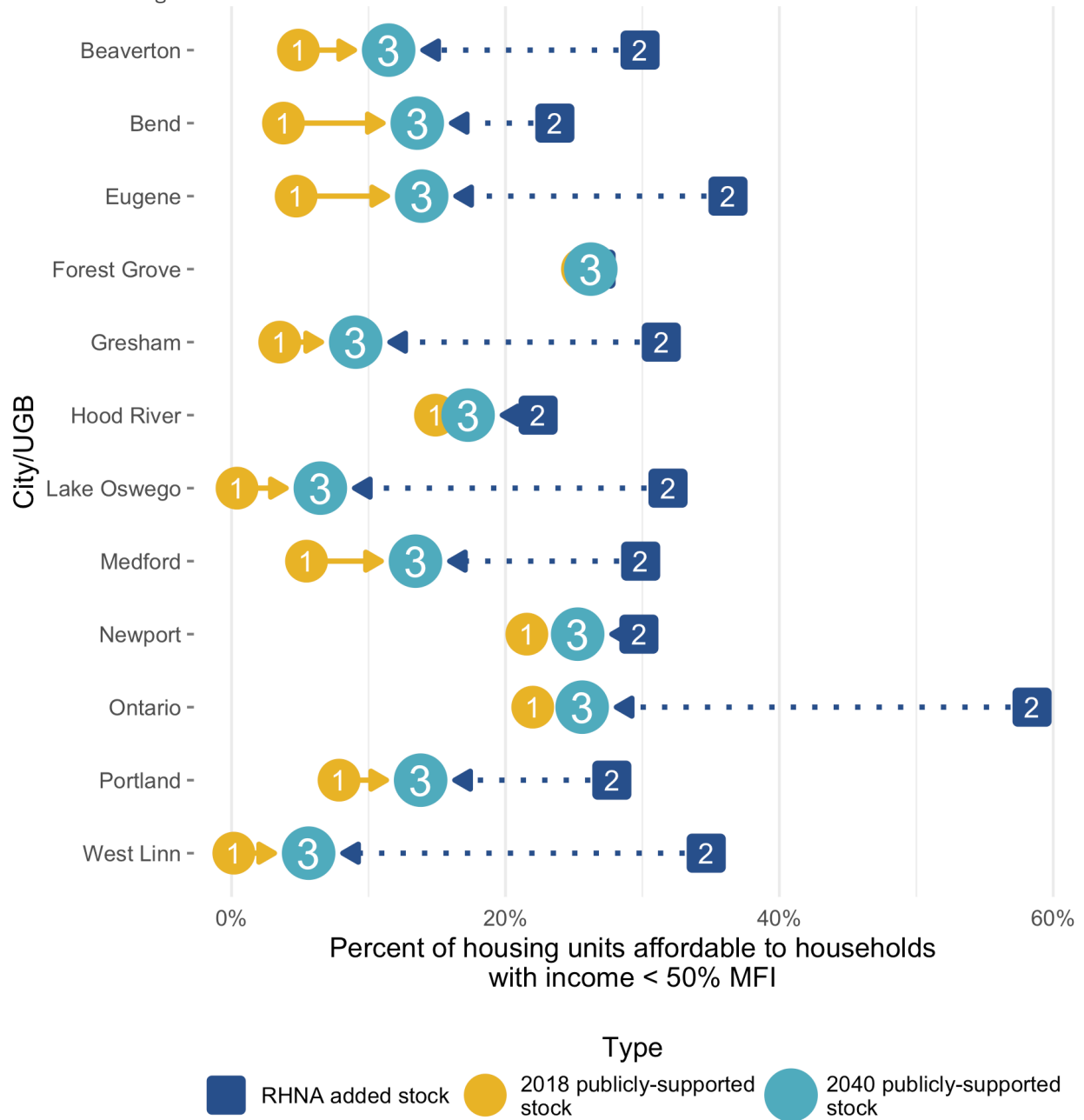


Exhibit 24 also shows that, in all regions, **the total housing stock in 2040 shifts to the right for all cities, increasing the percentage of housing that is affordable to households with income below 50% of MFI.** Cities with larger amounts of growth or with larger allocations of housing for underproduction or for people experiencing homelessness (which are assumed have greater need for housing affordable to lower income households), such as Bend or Eugene, show the largest shift in the 2040 housing stock to the right. In both those cities, about 5% of housing stock in 2018 was affordable to households with income below 50% of MFI, shifting to more than 10% of housing affordable to households with income below 50% of MFI by 2040. Cities with amount of growth projected by the RHNA, such as Ontario, Hood River, or Forest Grove, are expected to have much smaller shifts in the percent of housing affordable to households with income below 50% of MFI.

**Exhibit 24. Estimated in Percent of Housing Stock Affordable to Households with Income **Below** 50% of MFI for Selected Cities, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



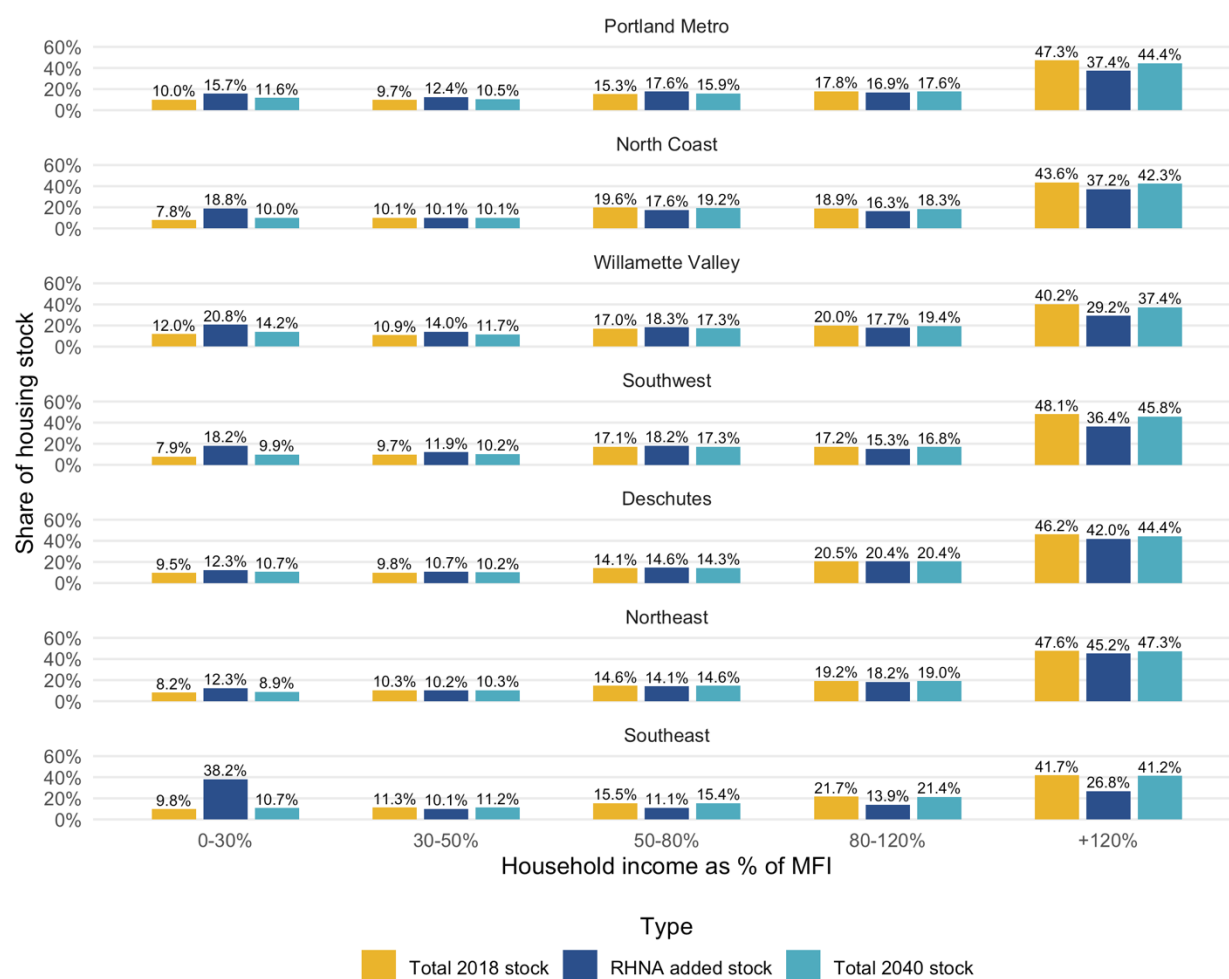
Source: OHCS, US Census



Exhibit 25 shows details of housing affordability by region in the five categories of household income used in the report. As in Exhibit 23, the percentage of housing affordable in lower income categories increases overall from the added stock from the RHNA (shown in dark blue), increasing affordability for the total 2040 stock (shown in teal).

### Exhibit 25. Estimated in Percent of Housing Stock Affordable to Households by income category, 2018 and 2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data



# Total Housing Need by Affordability and Region

## State of Oregon

Exhibit 26 and Exhibit 27 present housing need by income category for the entire state. About 29% of new housing will need to be affordable to households earning less than 50% of Median Family Income (MFI) and 46% of new units will need to be affordable to households earning less than 80% of MFI. Population growth (“projected need”) accounts for about 76% of the housing need (444,000 units), and housing need for the homeless accounts for about 5% of the housing need (29,000 units).

### Exhibit 26. Housing Need by Income Category, State of Oregon, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
120%	201,656	7,725	-	209,381	36%
80-120%	82,796	18,326	-	101,121	17%
50-80%	70,013	30,574	875	101,462	17%
30-50%	44,400	26,119	2,334	72,852	12%
0-30%	44,701	28,076	25,965	98,742	17%
Oregon	443,566	110,819	29,174	583,559	100%
% of Units	76%	19%	5%	100%	

### Exhibit 27. Share of Housing Need by Component of Need by Income Category, State of Oregon, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

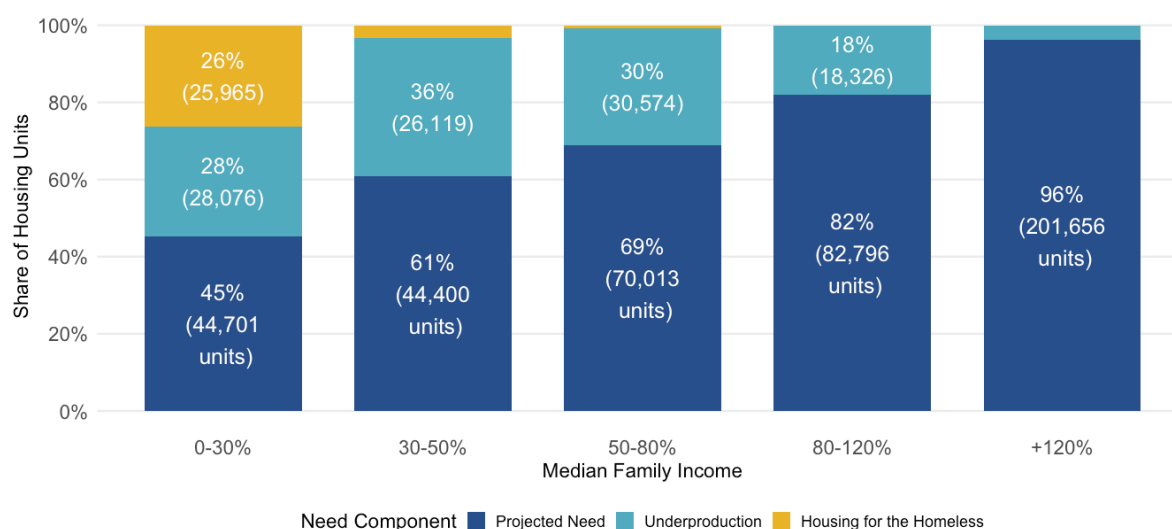
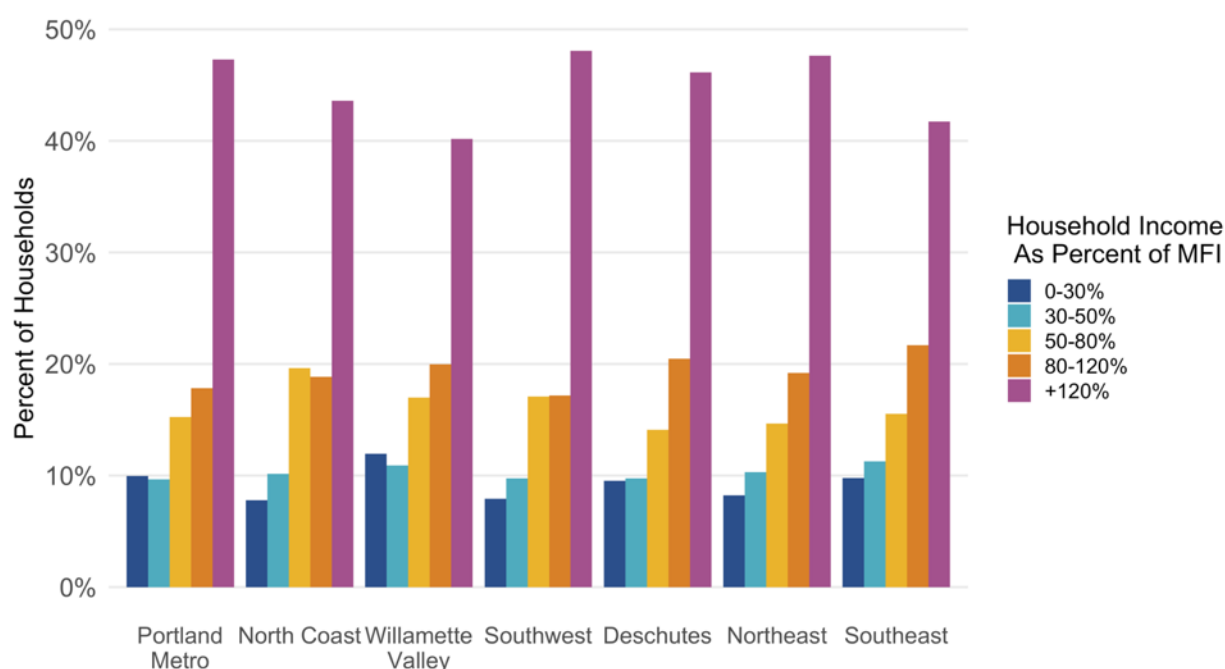


Exhibit 28 shows the current distribution of households by income level for each region, adjusted for household size (as described in Chapter 3 and Appendix B). In each region, at least 40% of existing households (nearly 50% of households in some regions) have income of 120% or more. And about 20% of households have income below 50% of MFI.

The results of the RHNA, summarized for the entire state in Exhibit 26, show slower growth in housing affordable to the households with income of 120% or more, which account for 36% of the RHNA housing projection. The RHNA shows faster growth in housing affordable to households with income below 50% of MFI, which account for 27% of the RHNA housing projection.

Exhibit 28. Distribution of Households by Income Adjusted Category, by Region

Source: ECONorthwest using PUMS data



House Bill 2003 calls for forecasting housing growth by housing type and income level.<sup>17</sup> The analysis originally used the four housing types called out in House Bill 2003: single-family detached housing, single-family attached housing, multifamily housing, and manufactured housing or mobile homes. As we developed the RHNA methodology, we found that allocating housing in these four housing types often resulted in misleading results, such as the need for substantial amounts of single-family detached housing affordable to households earning 0-30% of MFI.<sup>18</sup> The reason for these results are many: (1) The data available consistently and statewide

<sup>17</sup> HB 2003 section 1, 3(a).

<sup>18</sup> Appendix B documents the challenges we encountered in using these housing types in the RHNA methodology.

for understanding trends in unit mix is incomplete and flawed.<sup>19</sup> (2) We do not expect future housing mix to look like past housing mix for a variety of reasons, including recent legislation eliminating zones that are exclusively for single family development. (3) Creating targets that assume that lower-income households should be housed in multifamily developments (based on past trends) risks perpetuating a lack of housing choice for lower-income households. Given this starting point, we do not have a reasonable way to use available data about existing housing mix to project future housing mix across the many diverse markets in the state. Please see Chapter 3 for a complete discussion of these decisions, and Chapter 7 for details of our recommendations regarding unit type mix.

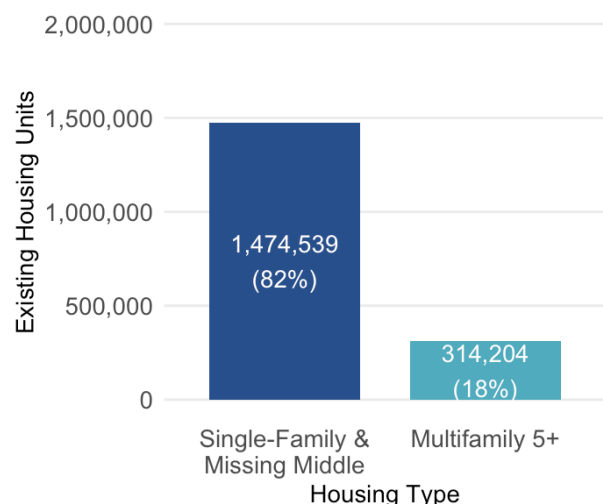
As a result of these issues and a recognition of the changes in zoning policy that will result from House Bill 2001, we decided to combine the housing types into two categories:

- **Single-Family and Missing Middle Housing:** this category includes single-family detached housing, manufactured or mobile homes, single-family attached housing, multifamily housing with two to four units per structure, and other housing. This term is inclusive of less traditional forms of housing (such as accessory dwelling units, cottage clusters, and tiny homes clustered on lots).
- **Multifamily Housing:** this category includes structures with five or more units per lot.

Exhibit 29 presents the existing mix of housing in the state. Overall, 82% of housing in Oregon is Single-Family and Missing Middle housing.

#### Exhibit 29. Existing Housing Units, State of Oregon, 2018

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates



<sup>19</sup> See the discussion of data limitations in the Methods chapter (Chapter 3) and Appendix A. Unit type data in the Census are based on self-reported survey information and are often inaccurate and incomplete, and other data sets are not available in a consistent format across the entire state. Some regions (Metro and Rogue Valley) have invested in improved data about unit type. Our comparison of the information in these data sets to the Census unit types showed substantial differences in results

## Portland Metro region

Exhibit 30 and Exhibit 31 present housing need by income category for the Portland Metro Region. About 46% of households will earn less than 80% of MFI, and will need units that are affordable to them. Exhibit 30 shows that population growth accounts for about 76% of the housing need (225,000 units) and housing need for the homeless accounts for about 4% of the housing need (11,000 units).

**Exhibit 30. Housing Need by Income Category, Portland Metro Region, 2020-2040**

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
+120% (\$97,680+)	106,223	4,035	-	110,257	37%
80-120% (\$65,120 to \$97,680)	40,084	9,778	-	49,862	17%
50-80% (\$40,700 to \$65,120)	34,266	17,173	320	51,759	18%
30-50% (\$24,420 to \$40,700)	21,715	14,096	855	36,666	12%
0-30% (\$0 to \$24,420)	22,395	14,406	9,508	46,309	16%
Portland Metro Region	224,683	59,488	10,683	294,853	100%
% of Units	76%	20%	4%	100%	

**Exhibit 31. Share of Housing Need by Component of Need by Income Category, Portland Metro Region, 2020-2040**

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

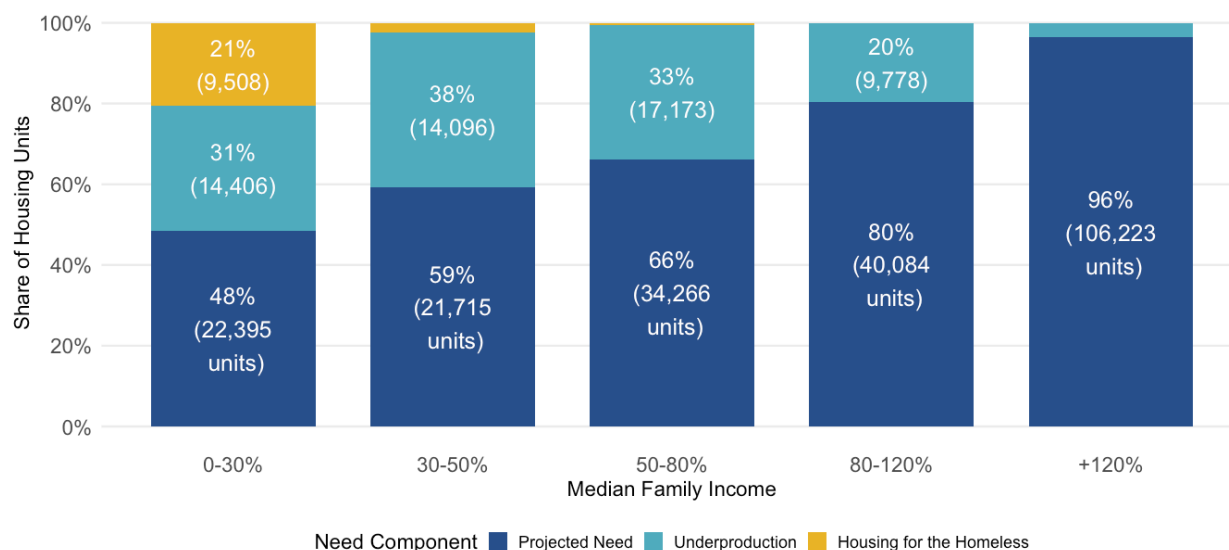
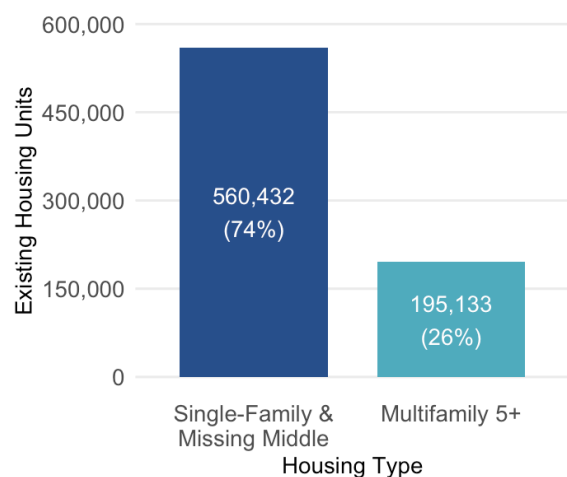


Exhibit 32 presents the existing mix of housing in the region. Overall, 74% of housing in the Portland Region is Single-Family and Missing Middle housing and 26% is Multifamily in structures with five or more units.

Exhibit 32. Existing Housing Units, Portland Metro Region, 2018

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates





## North Coast region

Exhibit 33 and Exhibit 34 present housing need by income category for the North Coast region. About 47% of new units will need to be affordable to households earning less than 80% of MFI. Most (85%) of the housing need are related to population growth and 2,300 units are related to housing need for the homeless.

### Exhibit 33. Housing Need by Income Category, North Coast Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
+120% (\$77,130+)	6,421	23	-	6,444	37%
80-120% (\$51,420 to \$77,130)	2,777	51	-	2,828	16%
50-80% (\$32,140 to \$51,420)	2,890	94	69	3,054	18%
30-50% (\$19,280 to \$32,140)	1,494	64	185	1,743	10%
0-30% (\$0 to \$19,280)	1,148	62	2,055	3,265	19%
North Coast Region	14,731	295	2,309	17,335	100%
% of Units	85%	2%	13%	100%	

### Exhibit 34. Share of Housing Need by Component of Need by Income Category, North Coast Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

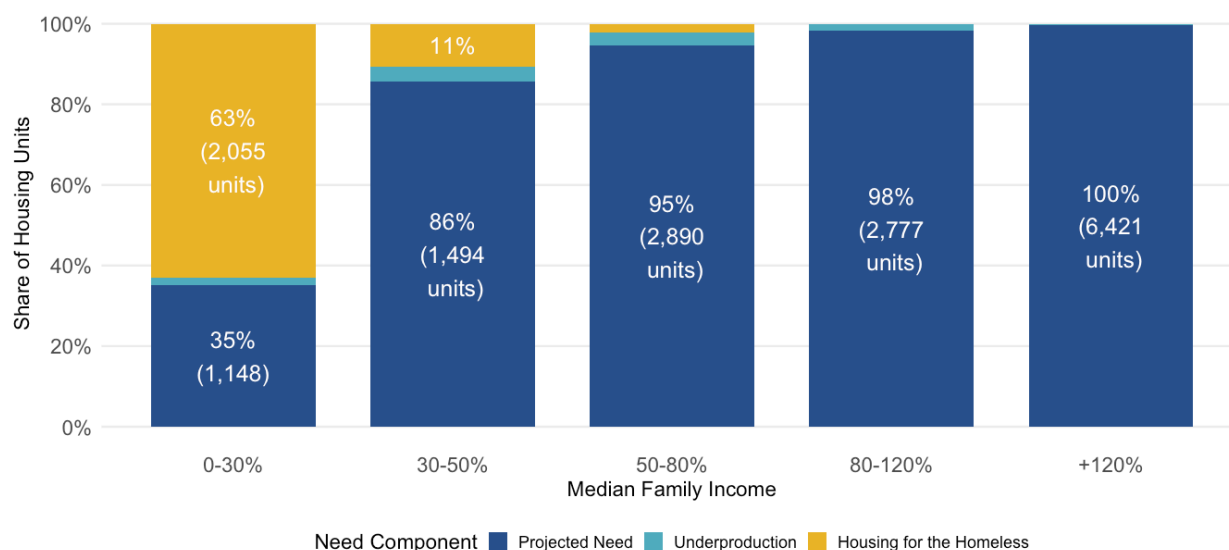
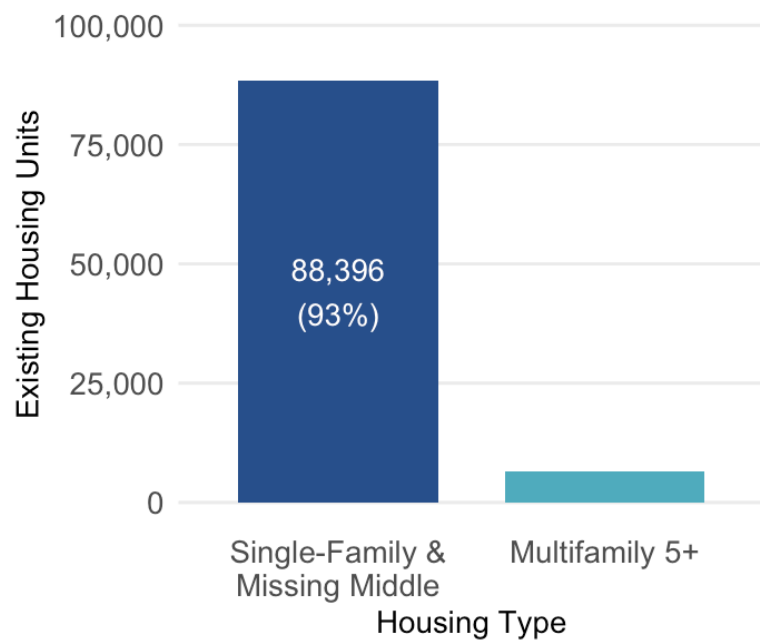


Exhibit 35 presents the existing mix of housing in the region. Overall, 93% of housing in the North Coast is Single-Family and Missing Middle housing and 7% is Multifamily in structures with five or more units.

Exhibit 35. Existing Housing Units, North Coast Region, 2018

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates



## Willamette Valley region

Exhibit 36 and Exhibit 37 present housing need by income category for the Willamette Valley region. About 53% of new units will need to be affordable to households earning less than 80% of MFI. 69% of the housing need are related to population growth and 9,000 units are related to housing need for the homeless.

### Exhibit 36. Housing Need by Income Category, Willamette Valley Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
+120% (\$81,820+)	40,855	1,890	-	42,745	29%
80-120% (\$54,540 to \$81,820)	20,315	5,683	-	25,998	18%
50-80% (\$34,090 to \$54,540)	17,271	9,251	269	26,791	18%
30-50% (\$20,450 to \$34,090)	11,092	8,748	718	20,558	14%
0-30% (\$0 to \$20,450)	12,171	10,342	7,985	30,498	21%
Willamette Valley Region	101,704	35,913	8,972	146,589	100%
% of Units	69%	24%	6%	100%	

### Exhibit 37. Share of Housing Need by Component of Need by Income Category, Willamette Valley Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

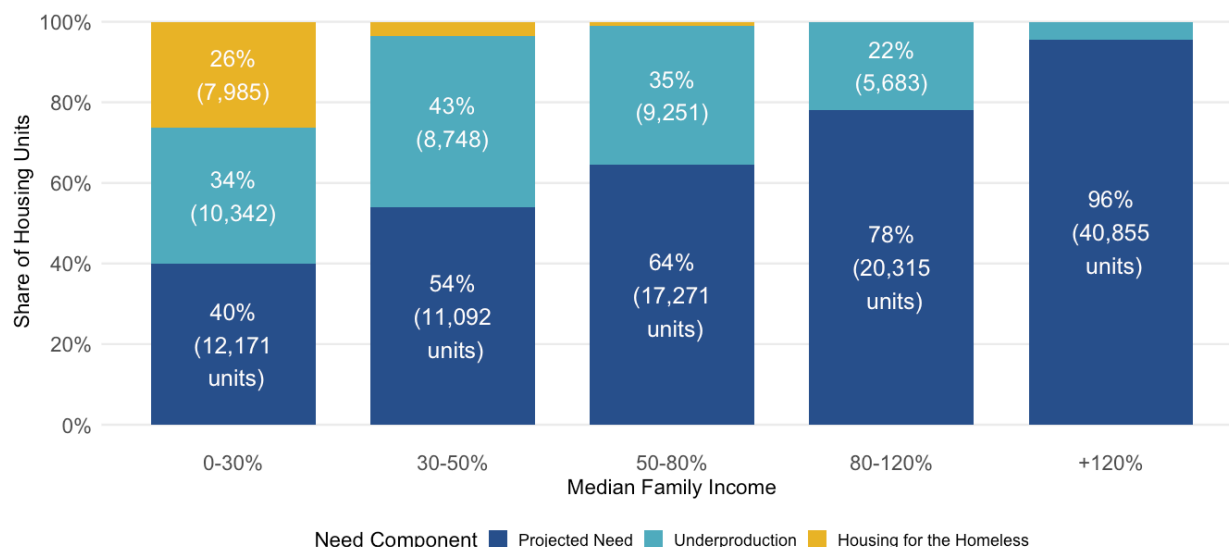
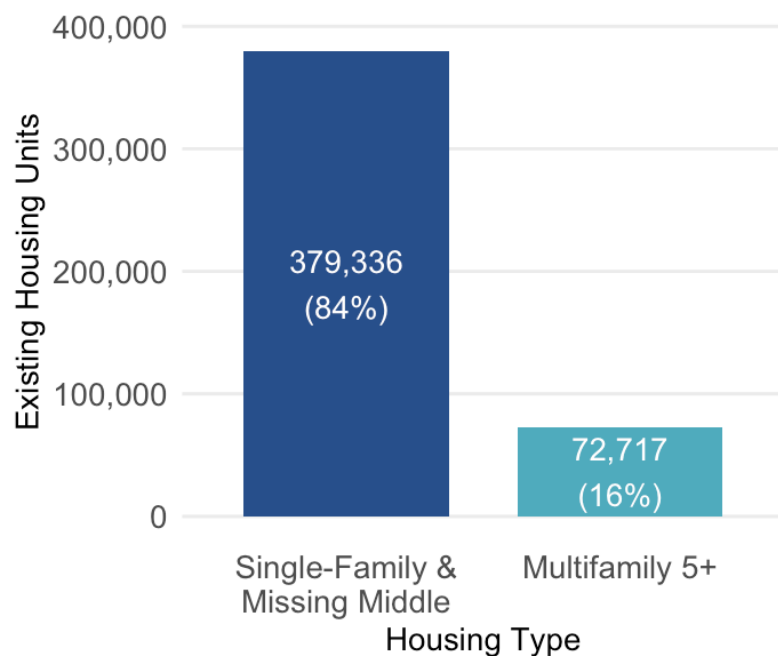


Exhibit 38 presents the existing mix of housing in the region. Overall, 84% of housing in the Willamette Valley region is Single-Family and Missing Middle housing and 16% is Multifamily in structures with five or more units.

**Exhibit 38. Existing Housing Units, Willamette Valley Region, 2018**

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates



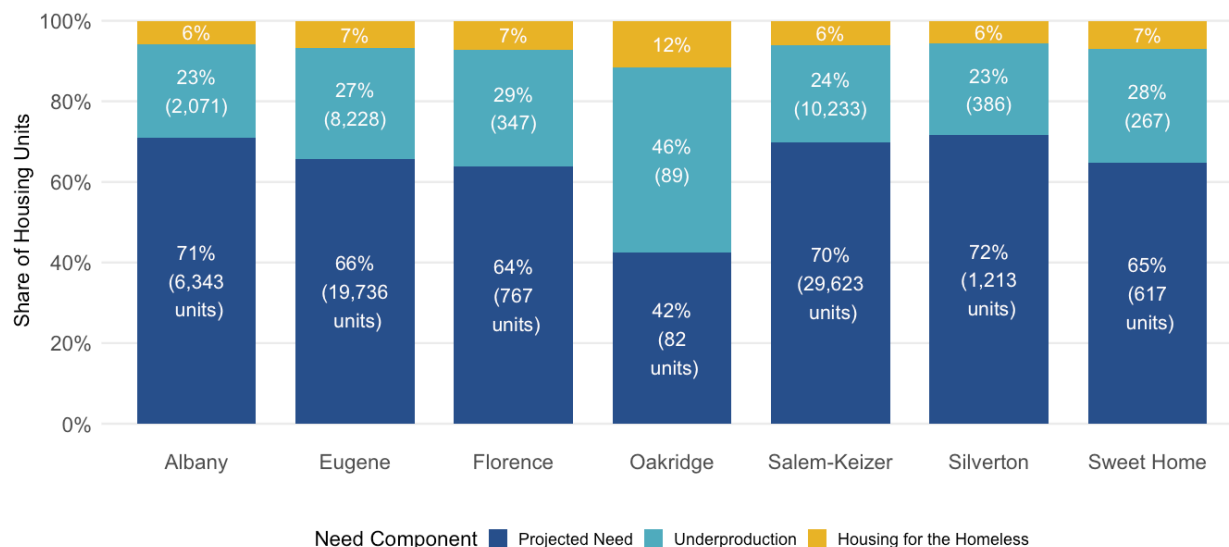
## Examples of results by city: Willamette Valley region

This section presents example of results from selected cities in the Willamette Valley Region. Appendix D presents all of the results for each city in each region. This section only shows the results of a few cities in the Willamette Valley, to illustrate results in different cities and illustrate how the assumptions in the methodology drive results. This section shows the results for Albany, Eugene, Florence, Oakridge, Salem-Keizer, Silverton and Sweet Home, to illustrate results for larger urban cities and smaller rural cities.

In most cities, about two-thirds of the total need over 20 years will be needed to accommodate population growth. The remainder is needed to accommodate the current population: underproduction (about one-quarter of total need) and housing for the homeless (7% of total need). The exception in this example is Oakridge, where underproduced units exceed units to accommodate projected need. The primary reason for this difference is that Oakridge is forecast to grow at a very slow rate in the PSU forecasts and Oakridge has a relatively small proportion of jobs within the Willamette Valley region. Since projected need is allocated half based on the PSU forecast for growth and half based on current jobs, Oakridge received a relatively small share of growth for Projected need compared with other cities in the Willamette Valley region.

### Exhibit 39. Share of Housing Need by Component of Need, Selected Cities in the Willamette Valley Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data



In Exhibit 40, Oakridge’s income distribution is different than the rest of the example cities, with 46% of needed housing at less than 50% of MFI. The reason for the difference is that housing to address underproduction and housing need for the homeless account for proportionately large percentages of needed housing in Oakridge. The income distributions for Underproduction and Housing need for the homeless emphasize housing affordable to lower income households than for Projected need, as shown in Exhibit 13 in Chapter 3.

**Exhibit 40. Share of Housing Need by Income Category, Selected Cities in the Willamette Valley Region, 2020-2040**

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

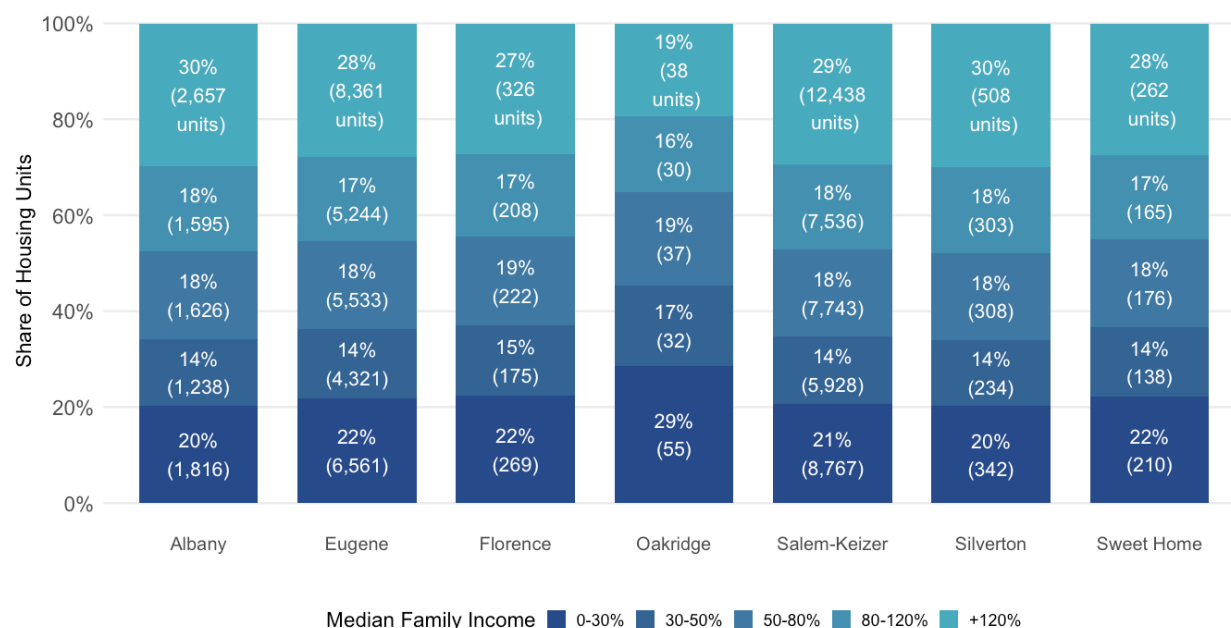




Exhibit 41 shows housing needed by income category for selected cities in the Willamette Valley region.

**Exhibit 41. Housing Need by Income Category, Selected Cities in the Willamette Valley Region, 2020-2040**

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
UGB: Albany					
+120%	2,548	109	0	2,657	30%
80-120%	1,267	328	0	1,595	18%
50-80%	1,077	533	16	1,626	18%
30-50%	692	504	41	1,238	14%
0-30%	759	596	460	1,816	20%
Total Units	6,343	2,071	517	8,931	100%
% of Units	71%	23%	6%	100%	
UGB: Eugene					
+120%	7,928	433	0	8,361	28%
80-120%	3,942	1,302	0	5,244	17%
50-80%	3,352	2,119	62	5,533	18%
30-50%	2,152	2,004	164	4,321	14%
0-30%	2,362	2,369	1,829	6,561	22%
Total Units	19,736	8,228	2,056	30,020	100%
% of Units	66%	27%	7%	100%	
UGB: Florence					
+120%	308	18	0	326	27%
80-120%	153	55	0	208	17%
50-80%	130	89	3	222	19%
30-50%	84	84	7	175	15%
0-30%	92	100	77	269	22%
Total Units	767	347	87	1,200	100%
% of Units	64%	29%	7%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
UGB: Oakridge					
+120%	33	5	0	38	19%
80-120%	16	14	0	30	16%
50-80%	14	23	1	37	19%
30-50%	9	22	2	32	17%
0-30%	10	26	20	55	29%
Total Units	82	89	22	193	100%
% of Units	42%	46%	12%	100%	
UGB: Salem/Keizer					
+120%	11,900	539	0	12,438	29%
80-120%	5,917	1,619	0	7,536	18%
50-80%	5,030	2,636	77	7,743	18%
30-50%	3,231	2,493	205	5,928	14%
0-30%	3,545	2,947	2,275	8,767	21%
Total Units	29,623	10,233	2,557	42,413	100%
% of Units	70%	24%	6%	100%	
UGB: Silverton					
+120%	487	20	0	508	30%
80-120%	242	61	0	303	18%
50-80%	206	99	3	308	18%
30-50%	132	94	8	234	14%
0-30%	145	111	86	342	20%
Total Units	1,213	386	96	1,695	100%
% of Units	72%	23%	6%	100%	
UGB: Sweet Home					
+120%	248	14	0	262	28%
80-120%	123	42	0	165	17%
50-80%	105	69	2	176	18%
30-50%	67	65	5	138	14%
0-30%	74	77	59	210	22%
Total Units	617	267	67	951	100%
% of Units	65%	28%	7%	100%	

## Southwest region

Exhibit 42 and Exhibit 43 present housing need by income category for the Southwest region. About 48% of new units will need to be affordable to households earning less than 80% of MFI. Exhibit 42 shows that 70% of the housing need are related to population growth and 4,600 units are related to housing need for the homeless.

### Exhibit 42. Housing Need by Income Category, Southwest Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
+120% (\$66,170+)	16,772	1,327	-	18,098	36%
80-120% (\$44,120 to \$66,170)	5,996	1,607	-	7,602	15%
50-80% (\$27,570 to \$44,120)	5,960	2,976	137	9,073	18%
30-50% (\$16,540 to \$27,570)	3,401	2,176	366	5,944	12%
0-30% (\$0 to \$16,540)	2,767	2,202	4,075	9,044	18%
Southwest Region	34,896	10,287	4,579	49,761	100%
% of Units	70%	21%	9%	100%	

### Exhibit 43. Share of Housing Need by Component of Need by Income Category, Southwest Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

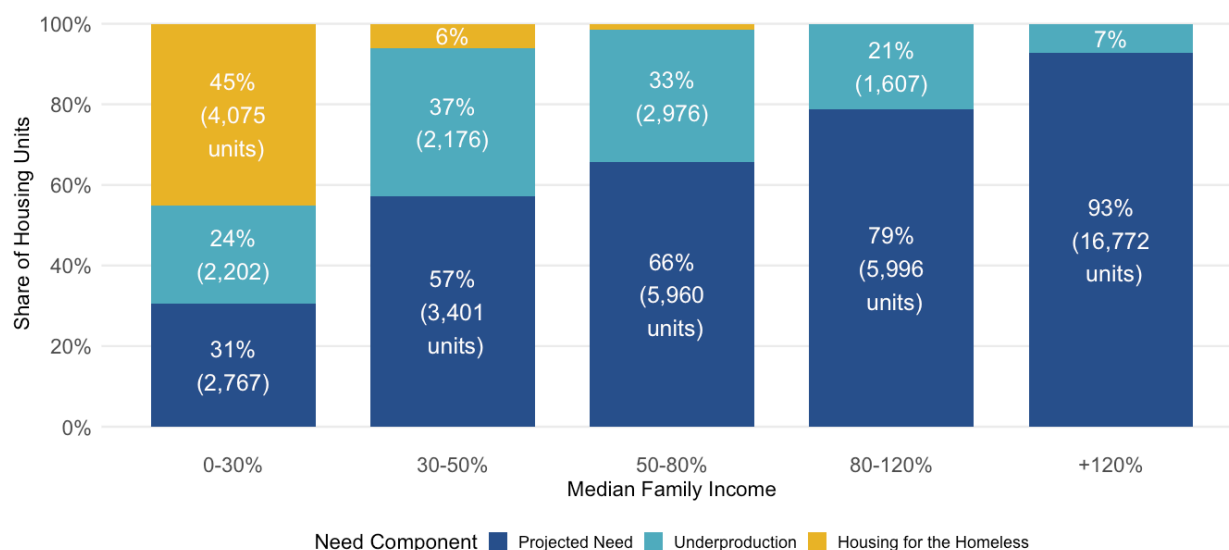
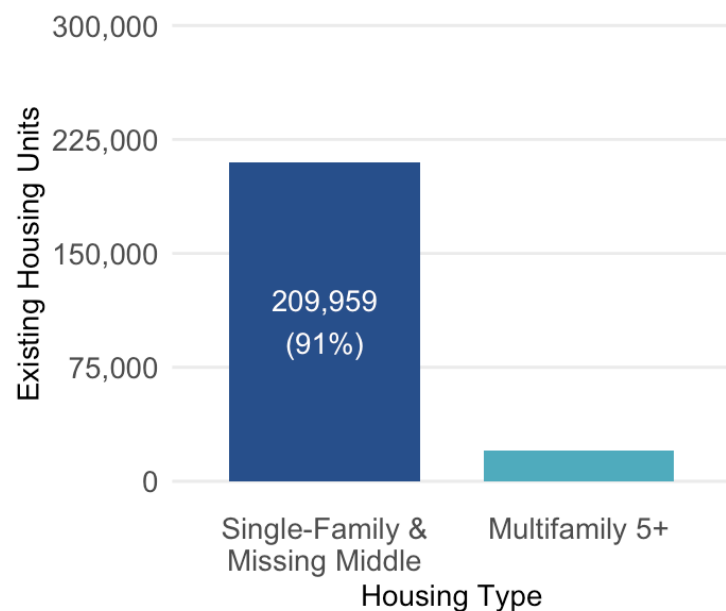


Exhibit 44 presents the existing mix of housing in the region. Overall, 91% of housing in the Southwest is Single-Family and Missing Middle housing and 9% is Multifamily in structures with five or more units.

**Exhibit 44. Existing Housing Units, Southwest Region, 2018**

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates



## Deschutes region

Exhibit 45 and Exhibit 46 present housing need by income category for the Deschutes region. About 38% of new units will need to be affordable to households earning less than 80% of MFI. Most (89%) of the housing need are related to population growth and 1,200 units are related to housing need for the homeless.

### Exhibit 45. Housing Need by Income Category, Deschutes Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
+120% (\$83,520+)	23,011	450	-	23,462	42%
80-120% (\$55,680 to \$83,520)	10,205	1,207	-	11,412	20%
50-80% (\$34,800 to \$55,680)	7,026	1,081	36	8,143	15%
30-50% (\$20,880 to \$34,800)	4,864	1,035	96	5,994	11%
0-30% (\$0 to \$20,880)	4,751	1,064	1,063	6,877	12%
Deschutes Region	49,856	4,837	1,194	55,887	100%
% of Units	89%	9%	2%	100%	

### Exhibit 46. Share of Housing Need by Component of Need by Income Category, Deschutes Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

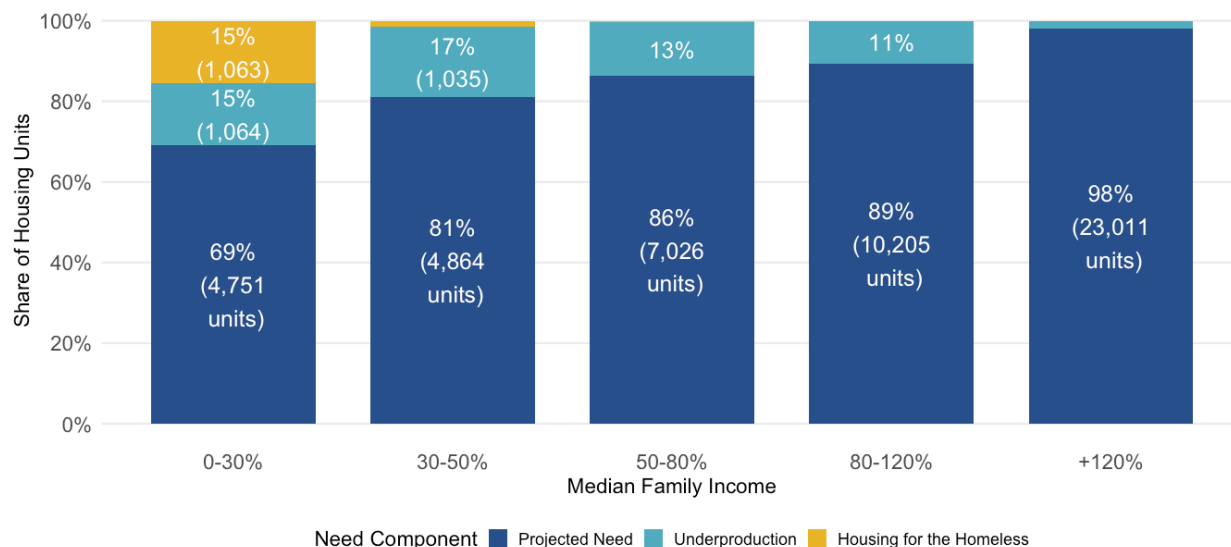
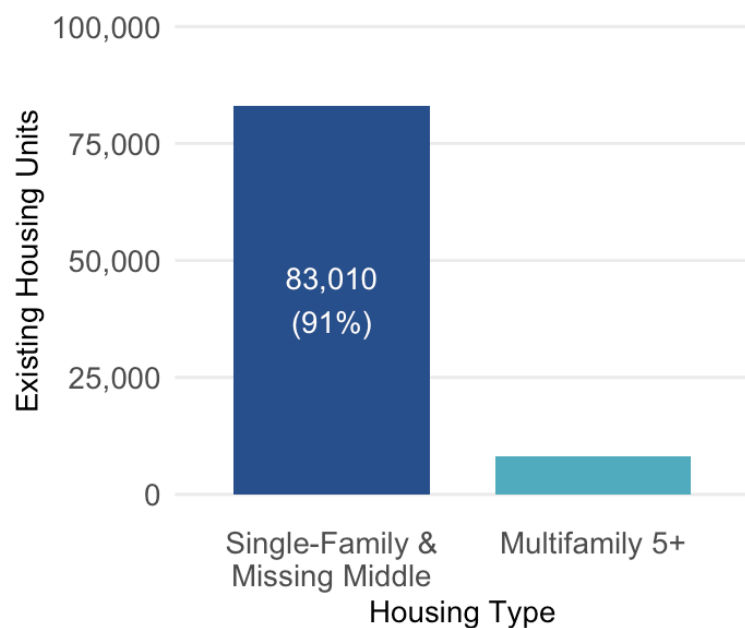


Exhibit 47 presents the existing mix of housing in the region. Overall, 91% of housing in the Deschutes region is Single-Family and Missing Middle housing and 9% is Multifamily in structures with five or more units.

Exhibit 47. Existing Housing Units, Deschutes Region, 2018

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates





## Northeast region

Exhibit 48 and Exhibit 49 present housing need by income category for the Northeast region. About 37% of new units will need to be affordable to households earning less than 80% of MFI. Most (95%) of the housing need are related to population growth and 900 units are related to housing need for the homeless. None of the needed units are related to underproduction.

### Exhibit 48. Housing Need by Income Category, Northeast Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
+120% (\$67,120+)	7,972	-	-	7,972	45%
80-120% (\$44,750 to \$67,120)	3,210	-	-	3,210	18%
50-80% (\$27,970 to \$44,750)	2,450	-	27	2,477	14%
30-50% (\$16,780 to \$27,970)	1,724	-	72	1,796	10%
0-30% (\$0 to \$16,780)	1,375	-	800	2,175	12%
Northeast Region	16,731	-	899	17,630	100%
% of Units	95%	0%	5%	100%	

### Exhibit 49. Share of Housing Need by Component of Need by Income Category, Northeast Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

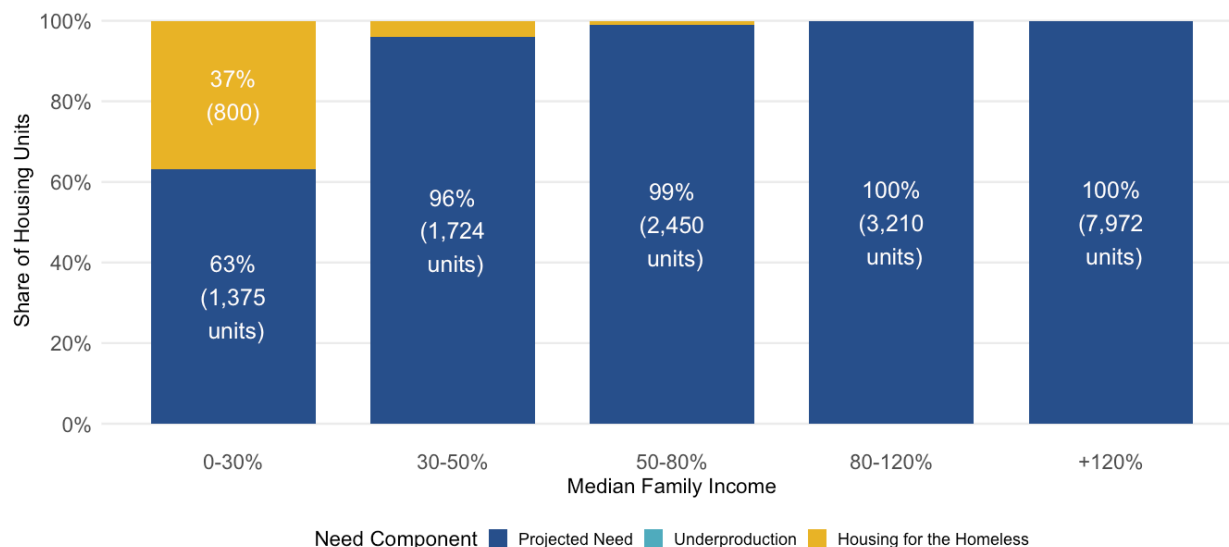
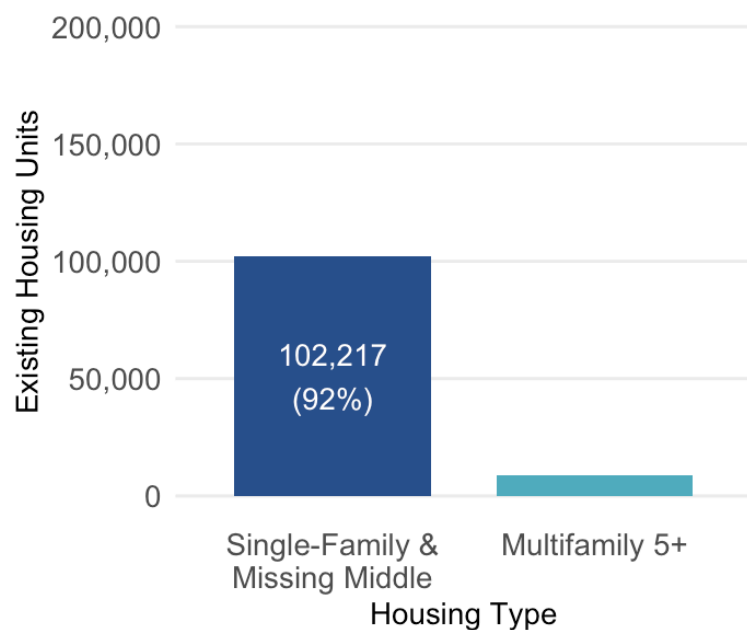


Exhibit 50 presents the existing mix of housing in the region. Overall, 92% of housing in the Northeast is Single-Family and Missing Middle housing and 8% is Multifamily in structures with five or more units.

Exhibit 50. Existing Housing Units, Northeast Region, 2018

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates



## Southeast region

Exhibit 51 and Exhibit 52 present housing need by income category for the Southeast region. About 59% of new units will need to be affordable to households earning less than 80% of MFI. 64% of the housing need are related to population growth and 500 units are related to housing need for the homeless. None of the needed units are related to underproduction.

### Exhibit 51. Housing Need by Income Category, Southeast Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following...			Total Units	% of Units
	Projected Need	Underproduction	Housing for the Homeless		
+120% (\$61,450+)	403	-	-	403	27%
80-120% (\$40,970 to \$61,450)	209	-	-	209	14%
50-80% (\$25,600 to \$40,970)	150	-	16	166	11%
30-50% (\$15,360 to \$25,600)	109	-	43	152	10%
0-30% (\$0 to \$15,360)	94	-	479	573	38%
Southeast Region	965	-	538	1,503	100%
% of Units	64%	0%	36%	100%	

### Exhibit 52. Housing Need by Component of Need by Income Category, Southeast Region, 2020-2040

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data

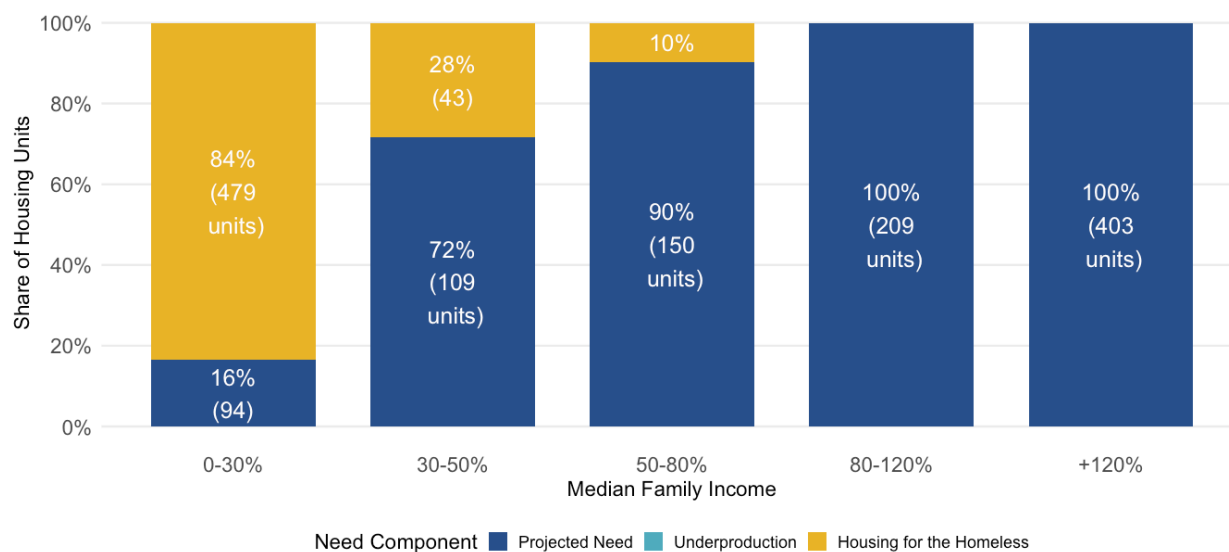
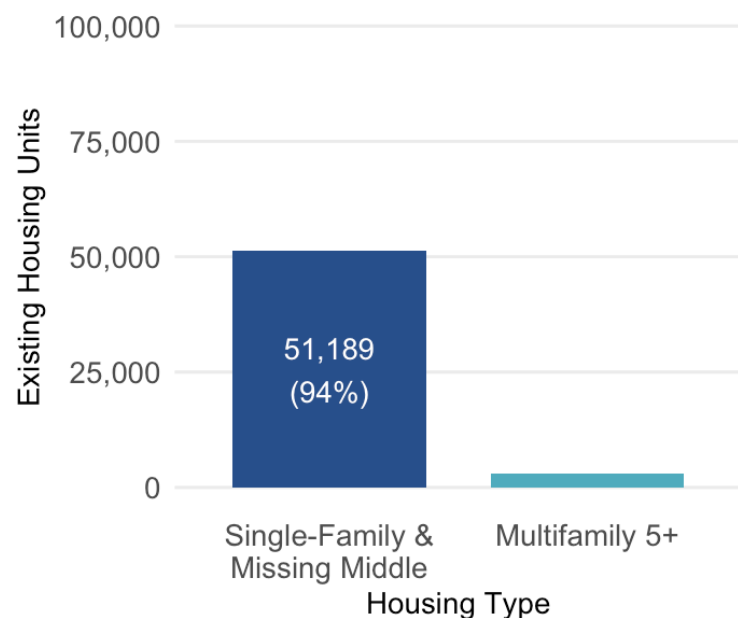


Exhibit 53 presents the existing mix of housing in the region. Overall, 94% of housing in the Northeast is Single-Family and Missing Middle housing and 6% is Multifamily in structures with five or more units.

**Exhibit 53. Existing Housing Units, Southeast Region, 2018**

Source(s): U.S. Census Bureau, 2018 ACS 1-year PUMS estimates



## Interpreting the Results of the RHNA in the Context of Local HNAs

The proposed RHNA methodology measures local housing need differently than the Housing Needs Analyses that cities currently undertake using local data. This section explores the magnitude of differences in results between the two methods, to inform discussions about how use of the RHNA will affect local housing planning efforts. It compares the results of a sample of recently completed local HNAs to RHNA results (Dallas, Klamath Falls, Monmouth, Prineville, Redmond, Roseburg, Silverton, St. Helens, Tualatin and Warrenton).<sup>20</sup>

The comparison of local HNAs and RHNA results for these cities shows:

- **The RHNA results in a forecast of more units than the local HNAs.** The RHNA includes housing needed for underproduction and housing to meet the needs of people experiencing homelessness, which accounts for between 4% and 37% of the RHNA total for the example cities. Local HNAs do not include a forecast of housing for these two types of need.

Both the local HNA and the RHNA use the official forecasts from the Oregon Population Forecast Program from Portland State University as the basis for forecasting growth of new units as a result of population growth. The local HNA uses the forecast by city. The RHNA allocates regional growth to cities based on the growth rate in the forecast and existing concentrations of employment in the region. As a result, in the “Projected Need” portion of the RHNA is larger for cities with high growth rates in the Oregon Population Forecast or regional employment centers.

- **A bit more than half of the cities show more need at the lower end of the income spectrum.** The RHNA often shows more need for housing affordable to households earning 80% or less of MFI, compared with the local HNAs.
- **Comparing results of HNAs is challenging.** While there is state guidance on conducting an HNA, there is not one method for doing so. As a result, it is challenging to compare results of HNAs among cities. The RHNA provides a consistent approach that allows for comparisons between cities and clearer interpretation of results. The primary advantage to a consistent approach to forecasting future housing need, especially one that incorporates underproduction and housing need for the homeless, would be ability to understand the housing needs of two or more cities relative to each other. This would make it clearer whether a city was meeting its responsibilities to support housing production and accommodate an equitable distribution of publicly-supported housing (as discussed in Chapter 6).

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<sup>20</sup> These cities all completed local HNAs in 2019 or 2020, making it easier to compare with the RHNA, in terms of the forecast periods. The RHNA’s forecast period is 2020-2040 and each of the comparison HNAs has a forecast period of 2019-2039 or 2020-2040.

## Forecast of new units

Exhibit 54 shows that all example cities **had more units forecast in the RHNA** than in the local HNA, ranging from 59 more units in Dallas to 4,226 more units in Tualatin. This was the result of two parts of the RHNA methodology:

- **Accounting for underproduction and housing needed for the homeless, in addition to projected need.** Local HNAs forecast growth only based on the official forecast of population growth, such as the Oregon Population Forecast Program at Portland State University. The RHNA used these forecasts as part of the forecast for projected need but also included new units necessary to account for historical underproduction and to meet the needs of people experiencing homelessness.

For example, the RHNA allocation for each of the example cities included units needed to meet the needs of people experiencing homelessness. All of the example cities were allocated units to address underproduction except for Klamath Falls and Prineville.

- **Accounting for underproduction in projected need.** The process for converting from the official population forecast to needed dwelling units is different in the RHNA and the local HNAs. The RHNA started with the official population forecasts and converted the population into households in a way similar to those used by local HNAs. But then the RHNA adjusted the forecast of future households by the national ratio of 1.14 dwelling units for every one household (as described on page 141 in Appendix B). In comparison, local HNAs simply rely on the official forecast of population growth to forecast future housing. By accounting for possible future underproduction, the number of new units needed as a result of projected need in the RHNA is larger than the forecast of housing units in a local HNA.
- **Forecasting population growth differently.** The allocation process for projected need in the RHNA is different than the forecasts of population growth used in the local HNAs. The RHNA started with the official population forecasts but allocated housing from the region to the city based half on these growth forecasts and half on current locations of employment. In comparison, local HNAs simply rely on the official forecast of population growth to forecast future housing.

The cities with the biggest differences between the RHNA and local HNA unit forecast were Tualatin, Roseburg, and Redmond. Each of these cities has substantial employment, meaning that they were allocated more housing as part of the “Projected Need” component of the RHNA allocation (which accounts for concentration of jobs).

#### Exhibit 54. Comparison of Total New Units Forecast in Local HNAs and the RHNA

Source(s): ECONorthwest analysis; City of Dallas Housing Needs Analysis (FCS Group, June 2019); City of Klamath Falls Housing Needs Analysis (ECONorthwest, June 2019); Monmouth Housing and Residential Land Needs Assessment (APG and Johnson Economics, June 2019); Prineville Housing and Residential Land Needs Assessment (APG and Johnson Economics, June 2019); City of Redmond Housing Needs Analysis (ECONorthwest, June 2019); City of Roseburg Housing Needs Analysis (ECONorthwest, June 2019); City of Silverton Housing Needs Analysis (ECONorthwest, January 2020); City of St. Helens Housing Needs Analysis (FCS Group, May 2019); City of Tualatin Housing Needs Analysis (ECONorthwest, December 2019); and City of Warrenton Housing Needs Analysis (APG, June 2019).

	Local HNA (Units)	RHNA Total (Units)	Difference between Local HNA and RHNA	
			Number of Units	% Difference from Local HNA
Dallas	2,768	2,827	59	2%
Klamath Falls	609	833	224	37%
Monmouth	1,207	1,537	330	27%
Prineville	1,021	1,475	454	44%
Redmond	6,963	10,127	3,164	45%
Roseburg	2,678	5,285	2,607	97%
Silverton	1,158	1,695	537	46%
St. Helens	1,621	2,348	727	45%
Tualatin	1,014	5,240	4,226	417%
Warrenton	1,117	1,338	221	20%



Exhibit 55 shows a comparison of the forecast of new units from the local HNA with the “Projected Need” portion of the RHNA, illustrating the difference in the use of the forecasts from the Oregon Population Forecast Program from Portland State University. Cities, such as Dallas or Klamath Falls, with comparatively lower growth rates in their forecast from the Oregon Population Forecast Program or cities with comparatively low concentrations of employment were allocated *fewer* units for “Projected Need” in the RHNA than the forecast from the local HNA. Cities, such as Tualatin or Redmond, with high forecast growth rates or comparatively high concentrations were allocated *more* units in for “Projected Need” in the RHNA than the forecast from the local HNA.

**Exhibit 55. Comparison of New Units Forecast in Local HNAs and the Projected Need from the RHNA**

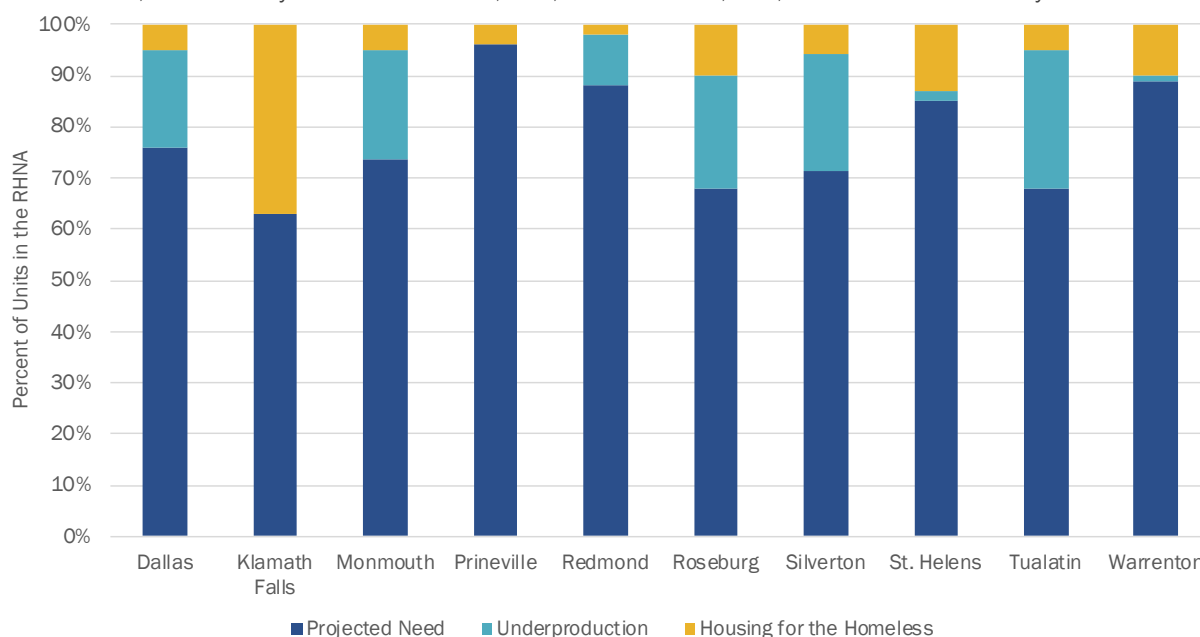
Source(s): ECONorthwest analysis; City of Dallas Housing Needs Analysis (FCS Group, June 2019); City of Klamath Falls Housing Needs Analysis (ECONorthwest, June 2019); Monmouth Housing and Residential Land Needs Assessment (APG and Johnson Economics, June 2019); Prineville Housing and Residential Land Needs Assessment (APG and Johnson Economics, June 2019); City of Redmond Housing Needs Analysis (ECONorthwest, June 2019); City of Roseburg Housing Needs Analysis (ECONorthwest, June 2019); City of Silverton Housing Needs Analysis (ECONorthwest, January 2020); City of St. Helens Housing Needs Analysis (FCS Group, May 2019); City of Tualatin Housing Needs Analysis (ECONorthwest, December 2019); and City of Warrenton Housing Needs Analysis (APG, June 2019).

	Local HNA (Units)	RHNA Projected Need Only (Units)	Difference between Local HNA and RHNA	
			Number of Units	% Difference from Local HNA
Dallas	2,768	2,152	(616)	-22%
Klamath Falls	609	527	(82)	-13%
Monmouth	1,207	1,124	(83)	-7%
Prineville	1,021	1,411	390	38%
Redmond	6,963	8,878	1,915	28%
Roseburg	2,678	3,619	941	35%
Silverton	1,158	1,213	55	5%
St. Helens	1,621	2,002	381	24%
Tualatin	1,014	3,585	2,571	254%
Warrenton	1,117	1,183	66	6%

Exhibit 56 shows the allocation of units to each of these cities as a percent of total new units for each unit in the RHNA. Housing to meet projected need (based on the official population forecasts for the next 20 years) accounts for more than 60% of housing growth in all of the cities. Most of the cities have some amount of housing need resulting from regional underproduction (as shown in Exhibit 124 and Exhibit 125 in Appendix B), account for as much as 27% of new housing in Tualatin. In each city, housing to address housing needs of people experiencing homelessness accounts from between 2% to 37% of needed housing.<sup>21</sup>

#### Exhibit 56. Component of needed housing as a percent of total, selected cities, RHNA

Source(s): ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; ODE, SY 2018-2019 McKinney Vento data



<sup>21</sup> Housing to address housing needs of people experiencing homelessness is generally 10% or less of needed units. In the case of Klamath Falls, housing for people experiencing homelessness is such a large percentage (37% of need or 306 units) because the forecast of future growth is relatively small (527 units).

## Income distribution

In addition to differences in the methodology for projecting total need, the RHNA uses a different approach to distributing need by income.

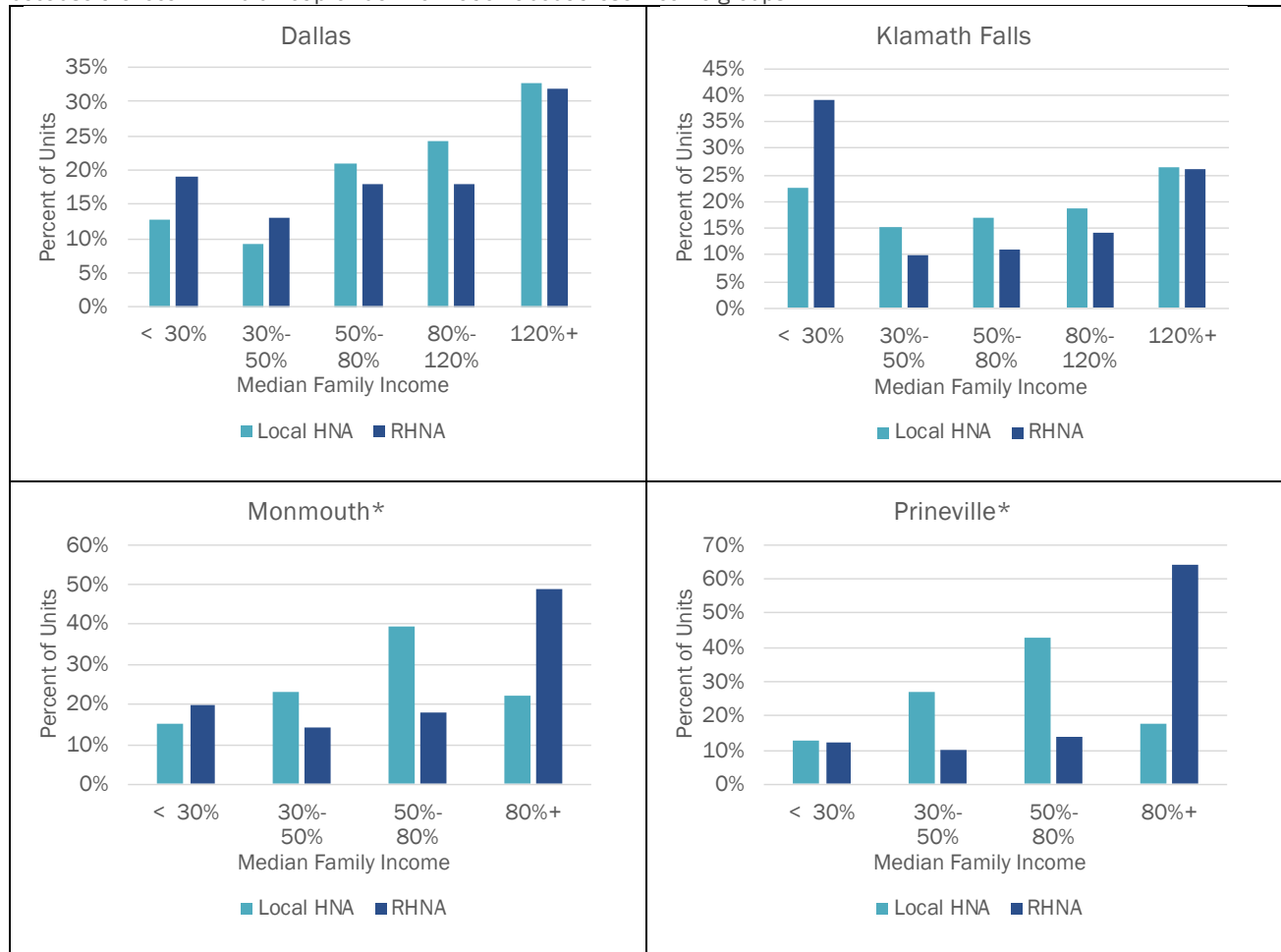
- **Use of the regional income distribution in the RHNA.** In local HNAs, the distribution of new housing by income grouping is generally based on local income distributions in the city. The RHNA used the regional income distribution for all cities within the region for projected need.
- **Use of a regional MFI, rather than a county MFI.** In local HNAs, the MFI is based on the HUD MFI for the county or a multicounty area. In the RHNA, the MFI is based on an average MFI for the region. For example, the Willamette Valley's MFI is based on the MFI for the Yamhill, Polk, Marion, Benton, Linn, and Lane Counties, most of which have a different MFI. For example the Willamette Valley's MFI is \$68,200. In comparison, Linn County's MFI was \$59,700 and Benton County's MFI was \$84,100. The only region in the RHNA that has the same MFI as that used in a local HNA is the Portland Metro region
- **Adjusting the income distribution for household size.** The local HNA uses the median family income for a household of four people. The RHNA adjusted the income distribution to account for household size, as described in Appendix B and Exhibit 28. In general, these changes in distribution decrease the percentage of households in the lower income groupings (less than 50% MFI) and increase the percentage of households in the higher income groupings (more than 120% of MFI). This adjustment is a key reason that comparing the income distribution results in a local HNA and the RHNA is not a direct, valid comparison because the underlying assumptions about household size are different between the two income distributions.

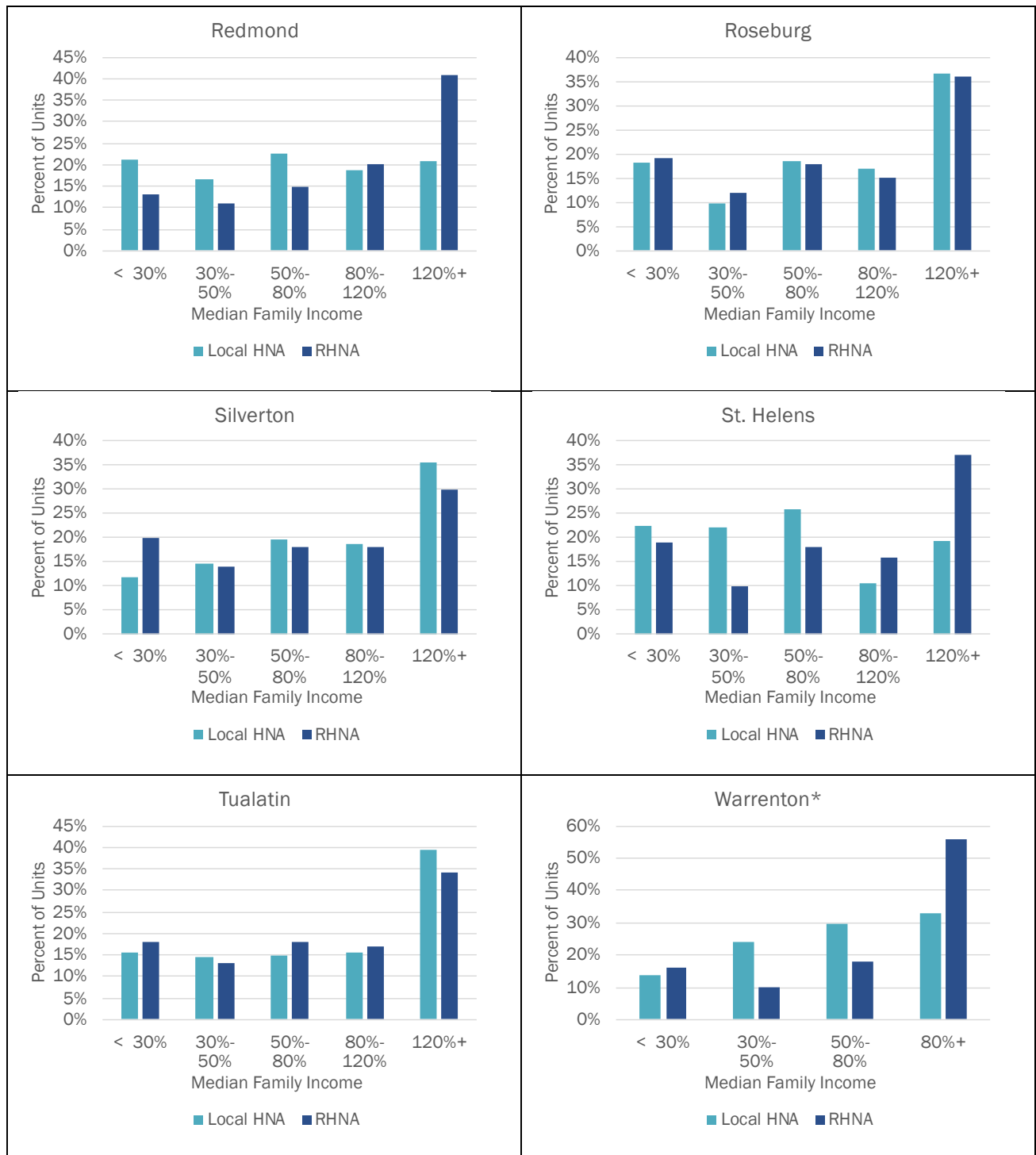
Exhibit 57 compares the income distribution used in the local HNAs with the income distribution from the RHNA.

## Exhibit 57. Comparison of New Units Forecast in Local HNAs and the RHNA

Source(s): ECONorthwest analysis; City of Dallas Housing Needs Analysis (FCS Group, June 2019); City of Klamath Falls Housing Needs Analysis (ECONorthwest, June 2019); Monmouth Housing and Residential Land Needs Assessment (APG and Johnson Economics, June 2019); Prineville Housing and Residential Land Needs Assessment (APG and Johnson Economics, June 2019); City of Redmond Housing Needs Analysis (ECONorthwest, June 2019); City of Roseburg Housing Needs Analysis (ECONorthwest, June 2019); City of Silverton Housing Needs Analysis (ECONorthwest, January 2020); City of St. Helens Housing Needs Analysis (FCS Group, May 2019); City of Tualatin Housing Needs Analysis (ECONorthwest, December 2019); and City of Warrenton Housing Needs Analysis (APG, June 2019).

\*Note: The local HNA for Monmouth, Prineville, and Warrenton only present future housing needs for the following income categories: < 30% of MFI, 30%-50%, and 50%-80%. In the charts below, 80% to 120% and 120%+ were combined together because the local HNA did not provide information about these income groups.





Appendix D presents detailed results of the RHNA for each of Oregon’s 241 cities. The following chapters present results for unmet housing needs across different demographic categories, as well as information about how the RHNA addresses the need for an equitable distribution of affordable housing.

## 5. Distribution of Unmet Housing Needs Across Demographic Categories

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Any attempt to move toward a more equitable geographic distribution of affordable housing must recognize that some populations experience housing instability at disproportionate rates. These populations include lower-income households, people of color, older Oregonians, and people with disabilities, among others. Solutions that focus exclusively on income and ignore persistent housing inequities based on patterns of racial and other forms of discrimination will fail to address housing equity. The methodology described in other parts of this report identifies housing need by income category. This chapter provides information about housing disparities by other demographic categories, to support the locally-driven and comprehensive approach to addressing housing inequity that is needed in Oregon and envisioned in HB 2003. More detailed results by region and other geography are included in Appendix F.

If the Regional Housing Needs Analysis (RHNA) is adopted as part of the state's comprehensive housing implementation framework, we recommend that an analysis similar to this (including the details in Appendix F and ideally with improved data, as described in Chapter 7 and elsewhere) be replicated statewide with each RHNA deployment to provide data and information to cities to address inequities in housing access through their land use plans and Housing Production Strategies. A planning focus on housing disparity by income only will fail to acknowledge systemic racism and other forms of discrimination that lead to the inequities in housing outcomes evidenced in this analysis.

### Key Methodological Issues

Measuring unmet housing need by demographic category is challenging, primarily because the datasets that are available statewide have well-documented shortcomings. This section describes some of those shortcomings and other methodological challenges, and, in that context, describes the methodology used in this chapter to provide information about housing inequities for cities.

#### Data quality and availability

Estimating a variable of interest from a small population or a small segment of a large population can result in large margins of error. The state-wide dataset on demographics and housing characteristics can be segmented by one of the demographic variables in this chapter without substantially increasing the margins of error, but segmenting by more than one demographic variable is likely to result in unreliable estimates. Some data, such as those related to race and ethnicity, cannot be disaggregated in many of the regions because there are too few observations of smaller racial and ethnic groups in Oregon. Thus, we provide estimates at the regional level only when we are reasonably confident that the data will not result in large

margins of error. The ability to provide data varies by geography as well as by demographic category.

Furthermore, inaccuracies in Census data are more prevalent among racial and ethnic minority groups for reasons beyond small sample size. Intentional and unintentional errors in survey data can be more prevalent among people who are harder to locate, contact, persuade, or interview. Moreover, aggregation of groups to larger racial categories overlooks large disparities that exist within the categories. The disparities contribute to larger margins of error and decrease the likelihood of statistical significance of the survey results. More deliberate methods of research are needed to overcome inaccuracies in the data related to people of color. A detailed discussion of known deficiencies in Census data is included in Appendix A.

Data quality and availability for understanding details of the housing market add further challenges. Outside of the Census, there is no comprehensive statewide dataset to understand housing stock (number, type, availability, and location of units), current rent, or sales prices. This analysis therefore uses Census data to understand the housing market. In addition to the fact that Census data lag the market substantially in time, it also includes self-reported information from survey respondents on these key pieces of information, which introduces the potential for inaccuracies. However, due to the lack of the availability of other data, Census data are frequently used for these kinds of analyses across the whole state and the country.

### Implications for local planning

Given the documented challenges with available data for understanding housing inequities by race and other demographic categories, and the need for accurate and geographically specific information to support local planning processes, the analysis of demographic and housing characteristics is not possible at all geographic levels. Census data for small cities is unlikely to be reliable for accurately understanding the relationship between demographic and housing characteristics.

The data used in this chapter to calculate housing disparities by demographic categories comes from the U.S. Census Bureau's Public Use Microdata Sample (PUMS), 2018. Compared to other Census derivative data sets, PUMS data is relatively reliable for regional analysis because it is available in geographies with more than 100,000 residents. Its limitation is that it cannot be used for places with less than 100,000 residents. However, even this dataset cannot produce reliable estimates for very small segments of the population. **In general, when using PUMS data, estimating housing characteristics for a demographic group with 5,000 or fewer people should be avoided.**

For places with fewer than 100,000 residents, the American Community Survey (ACS) standard tables can be a resource for some estimates, but there are few customized tables that cross-tabulate demographic and housing characteristics discussed in this chapter. Comprehensive Housing Affordability Strategy (CHAS) data can also be a resource for smaller cities because it provides additional crosstabs, such as estimates of rent by unit affordability, household income,



and bedroom count. However, the estimates provided in ACS standard tables and CHAS data must be evaluated with the large margins of error they come with. In many cases, the estimates may be too close to zero to be reliable. Appendix A discusses in detail the reliability of each data source.

While places with more than 100,000 residents can reliably use PUMS data to understand housing inequities, places with fewer than 100,000 residents have limited options using standard big datasets. At a minimum, places with a small population can infer housing characteristics across demographic groups by looking at data available at a larger geographic level, such as the regions used in this report. Some places could use 5-year estimates from ACS to increase the sample size and reduce the margin of error. This report uses 1-year estimates to understand housing needs at a particular point in time, rather than a range of time, so that the needs can be compared across years. Since we know that data sources such as the ACS undercount communities of color, it is important that the state, regions, and cities, in partnership with communities of color, develop alternative ways of understanding the specific needs of these populations. This can be done by investing in participatory action research through the local HNA and other local planning projects.

### Methodology for demographic disparities

Household-level data of PUMS provides information such as tenure, household income, and gross rent as a percent of household income. Person-level data provides information such as race, age, and disability status. The data are analyzed at the person-level, and individuals living in the same household share the same household-level data. Similar to the approach used for calculating the RHNA estimates, we filtered out group quarters and vacant units from the data and aggregated the data from Public Use Microdata Areas (PUMAs) to 7 regions defined in the Recommended RHNA.

The median family income (MFI) data from U.S. Department of Housing and Urban Development (HUD) is available at the county-level. This data was also aggregated to the 7 regions to calculate weighted regional MFI. The relative weights of each county were determined by the relative size of population in 2020 according to Portland State University's Population Research Center population forecasts. We placed every household into one of five income groups based on their incomes and the regional MFI. In order to more accurately describe affordability by household size, the applicable MFI for each household was adjusted by the number of persons in the household. A more detailed description and the implications of this adjustment are explained in Step 4, Approach B in Appendix B.

When determining the disparate housing needs among people of color, the data was disaggregated into non-Hispanic White, Asian, and all other races and ethnicities. The third group includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and Hispanic populations. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations

are, on average, similar to those among non-Hispanic White population. That said, there are wide disparities in housing stability among subgroups of Asian populations; those variations are also explored in this chapter.

The race categories used by the U.S. Census are unrelated to ethnicity. Thus, when we present housing needs by race in the Population by Race section, the White category includes both Hispanic and non-Hispanic White populations. However, when the White category is compared to the non-Asian people of color category in the rest of the chapter, only the non-Hispanic White population is included in the White category. Also, the data for people of two or more races are grouped with the data for other races.

Although we recognize that households are made up of members with various levels of English proficiency, the available data are in a binary form. The U.S. Census identifies households as either having at least one person in the household aged 14 and over who speaks English only or speaks English very well or having no one in the household aged 14 and over who speaks English only or speaks English very well. We assigned the English Speaker in Household attribute to individuals living in a household where at least one person in the household aged 14 and over speaks English only or speaks English very well. Similarly, we assigned the Limited English Proficiency attribute to individuals living in a household where no one in the household aged 14 and over speaks English only or speaks English very well.

Disabilities can include hearing difficulty, vision disabilities, self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), or cognitive difficulty (having difficulty remembering, concentrating, or making decisions). For the purpose of analysis in this chapter, disabilities are segmented to those related to hearing or vision difficulties and other difficulties.

Age is segmented to individuals 65 years or older and younger than 65 years. Family size of an individual is defined by the number of people living in the same household as the individual. Household type is segmented by those living in a household where the householder is a married couple, those living in a household where the householder is living with at least one other relative but without a spouse, and those living in a household where the householder is living alone or sharing the unit exclusively with people to whom they are not related to.

The housing types used in this chapter are: (1) Single-family and missing middle housing type, which includes detached single-family units, attached single-family units such as townhomes, duplexes, triplexes, quadplexes, cottage clusters with four or fewer units, mobile homes, trailers, boats, RVs, and vans and (2) Multifamily 5+, which includes all other types of multifamily with five or more units in the structure.

Households are considered rent burdened when they spend more than 30% of the household income on rent and utilities. In the analysis in this chapter, households that spend 30% to 50% of the household income on rent and utilities are labeled rent burdened and households that

spend more than 50% of the household income on rent and utilities are labeled severely rent burdened.

## Summary of Key Findings in Oregon

The findings that follow provide evidence of systemic racism and other forms of discrimination in the housing market. Across nearly every category (non-Asian people of color, people with limited English proficiency, people with disabilities, and seniors), rent burden and other markers of housing instability were higher than for white households with comparable incomes. More specifically:

- Across the state and among the demographic groups explored in this research, people with limited English proficiency experience the greatest housing needs. They are more likely to be renters, be rent burdened or severely rent burdened, and live in multifamily units than people in any other demographic group. Most (88%) of people with limited English proficiency earn less than the Median Family Income.
- Non-Asian people of color and people with disabilities also experience high rates of rent burden or severe rent burden, have relatively lower household incomes, and are more likely to live in multifamily and rental units than people in almost any other demographic group.
- Compared to other racial groups, Black or African Americans tend to experience the highest rate of rent burden or severe rent burden, are likely to be renters, and have the lowest household income, on average. American Indians or Alaska Natives also experience relatively high rates of rent burden or severe rent burden, and 41% are renters, compared to 34% among residents in Oregon. Although Native Hawaiians and Other Pacific Islanders are the least likely to experience rent burden or severe rent burden, they are most likely to be renters and live in multifamily units.
- Among the demographic groups explored in this research, people 65 years and older are the most likely to be homeowners and live in single-family or missing middle housing, but 60% of those who live in rental units are rent burdened.
- On average, Asian and non-Hispanic White populations experience relatively low rates of rent burden, have higher household incomes, and are more likely to be homeowners, though the Asian population is more likely to live in multifamily units (17% of Asian vs. 11% of non-Hispanic White populations).
- However, there are severe disparities among subgroups of the Asian population. Over 70% of Vietnamese renters are rent burdened or severely rent burdened. The shares of renters range from 21% among Chinese and 22% among Vietnamese to 39% among Koreans and 41% among Filipinos. In comparison, 34% of residents in Oregon are renters. Although Chinese and Vietnamese are less likely to be renters, they tend to have lower incomes than Koreans and Filipinos.

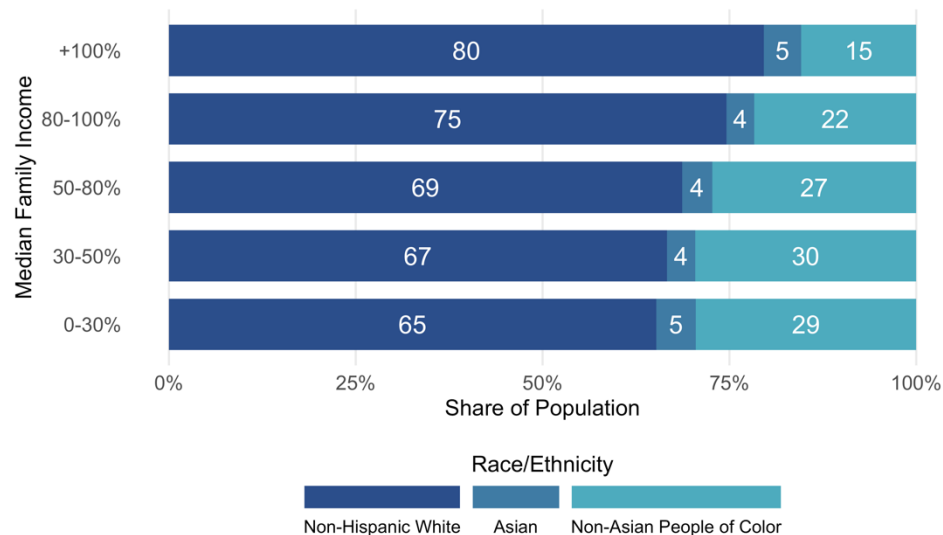
- Among various family sizes, people living in single-person households are the most likely to be renters, be rent burdened or severely rent burdened, and live in multifamily units. Most (69%) earn below the adjusted Median Family Income, which is 70% of the Median Family Income for single-person households. Larger households tend to have higher incomes and live in single-family or missing middle housing. However, rent burden also increases with family size for households with two or more people.
- Among various household types, people living in married couple households are the least likely to be renters, be rent burdened or severely rent burdened, and live in a multifamily unit. Most (70%) earn above the Median Family Income.

## Summary of Unmet Housing Needs: Oregon

People of color disproportionately experience cost burdening in part because they are disproportionately represented in lower-income categories. Non-Asian people of color comprise nearly 30% of the population with incomes at or below 80% of the state's MFI, and are just 20% of the overall population.

**Exhibit 58. Distribution of Race/Ethnicity by Income Level**

Source: U.S. Census 2018 ACS 1-year PUMS estimates

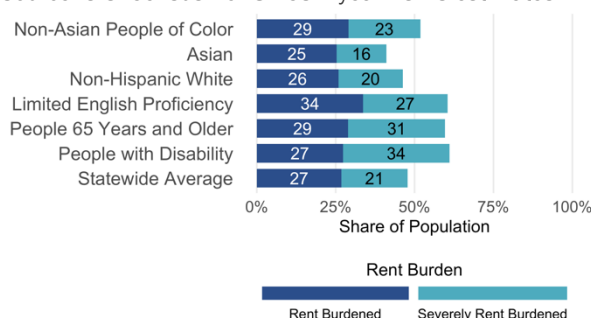


Below is a summary of unmet housing needs and characteristics for non-Asian people of color,<sup>22</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, and people with a disability, compared to the statewide averages of the total population.

Throughout Oregon, there are 824,000 non-Asian persons of color, accounting for 20% of the state's population, 190,000 or 5% Asian people, 125,000 or 3% with limited English proficiency, 722,000 or 18% aged 65 years or older, and 570,000 or 14% with a disability.

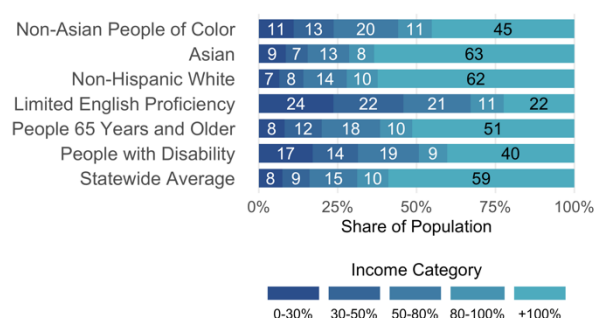
**Exhibit 59. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



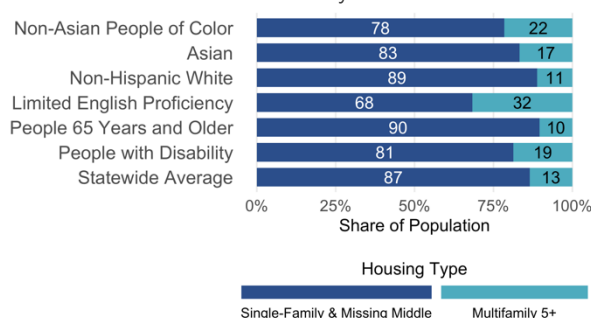
**Exhibit 60. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



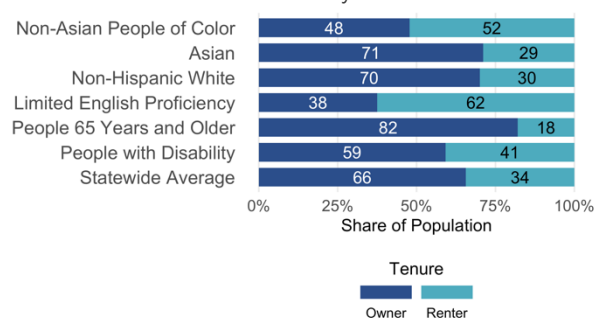
**Exhibit 61. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 62. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



<sup>22</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and Hispanic population. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

## People of Color: Oregon

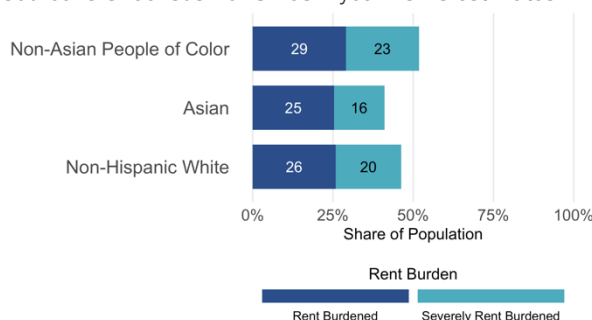
Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population.<sup>23</sup> These charts compare information about the Asian population and people of color with the White population.

Oregon has 824,000 non-Asian persons of color, accounting for 20% of the state's population. In addition, Oregon has 190,000 Asian people and 3,088,000 White people, accounting for 5% and 75% of the state's population, respectively.

Oregon has 14,000 people experiencing homelessness, of whom 29% are non-Asian people of color, compared with 1% of Asian people and 71% of White people.

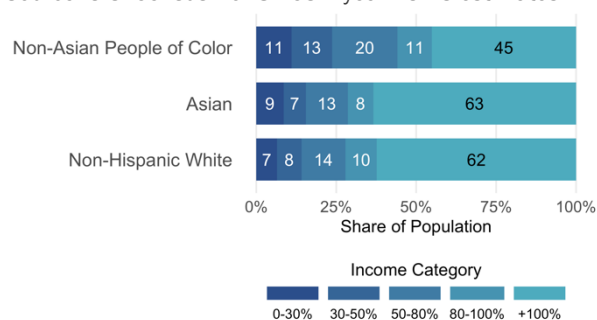
**Exhibit 63. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



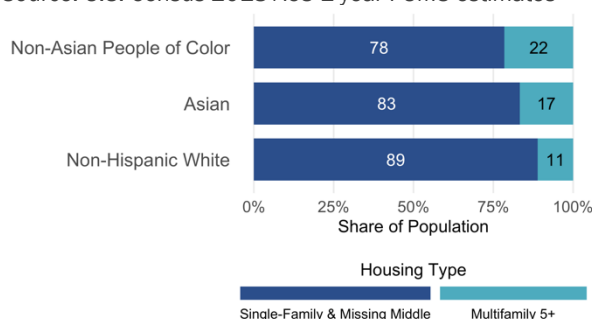
**Exhibit 64. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



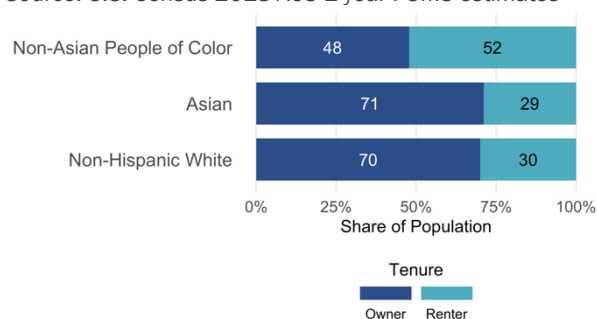
**Exhibit 65. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 66. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



<sup>23</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available. The people of color do not include Asian people because, as a whole, Asian populations experience cost burden at a lower rate than other people of color. A subsequent section of this chapter describes cost burden among Asian subpopulations.

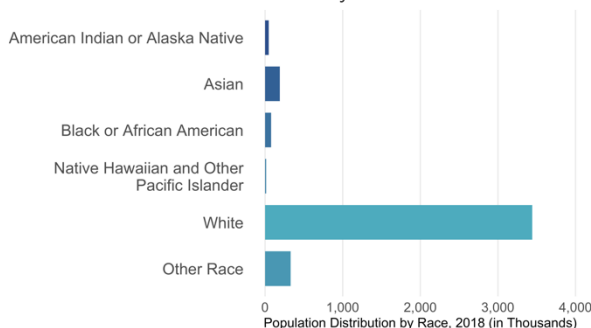


## Population by Race: Oregon

Below is information about housing affordability and characteristics for the following races: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Pacific Islander, White, and Other Races. These charts compare information with the state average.

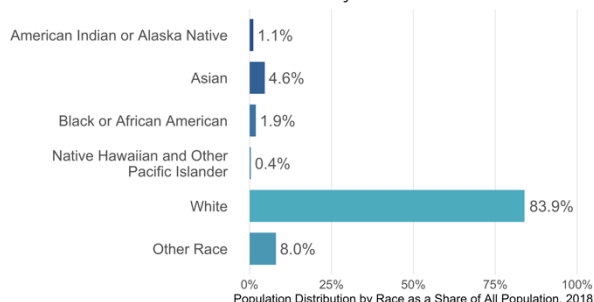
**Exhibit 67. Population Distribution by Race, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



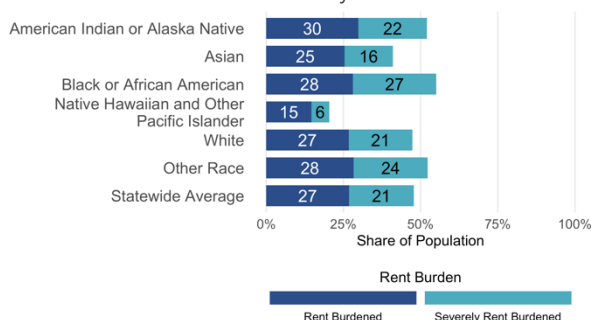
**Exhibit 68. Population Distribution by Race of Total Population, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



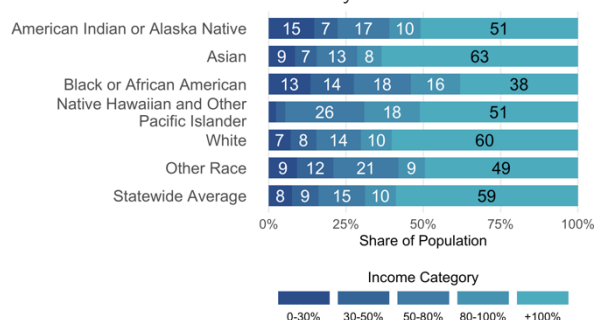
**Exhibit 69. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



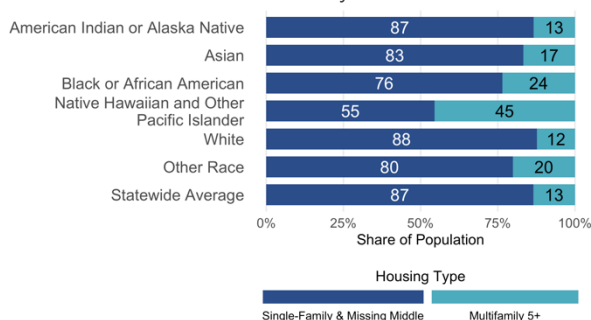
**Exhibit 70. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



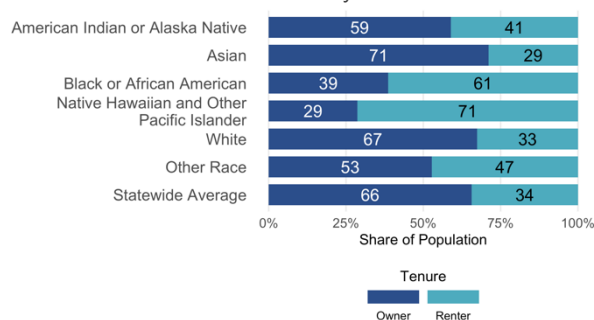
**Exhibit 71. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



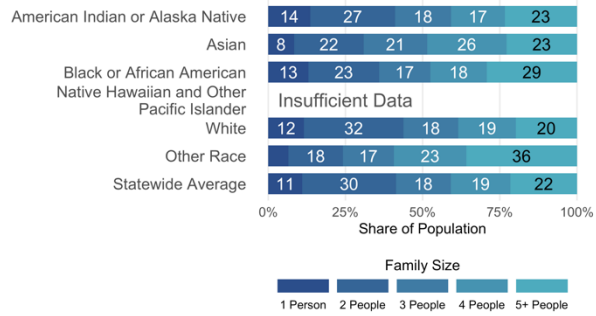
**Exhibit 72. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



## Exhibit 73. Family Size, 2018

Source: U.S. Census 2018 ACS 1-year PUMS estimates

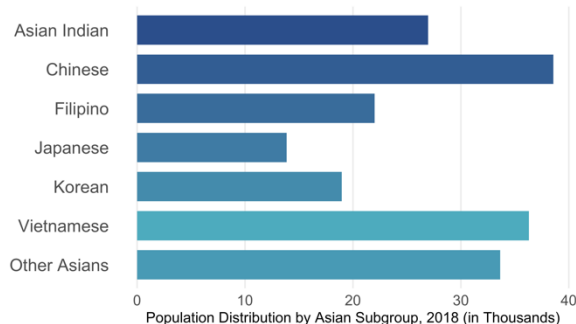


## Asian Population by Subgroups: Oregon

Below is information about housing affordability and characteristics for subgroups of the Asian population including: Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese and other Asians. These charts compare information about subgroups of Asian populations and the State of Oregon average.

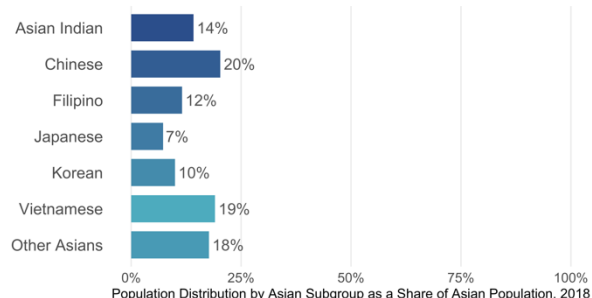
**Exhibit 74. Population Distribution by Asian Subgroup, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



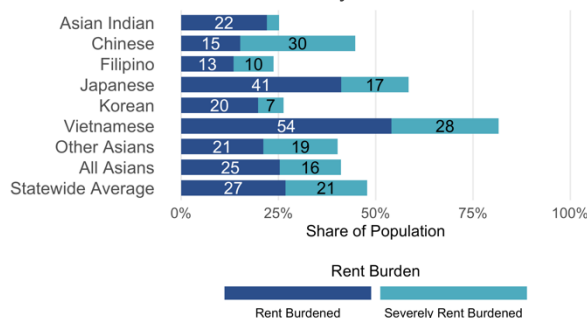
**Exhibit 75. Population Distribution by Asian Subgroup of Total Asian Population, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



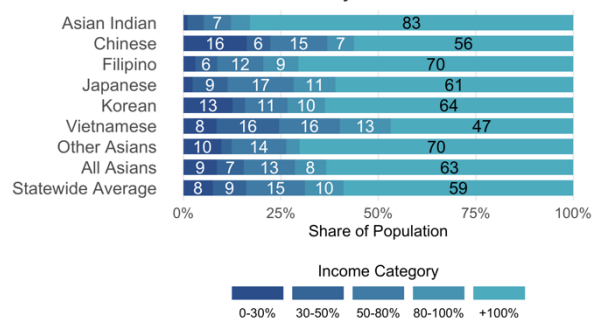
**Exhibit 76. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



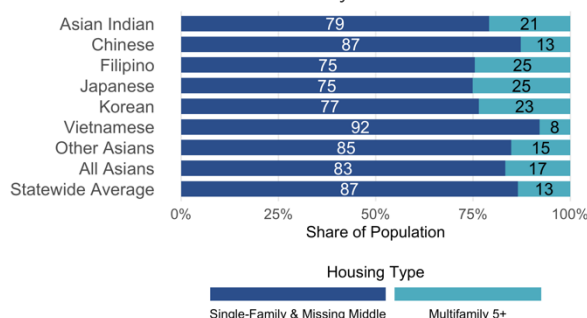
**Exhibit 77. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



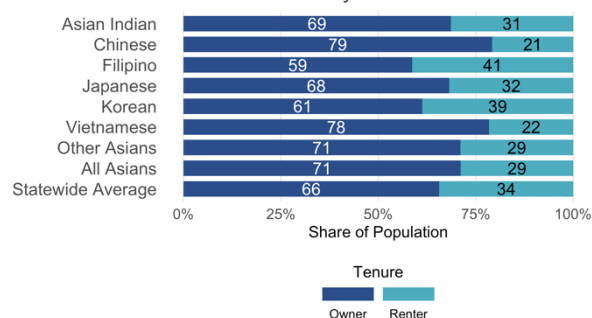
**Exhibit 78. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 79. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



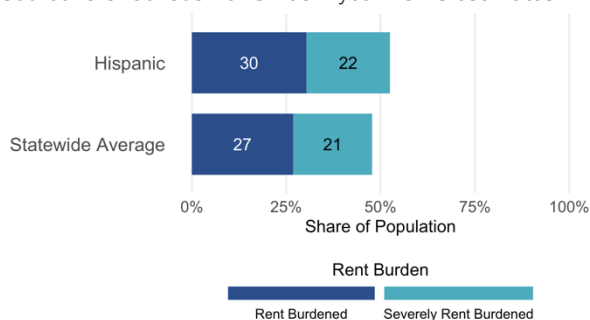
## Hispanic: Oregon

Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the State of Oregon average.

Oregon has 544,000 Hispanic persons, accounting for 13% of the state's population. Oregon has 14,000 people experiencing homelessness, of whom 11% are Hispanic, compared with 1% of Asian people, 71% of White people, and 18% of people of color.<sup>24</sup>

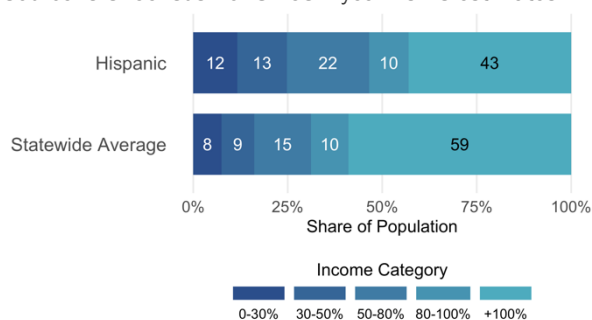
**Exhibit 80. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



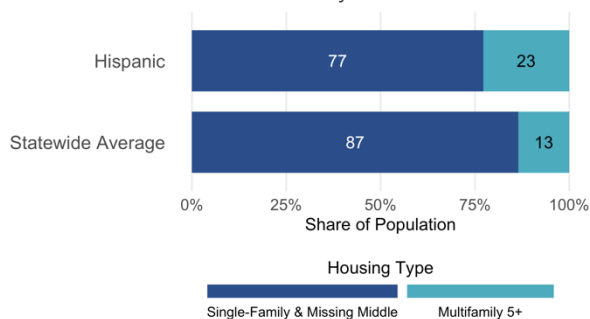
**Exhibit 81. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



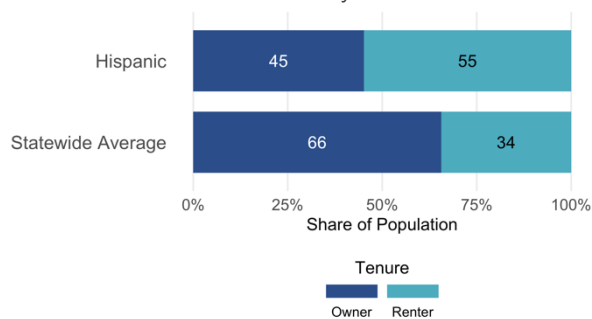
**Exhibit 82. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 83. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



<sup>24</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

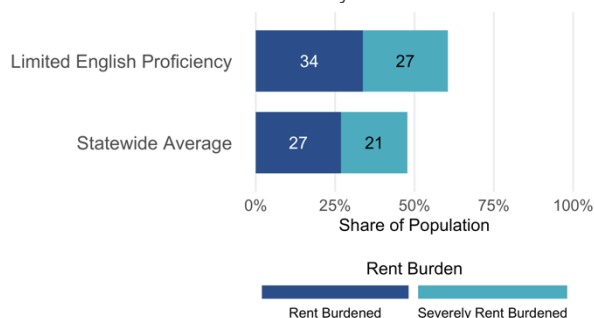
## Limited English Proficiency: Oregon

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the statewide average.

Oregon has 125,000 persons with limited English proficiency, accounting for 3% of the state's population.

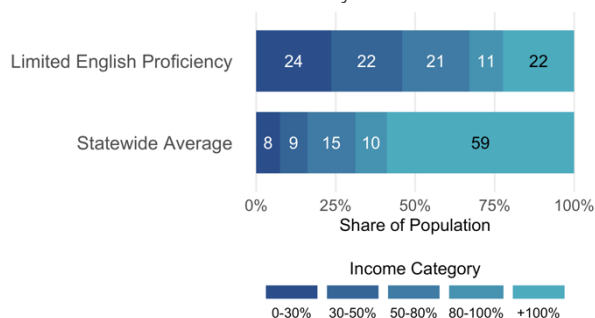
**Exhibit 84. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



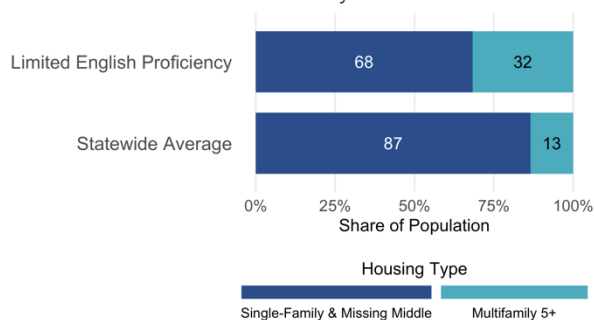
**Exhibit 85. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



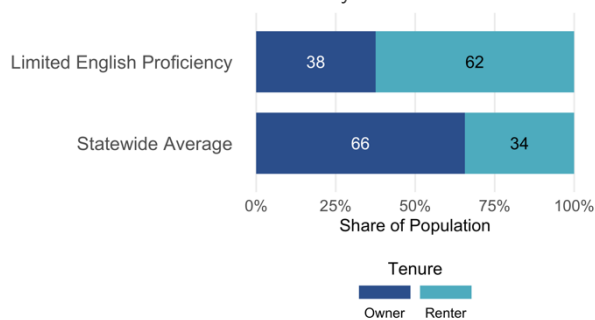
**Exhibit 86. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 87. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



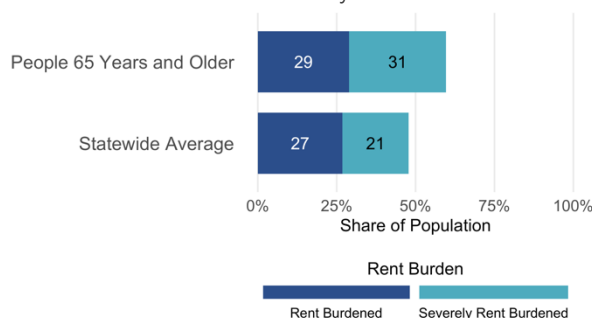
## Seniors 65 Years and Older: Oregon

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the statewide average.

Oregon has 722,000 persons 65 years and older, accounting for 18% of the state's population.

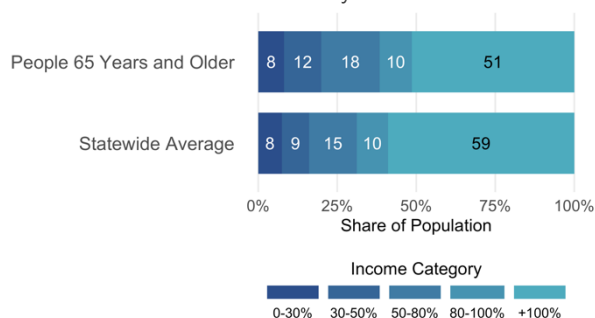
**Exhibit 88. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



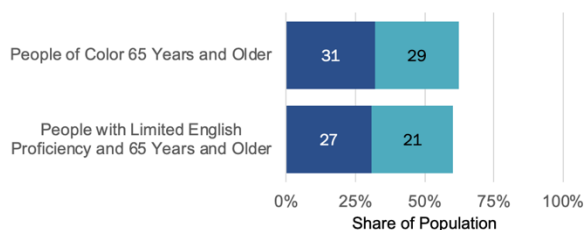
**Exhibit 89. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



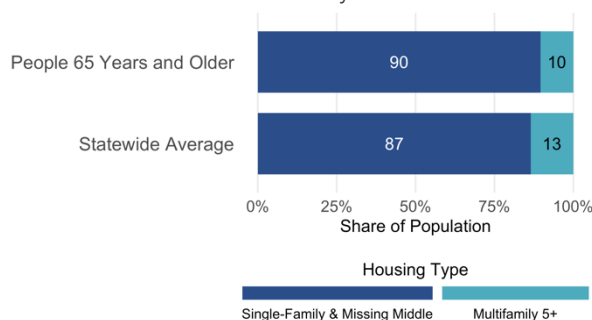
**Exhibit 90. Rent Burdened and Severely Rent Burdened, Selected Demographic Characteristics, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



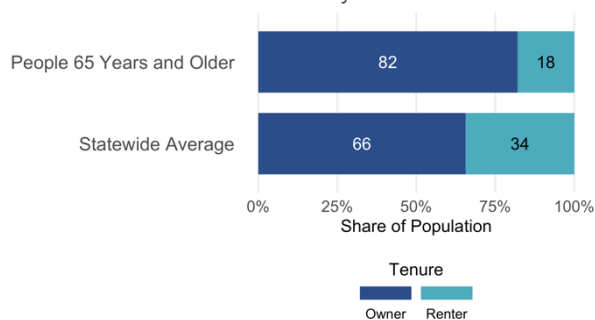
**Exhibit 91. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 92. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



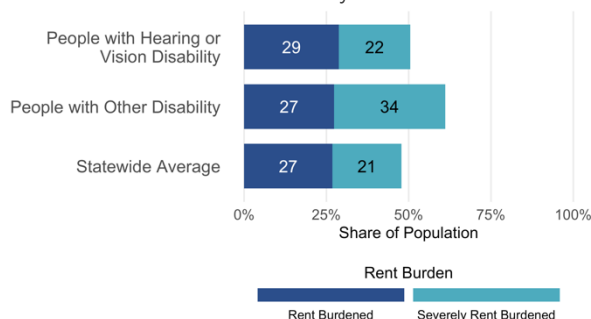
## People with Disabilities: Oregon

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>25</sup> and the statewide average.

Oregon has 570,000 persons with disabilities, accounting for 14% of the state's population. Of these individuals, 138,000 (24%) have a hearing or vision disability and 432,000 (76%) have some other type of disability, accounting for 3% and 11% of the state's total population, respectively.

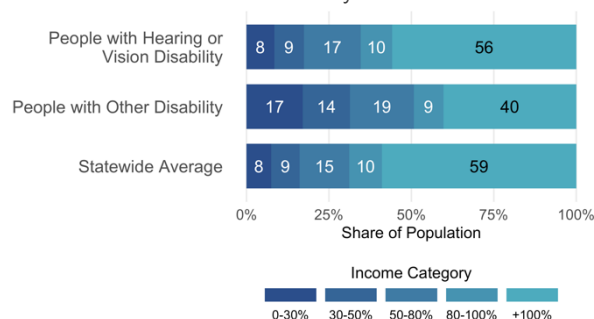
**Exhibit 93. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



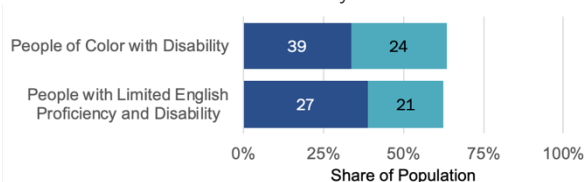
**Exhibit 94. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



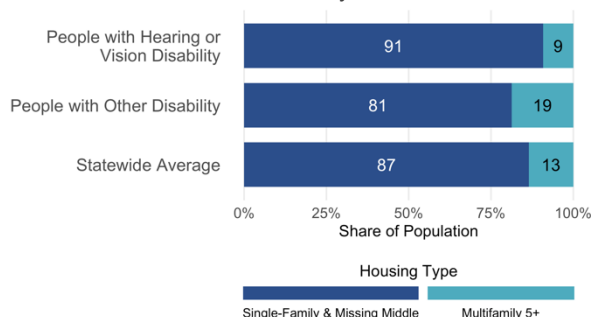
**Exhibit 95. Rent Burdened and Severely Rent Burdened, Selected Demographic Characteristics, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



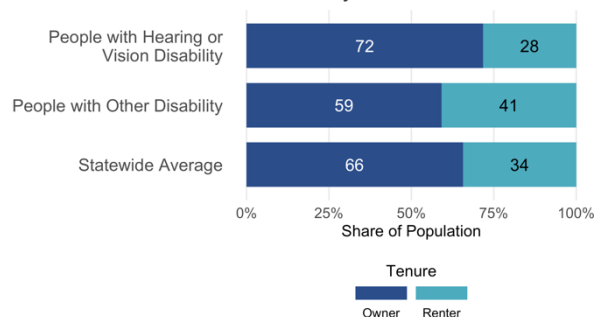
**Exhibit 96. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 97. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



<sup>25</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

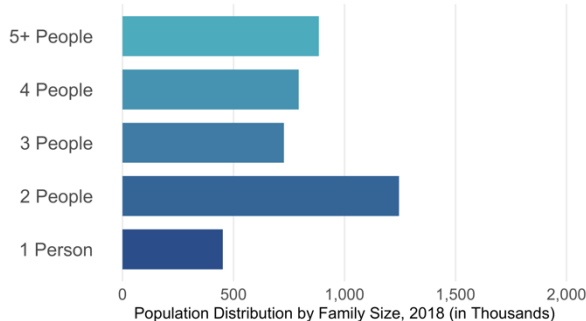


## Family Size: Oregon

Below is a summary of family size characteristics in Oregon and the statewide averages of the total population. These charts compare information about family size<sup>26</sup> and the statewide average.

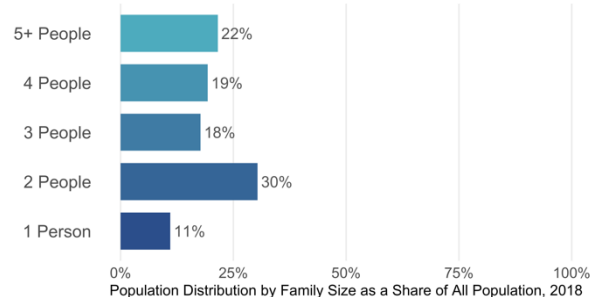
**Exhibit 98. Population Distribution by Family Size, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



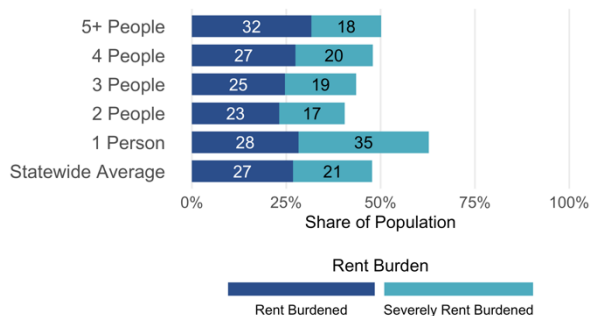
**Exhibit 99. Population Distribution by Family Size of Total Population, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



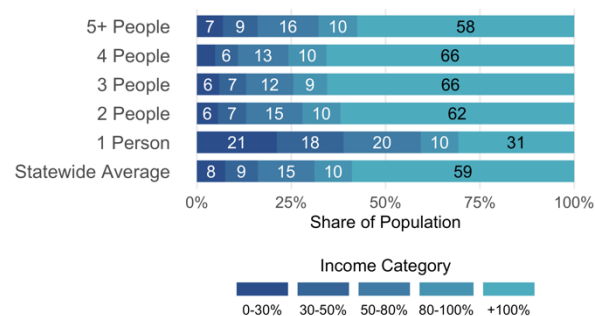
**Exhibit 100. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



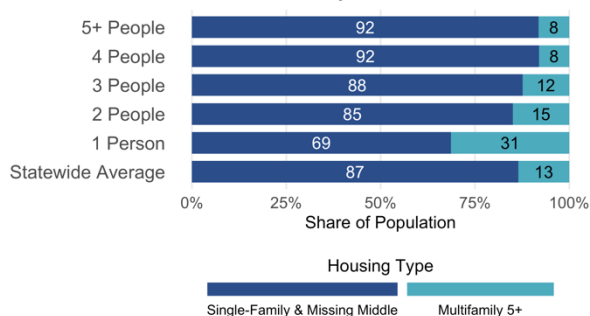
**Exhibit 101. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



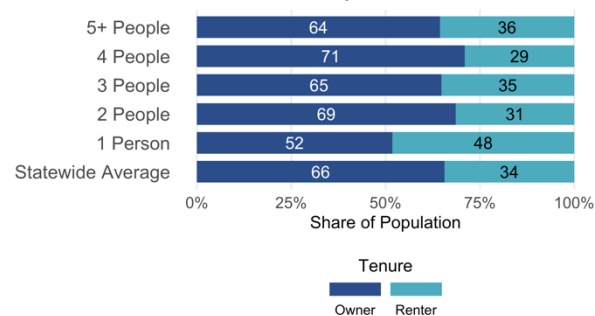
**Exhibit 102. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 103. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



<sup>26</sup> For the purposes of this chapter, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

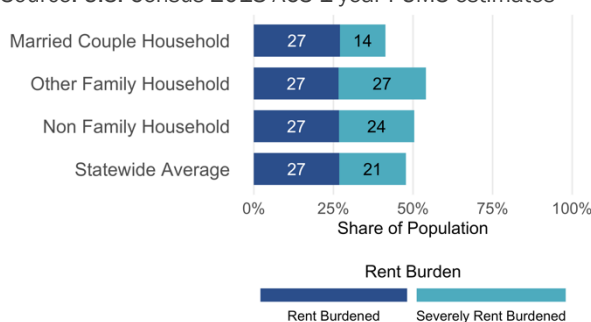
## Household Type: Oregon

Below is a summary of characteristics of household types in Oregon and the statewide averages of the total population. These charts compare information about married couple households, other family households,<sup>27</sup> non-family households,<sup>28</sup> and the state average.

The state has 2,500,000 persons in married households, accounting for 61% of the state's total population. In addition, the Oregon region has 764,000 persons in other family households and 834,000 persons in non-family households, accounting for 19% and 20% of the state's population, respectively.

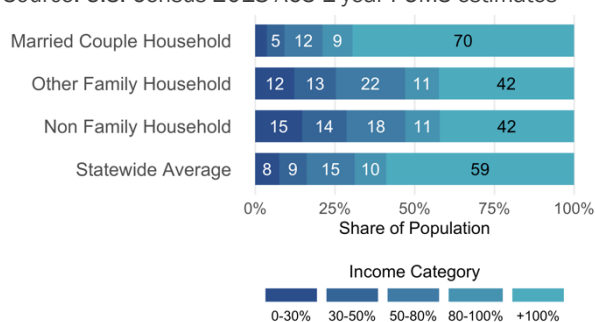
**Exhibit 104. Rent Burdened and Severely Rent Burdened, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



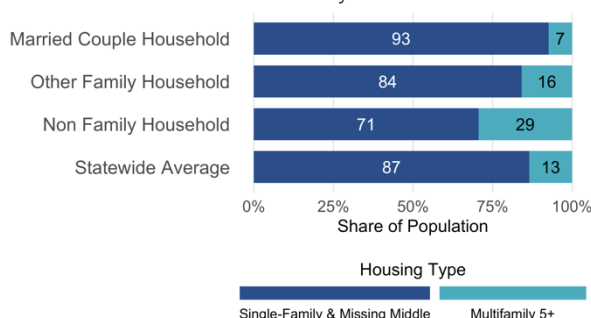
**Exhibit 105. Household Income Distribution, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



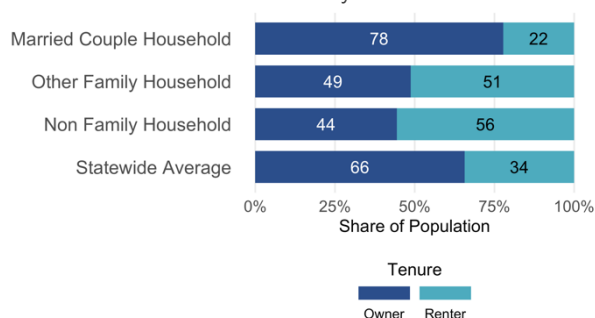
**Exhibit 106. Housing Type, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



**Exhibit 107. Tenure, 2018**

Source: U.S. Census 2018 ACS 1-year PUMS estimates



<sup>27</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>28</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

## 6. Additional Considerations

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House Bill 2003 required that the RHNA identify the number of housing units needed to accommodate anticipated populations in a region over the next 20 year based on:

- Trends in density and in the average mix of housing types of urban residential development;
- Demographic and population trends;
- Economic trends and cycles; and
- Equitable distribution of publicly-supported housing within a region.

This chapter describes how we have considered each of these items in the analysis.

### Trends in Density and Average Mix

Information about housing mix is available for all cities in Oregon from the American Community Survey (ACS), which reports the number of units by structure type in each city. Structure types are limited to: single-family detached, single-family attached, duplex, triplex or quadplex, and multifamily structures with at least five units. Housing types such as cottage housing, tiny housing, permanently supportive housing, and other types of housing are not reported by the ACS.

For areas like the Portland Metro region or urban areas within the Metropolitan Planning Organizations (MPOs) in Jackson and Josephine Counties, additional information is available about housing stock and types of housing in those areas. That information was developed locally, by Metro or by RVCOG.

The ACS does not report information about housing density. In the context of Goal 10, in Oregon we focus on the number of dwelling units per acre as the measure of density. Aside from analysis of housing densities conducted as part of a local housing needs analysis, little information is available about changes in housing densities in Oregon cities.<sup>29</sup> Conducting analysis of housing densities is complex and requires detailed information about recent housing development, tax lot information, and details about development, sometimes on a case-by-case basis (especially for multifamily housing).

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<sup>29</sup> In 2015, the Community Service Center at the University of Oregon produced the report “Analysis of Land Use Efficiency in Oregon Cities: A Report to the HB 22254 Rules Advisory Committee.” The report presents trends in housing densities for some cities in Oregon from 1993 to 2012. Overall the analysis showed that densities of all housing increased from 5.2 dwelling units per acre in 1993-1997 to 6.38 dwelling units per acre in 2008-2012, an increase of 22%. We were not able to use this information in this report, as it was not available for all Oregon cities and the information is considerably older than other information included in the report.

Given the absence of available data about housing density, we used information about changes in mix of housing as an indirect indicator of changes in housing density. Development of more multifamily housing (as a percent of all housing built) results in an overall increase in density of housing development. However, additional changes in density that result from development of taller or denser buildings, such as increases in multifamily development densities, are not captured in this measure of change in density.

Generally speaking, in urban regions (such as the Portland Metro region or the Willamette Valley region), the mix of housing developed has shifted to include more multifamily housing (including missing middle housing types) and less single-family housing. This is illustrated in Appendix B in Exhibit 133.

We incorporated considerations of housing mix (and thus housing density) into the analysis through assumptions about future housing mix. As described in Appendix B, we assumed that the needed mix of housing for accommodating the forecast of population growth would be based on development in a region that occurred since 2010, rather than the overall stock of housing in a region. In more urban regions (such as the Portland Metro region or the Willamette Valley region), more multifamily housing was developed since 2010 as a percent of all housing development.

In addition, we based the mix of new housing to accommodate population growth on the regional mix of housing, rather than the local mix of housing. In many cities, the regional mix of housing includes more multifamily housing than the local mix of housing.

The only way to more fully take into consideration trends in density and mix would be to create new data about housing in Oregon. Metro has two databases that provide information such as housing mix and density, in the Regional Land Information System (RLIS) database and the Multifamily Housing Inventory database. The Rogue Valley Council of Governments (RVCOG) has created databases that provide this type of information in the Metropolitan Planning Organizations (MPOs) for Grants Pass and Medford.

Some of the information needed for this analysis exists (or nearly exists) on a statewide basis. All counties have an assessor's database and a tax lot database. But these databases are not standardized and vary across the state. There is a statewide zoning database, which is updated periodically (but may not be updated frequently enough). The Oregon Geospatial Enterprise Office is developing an address database for the entire state, which could be helpful in this analysis. What is missing is information about the type of housing and number of units on each tax lot. Generally speaking, information about single-family detached housing is more readily available and information about multifamily housing (such as type and number of units) is less readily available, especially for smaller jurisdictions. Information about housing tenure is also unavailable.

## Demographic and Population Trends

The analysis incorporates substantial information about demographic and population trends from the American Community Survey, in the form of Public Use Microdata Sample (PUMS) data, and the Portland State University's Oregon Population Forecast program, which forecasts population growth for the State of Oregon. These data include information about total population, incomes, housing tenure, household size, cost burdening, and projected population growth.

Chapter 5 presented additional information about housing issues (especially cost burden) for key demographic groups, including by race, by ethnicity, and for seniors. As discussed in Chapter 5 (and Appendix A) there is limited information available about people of color and other demographic groups. And the available data, especially in less urban areas, is of poor quality.

There are a number of groups that the project team and stakeholders identified as needing more information, beyond what was available for this analysis. For example:

- This analysis does not directly forecast housing need by race or ethnic group. Chapter 5 does document the differences in cost burden by race and ethnicity, where information is available. Some reasons for this omission include the limitations of existing data and the fact that the Oregon Population Forecast program does not include a forecast by race or ethnicity. In addition, it may be appropriate that the RHNA focus on providing the information available, while policy issues related to segregation or concentrations of poverty be addressed in local policy or in the Housing Production Strategy.
- This analysis does not address housing needs for Oregon's federally recognized tribes and does not allocate housing to Tribal lands. Some reasons for this omission include limitations of existing data because only two of Oregon's nine federally recognized Tribes have sufficient information available from key Census data sources and the fact that the Oregon Population Forecast program does not include a forecast specific to Tribal growth.

These issues could be addressed through inclusion of racial, ethnic, and other demographic characteristics in the Oregon Population Forecast program. It may be that making such as forecast would require additional data collection about people of color and other demographic groups across the State, beyond what is provided by the American Community Survey.

## Economic Trends and Cycles

The analysis takes into consideration economic trends and cycles through information from the American Community Survey (through PUMS data) about household income, as well as information about housing cost and affordability (such as cost burden). In addition, the population forecasts from the Oregon Population Forecast program account for economic trends through assumptions about in-migration, which is affected by economic trends. We have also accounted for the location of jobs and industry in the approach to allocating regional housing need to cities, and commuting patterns in the development of regions.

Of these, the most significant economic indicator of housing need is income, which is a key economic indicator that is closely tied to housing choice. In general, as households age, their income increases and peaks at retirement age. As described in Chapter 3 and Appendix B, income is a central consideration in this analysis.

The analysis also considers information about the location of employment from the Census' Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics. It uses current jobs as an indicator of location of future housing needs. Ideally, we would have used a forecast of future employment growth by city. The best available forecast for employment growth is the Oregon Employment Department's forecast of job growth. That forecast is for a 10-year period (currently the 2017-2027 forecasts are the most recently available forecasts). The regions used by the Employment Department for their forecasts are different than those used in this analysis.

## Equitable Distribution of Publicly-Supported Housing

The policy intent of HB 2003 is clear: the combination of the RHNA, the Housing Production Strategy (HPS), and land use plans should lead toward an equitable distribution of affordable and publicly-supported housing, so that everyone who needs access to affordable housing can have it *in every community in the State*. Decisions to address this aspect of the bill were integrated throughout the methodology. Chapter 4 (Results) provides some findings that show how implementation of the RHNA could improve the distribution of publicly-supported housing.

### Definitions

HB 2003 provides no explicit definition of or metric for "equitable distribution" nor "publicly-supported housing". The Recommended methodology and accompanying analysis operationalizes these terms in relationship to the RHNA methodology as follows:

- **Equitable distribution.** The policy intent behind HB 2003 (and especially this aspect of HB 2003) is to ensure that all local governments enable the development their "fair share" of housing that is income-restricted and available to house those at the lowest end of the income spectrum. The RHNA methodology quantifies need across the income spectrum, and identifies the number of lower-income households that, over 20 years,

will need access to affordable units. We have operationalized the concept of ‘equitable distribution’ to mean that *each city in the State should plan to meet the housing needs of all households at the lowest end of the income spectrum*. In other words, the distribution will be “equitable” when all households that the RHNA identifies as needing affordable units can find them.

- **Publicly-supported housing.** In this report, this term refers to units that are funded with public money and are income-restricted to meet affordable housing needs, including housing that has public funding from a wide range of local, state, or federal programs. There are many ways that local, state, and federal governments can fund affordable housing: tax credits and exemptions, direct cash investments, land donations, inclusionary zoning policies (accompanied by incentives), and project-based housing vouchers are among them. We assume that local governments will seek to accommodate housing need through partnerships to optimize and coordinate access to the full suite of funding tools and incentives that are available to them. This would include connecting residents and developers to state and federal resources and creating new local tools and resources, so that they can work toward the RHNA goals and targets for an equitable distribution of publicly-supported housing over the 20-year implementation period.

This definition is considerably broader than the definition of “publicly-supported housing” in ORS 456.250, which defines publicly-supported housing as housing that is multifamily rental housing with five or more units with an affordability restriction that receives government assistance from OHCS, the U.S. Department of Housing and Urban Development (HUD), or the Department of Agriculture.<sup>30</sup> We use a broader definition of publicly-supported housing to include the tools available to local governments (e.g., tax exemptions, land donations, local government general fund, etc.), some of which will almost certainly be used by local governments in their Housing Production Strategy.

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<sup>30</sup> ORS 456.250 (6) defines “publicly-supported housing” in a narrower and more specific way:

- (a) “Publicly-supported housing” means a multifamily rental housing development of five or more units that receives or benefits from government assistance under:
  - (A) A contract for rent assistance from the United States Department of Housing and Urban Development, the United States Department of Agriculture or the Housing and Community Services Department that contains an affordability restriction; or
  - (B) A contract that is for any other type of government assistance or subsidy that includes an affordability restriction and that is identified in rules adopted by the Housing and Community Services Department.
- (b) “Publicly-supported housing” does not include a multifamily rental housing development:
  - (A) For which the development or developer receives only a construction excise tax waiver, a system development charge waiver, a fee waiver or a property tax abatement;
  - (B) That is part of an inclusionary housing program as defined by local government and authorized under ORS 197.309;
  - (C) That receives tenant-based federal rent subsidy payments under the Housing Choice Voucher Program authorized by 42 U.S.C. 1437f;
  - (D) That receives project-based rental assistance vouchers administered by a housing authority under section 8 of the United States Housing Act of 1937 (42 U.S.C. 1437f (o)(13)); or
  - (E) That receives tenant vouchers from the United States Department of Agriculture under section 542 of the Housing Act of 1949 (42 U.S.C. 1471).



Given these definitional starting places, the key questions for the RHNA methodology are: (1) How does the RHNA methodology ensure an accurate reflection of need at the lowest end of the income spectrum? (2) How would local governments translate the RHNA need into an estimate of the number of needed publicly-supported units so that their HPS, land use plans, and other policies can be organized to achieve those targets?

### How the RHNA measures need

The RHNA measures need based on median family income (MFI), which is different for each region. For example, the average MFI in the Willamette Valley is \$68,190. Households with income of 80% or less of MFI (\$54,540 or less in the Willamette Valley) are more likely to need publicly-supported housing because their incomes are not high enough to afford the cost of newly built rental (or ownership) housing or a portion of the market rate stock without being cost burdened.

The RHNA produces an estimate of need for housing affordable to households at or below 80% of MFI using one of the following methodological approaches, described in detail in other parts of the report and summarized here:

- Accounting for historical underproduction of housing and need for housing for people currently experiencing homelessness.
- Allocating housing to income categories based on the regional income distribution from households with income below 30% MFI to households with income above 120% of MFI, rather than perpetuating the local income distribution in each city.
- Allocating underproduction to income categories proportionate to regional rates of cost-burdening within each income category, which recognizes the need for production that meets the needs of the lower-income households that are more likely to experience cost-burdening.

### Translating RHNA need to need for publicly-supported housing

The largest share of unit production that occurs in any community requires limited public investment. The market system is built on an expectation that rents or sales prices are high enough to cover the costs of development, repayment of construction and / or operating loans, and return expectations for developers and other investors. Newer market-rate housing units are therefore generally more expensive, and generally sell or rent to people at the middle or upper end of the income spectrum. Over time and in most market circumstances, if sufficient new units are produced to meet demand in a market, older units become available and more affordable to households at the middle or lower end of the income spectrum. In this way, in most communities, the housing market provides much of the community's housing needs without direct public support. For this reason, HB 2003 recognizes that unit production across the entire income spectrum (including at the upper end) is critical to meeting the needs of all households in a community.

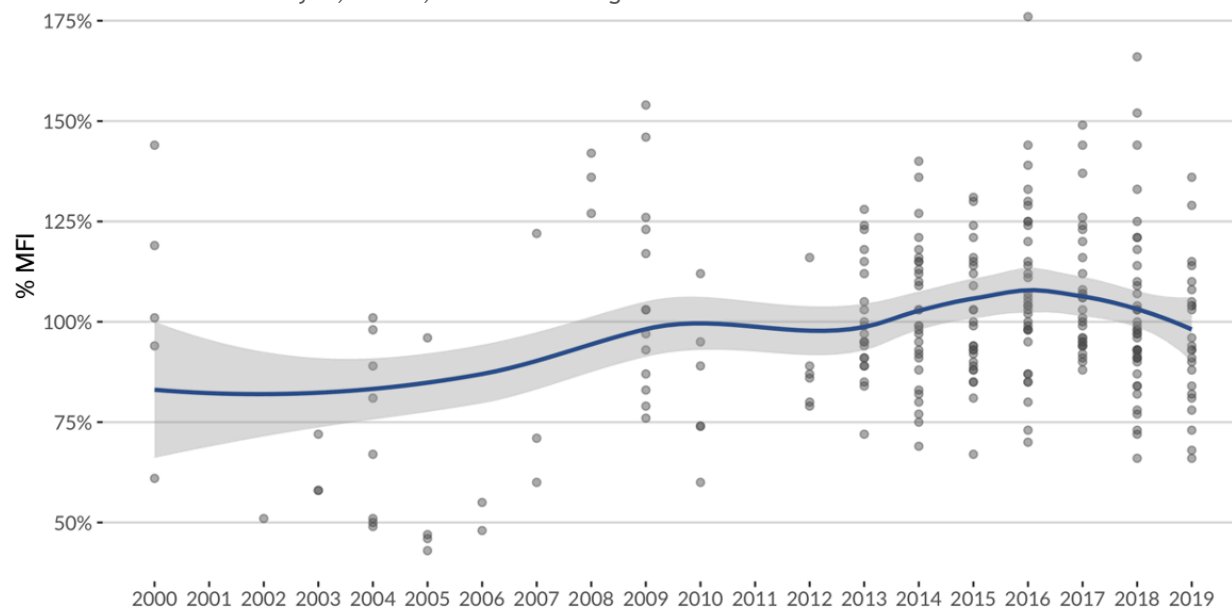
However, the housing market has consistently failed to meet the needs of those at the lowest end of the income spectrum. The market was never organized to produce units that serve households with incomes in the lowest brackets (particularly those below 50% of MFI). Even in markets with many housing type and price options and normal vacancy rates, some publicly-supported housing is needed. And, in communities that have consistently under-produced market-rate housing (as in most Oregon communities), the lack of available housing means that even middle-income households' needs are not met. To meet this need, direct public funding of new units is necessary.

## The market is not producing affordable rental housing

Evidence from the Portland Metro region, where more complete and accurate market and unit production data are available, show that the market has produced little rental or homeownership housing affordable to those below 80% of MFI, and almost no housing below 50% of MFI over the past 20 years. This supports the need for public subsidy to meet the needs of lower-income households.

Exhibit 108 examines the affordability of newly constructed apartments over time in the City of Portland. Each dot on the chart represents a building and the average affordability of a 1-bedroom unit as a percentage of MFI in the year it was built. Often affordability of the stock of newly constructed apartments is characterized in aggregate or on average, which misses the nuance that buildings are affordable at above and below the average. The data show that rent for newly constructed buildings has become less affordable over time in the City of Portland.

Exhibit 108. New construction affordability for 1 bedroom apartments in the City of Portland, 2000-19  
Source: ECONorthwest analysis, CoStar, Portland Housing Bureau



Without public support, in most Oregon markets, it is currently not feasible to produce new units that can immediately be rented or sold to households earning less than 50% to 80% of MFI at affordable prices, while still covering the costs of producing those units. In some communities or neighborhoods where land costs are very high, or for unit types that are more expensive to produce (such as high-rise construction types) it may not be possible to produce new units that rent or sell to households earning as much as 120% of MFI at affordable prices.

Therefore, to plan to meet the needs of these households in the near-term, **cities must plan for all units that cannot feasibly be produced in the market needing additional access to subsidies from federal, state, and local governments to support this development.** Without those subsidies, the units are unlikely to be produced, and housing needs will continue to go unmet. In other words, these units must be publicly-supported.

For a variety of reasons, publicly-supported unit production does not directly align with the income categories described in the RHNA. For example, an affordable housing project may have been built with federal low-income housing tax credits (LIHTC), and technically rent to those who earn 60% of MFI. But, some tenants in that building may have incomes in the 0 – 30% income category, and use housing vouchers to make up the difference. Further, in many communities, over the 20-year planning period, some market rate units will become available for rent or sale at price points that make them affordable to those at lower incomes, even without any subsidy.

However, in general, it is a safe assumption that **in the near-term, local governments should plan for all units below 80% to require at least some public support. Units below 50% will likely need be *entirely* publicly-supported to be constructed.** Housing Production Strategies and other policies should strive to increase unit production at those price points.

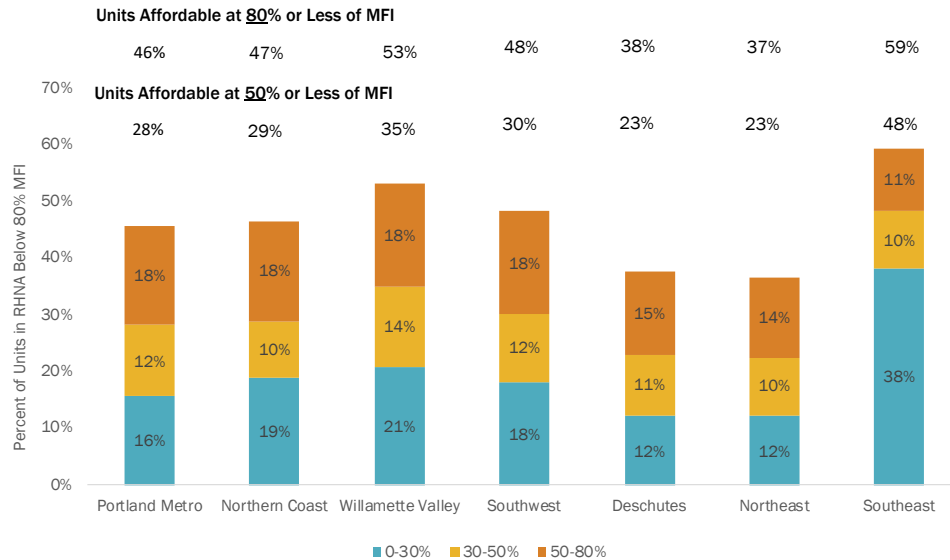
To put this in the context of the RHNA, the implication for needed units is shown in Exhibit 109 to Exhibit 112. The percent of units in the RHNA at 80% or lower varies by region, from a low of 23% in the Northeast region to 59% in the Southeast region.<sup>31</sup> Overall, 47% of new units in Oregon are expected to be for households with incomes of 80% of MFI or below.

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<sup>31</sup> The variation is so great, in part, because the Southeast region (which has 48% of its need below 50% MFI) has a small number of new units (1,503) and one third of new units address the needs of people experiencing homelessness, nearly all of whom are assumed to have income below 50% of MFI. In contrast, the Northeast region (which has 22% of its need below 50% MFI) has a larger forecast of new units (17,630), only 5% of which are to address the needs of people experiencing homelessness. The result is largely based on the existing regional income distribution.

# Exhibit 109. Percent of Units in the RHNA Affordable at 80% or less of MFI, all regions, 2020-2040

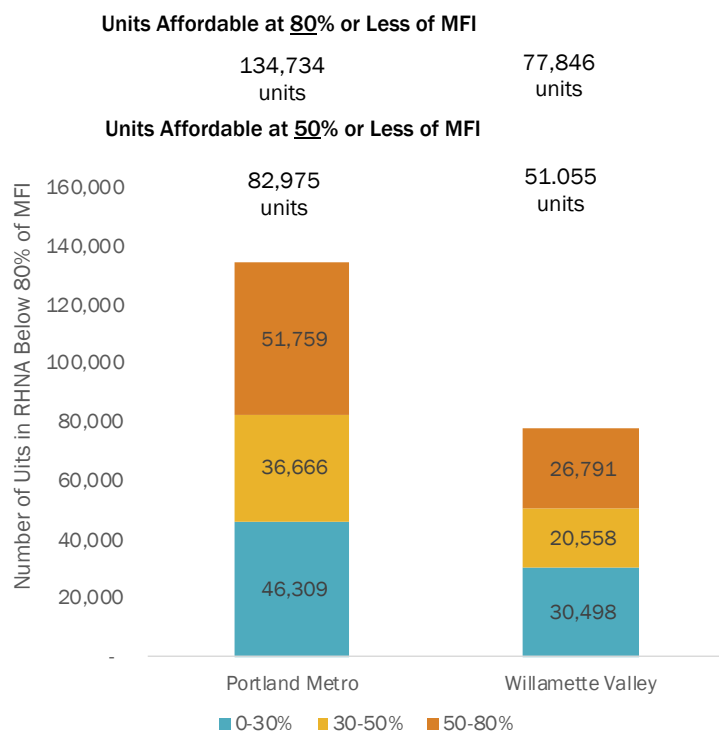
Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; PIT Count; McKinney Vento data



The number of new units needed in the RHNA at 80% or lower varies by region, with the greatest need in the regions with the largest number of new units (and largest existing populations), the Portland Metro and Willamette Valley regions. Overall, there is a total need of 273,000 new units in Oregon over the next 20 years for households with incomes of 80% of MFI or below.

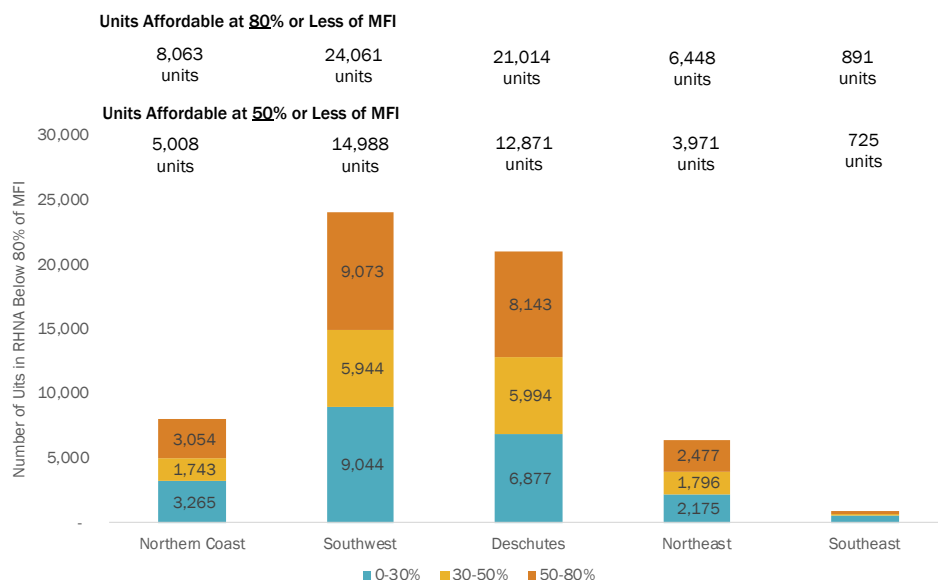
# Exhibit 110. Number of Units in the RHNA Affordable at 80% or less of MFI, Portland Metro and Willamette Valley regions, 2020-2040

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; PIT Count; McKinney Vento data



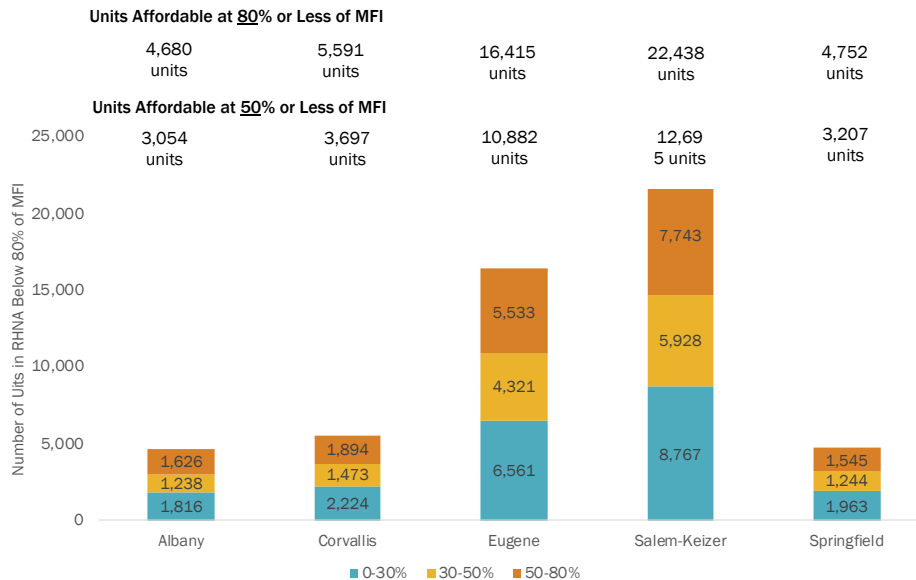
# Exhibit 111. Number of Units in the RHNA Affordable at 80% or less of MFI, North Coast, Southwest, Deschutes, Northeast, and Southeast regions, 2020-2040

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; PIT Count; McKinney Vento data



## Exhibit 112. Number of Units in the RHNA Affordable at 80% or less of MFI, example communities from the Willamette Valley Region, 2020-2040

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; PIT Count; McKinney Vento data



## Implications for Oregon's housing implementation framework

The RHNA's findings regarding the need for publicly-supported housing draw attention to several critical implementation challenges.

First, the need is large. Meeting it will require new resources from state and local governments and a phased approach to implementation. Over 20 years, as many as 273,000 new units may need some public funding, comprising 47% of all new housing units needed. Over time, some of that need could be met by market-rate units or through voucher rent-assistance programs that do not require unit production. **However, even in the most conservative look, we find a need for public funding for 171,594 units (29% of all units) affordable to those below 50% of MFI.** Of those, nearly 26,000 units would meet the needs of those who are currently experiencing homelessness statewide. For these Oregonians, the unsupported market is very unlikely to produce units. For context, there are about 69,000 publicly-supported housing units in Oregon currently. Regardless of how you measure it, the needed increase is large.

Second, the 20 year time-frame for the RHNA analysis creates challenges for conceptualizing near-term implementation steps. In particular, if market-rate housing production rapidly picks up pace, over the 20 year period, some portion of the need for those between 50% and 80% of MFI might be met in some communities without public support. In the near-term, however, the market is unlikely to meet the needs of lower-income Oregonians. State and local governments will need to decide how to prioritize investments in affordable units to move toward the goal of a more equitable distribution of publicly-supported units in the near-term. Questions to consider include:

- What are reasonable near-term targets for the next five years? We find that statewide, 29% of all households will need units affordable to those earning below 50% of MFI, with some regional variation. How can local government resources best leverage state resources to meet this need?
- What role does rental assistance (tenant based and/or project based) play in supporting housing access for the lowest-income households?
- How should resources be distributed geographically (within and among cities), to increase equitable access to units?

These questions are further explored in Chapter 7 of this report.



## 7. Initial Recommendations

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The findings from this inaugural run of the RHNA lay bare the need for the production of all housing types at all price points to meet the needs of our growing state. Adding roughly 584,000 units over the next 20 years—nearly half of which must serve the needs of households under 80% of median family income (MFI)—will require concerted, coordinated effort among all of the partners involved in the housing production system. Elected officials, non-profits, developers, planners, and others will need to be united through an integrated implementation system with clearly articulated production goals.

The RHNA could play an important role in meeting housing need. The projections it provides create production targets for affordable units so that the needs of low-income households are clearly known and cannot be ignored. It helps local governments understand the role that housing underproduction plays in rising housing costs. It provides a starting place for understanding the magnitude of needed public investment to enable affordable housing production. It can be designed to integrate with local planning efforts and be flexibly updated to account for progress that is made over time in housing production.

This chapter provides initial recommendations regarding why the RHNA should advance to implementation, a vision of how it can be integrated into an existing system, and details of what additional work would be helpful to improve the RHNA in the near future and over time.

These initial recommendations should be read as a starting place for community and stakeholder conversations. They will be revised and refined based on further evaluation of the findings of the RHNA, and stakeholder engagement expected to occur in the Fall of 2020. With additional insights, these initial recommendations may change substantively before they are finalized in December of 2020.

The project team will develop a document that summarizes the results of the RHNA and presents final recommendations after this engagement is complete.

### Initial Recommendation #1: Move Forward with the RHNA Methodology

The RHNA described in this report can and should be improved (see additional recommendations below). However, even in its current iteration, it substantially advances the state of practice for estimating housing need and could support improved housing outcomes through local and state implementation efforts. Specifically, the RHNA:

- **Provides transparency and consistency.** The RHNA provides a documented methodology that uses readily available statewide data and can be implemented consistently for all Oregon cities.

- **Leads to a more complete understanding of total housing need.** The RHNA accounts for the current underproduction of housing (units that have not been built to date to meet current housing need). This underproduction has led to rising prices across the entire housing market. Further, the RHNA explicitly recognizes that the impact of underproduction disproportionately affects households at the lowest end of the income spectrum, leading to rising cost burdening for those households, and allocates underproduced units to local jurisdictions based on regional rates of cost burdening.
- **Improves our understanding of housing need for households at the lowest end of the income spectrum.** The RHNA methodology accounts for housing needs for households experiencing homelessness. While our understanding of how many households experience homelessness needs improvement (see later recommendations), the current system does not require local governments to consider and plan to meet this need.
- **More equitably distributes housing need across the region.** The method starts with a regional housing projection, which is allocated to local governments relative to **regional** needs (based on regional income averages), rather than relative to **local** need (based on local income averages). This approach stops a cycle of planning for future housing need based on past development trends, which has led to affluent communities planning for fewer low-income households. The system reduces local political influence in quantifying housing need.
- **Provides data to support the integration of equity into system implementation.** The RHNA as conceived in this methodology offers needed data demonstrating housing inequities across demographic categories in a consistent format. This data provides indisputable evidence of the differences in the ways various populations experience housing outcomes and can be used as local governments plan to meet housing needs in their jurisdictions in a more equitable way.
- **Can be integrated into a comprehensive implementation system.** The RHNA can complement and integrate with the current land use planning system and newly created Housing Production Strategies by providing inputs for land use planning and targets for housing production efforts.
- **Introduces commute sheds and jobs-housing balance into thinking about housing need.** The regions used for this analysis build from research to understand commute sheds in Oregon, and the allocation methods incorporate the location of jobs in determining where future housing development will occur. The current system, which builds exclusively from local-level population forecasts, does not (explicitly) consider the role of commuting or jobs in the future location of housing.
- **Increases efficiency.** The current system requires all local governments to complete their own independent analysis of future housing need. Centralizing this effort with a state entity that completes the analysis for the entire state simultaneously will improve overall system efficiency.

## Implementation considerations

At the highest level, if the RHNA moves forward as a component of Oregon’s housing planning and implementation framework, we envision that it could: (1) replace the portion of the required local Housing Needs Analysis (HNA) that projects housing need, and then rely on the currently-in-place land use planning system (including buildable land inventory and zoning analysis) to determine the appropriate housing type mix that can accommodate housing need through the zoning process; and (2) inform unit production targets or goals that the policies and investments described in the Housing Production Strategy would help to achieve.

Beyond that, moving forward with the RHNA will require further discussions among stakeholders regarding many other considerations: how the methodology and its results interact with the existing system, budget and fiscal implications, staffing needs, and other operational issues. These are questions for the Department of Land Conservation and Development (DLCD) to work through with state and local partners (including OHCS).

One of the largest unanswered questions relates to regulatory authority. If the RHNA is to serve as a data source for local housing production targets, how will state and local governments track progress toward those targets? Will the state provide incentives, new regulations, or a combination of both to encourage and support implementation? How will the regulatory system recognize that local governments are not generally in the business of actually building housing, and that market cycles – which are almost entirely out of the control of local governments – greatly influence production? Is it necessary to measure and monitor unit-level affordability to ensure compliance? If so, how will that occur?

Answering these important and complicated implementation questions will interact with the approach to addressing the following methodological issues:

- **Housing need is not the same as unit need.** The RHNA identifies housing need by estimating the number of *households in each income category* that will need housing that is affordable to them. Local government implementation efforts will need to plan for the number of *units that must be built*. The translation between housing need and unit production is not one-to-one. For example, some very-low-income households have access to housing vouchers, which help them afford units that may have been built by the market that are affordable for higher-income categories. And many households will prefer to “rent-down” (or live in a unit that costs less than 30% of their income and could be occupied by lower-income households) if that is an option.
- **Need for a shorter time frame for projections.** Over 20 years, if local governments are successfully addressing underproduction and meeting growing demand, the approach to meeting need at some parts of the income spectrum will shift. Over time, if sufficient new units are produced to meet demand in a market, older units will become available to those at the middle or lower end of the income spectrum. This means that successfully addressing underproduction may mean that additional households will be able to afford

market-rate units in the future. Further, need will shift over time. Incomes may change with economic cycles; projections of population will also change. While a 20 year projection is appropriate to integrate with Oregon's land use planning system, shorter time frame projections and a regular cycle of RHNA updates will be necessary to effectively support local housing planning implementation efforts.

The appropriate schedule for RHNA projections should be determined in coordination with the schedule for local government Housing Production Strategy (HPS) and Housing Needs Analysis (HNA) schedules and with the timing of updated data. Cities within the Metro urban growth boundary will be required to develop an HNA and HPS every six years and all other cities over 10,000 people will develop an HNA and HPS every eight years. Future iterations of the RHNA could **include a methodology for estimating the housing construction that would be needed during a planning period**, to provide an estimate of units needed for the time period covered by the HPS. For example, should a city plan to meet all of the identified need for housing to address homelessness and a portion of its underproduction within five years of adopting the HPS? This methodology should be consistent with the regulatory framework, rules, and considerations for developing the HPS.

- **The RHNA is not an appropriate source for unit mix targets.** Absent clearer statewide policy goals for future unit mix and improved data, unit types should be considered as part of the local housing planning process, rather than as part of the RHNA. House Bill 2003 called for a RHNA methodology that considered both housing type and housing affordability. The Beta version of the RHNA estimated both housing type and affordability and used the regional averages of these to forecast future housing need. The results, presented in Appendix C, were sometimes non-intuitive and / or inconsistent with local and state land use planning goals.

The problems are many: (1) The data available consistently and statewide for understanding trends in unit mix is incomplete and flawed.<sup>32</sup> (2) We do not expect future housing mix to look like past housing mix for a variety of reasons, including recent legislation eliminating zones that are exclusively for single family development. (3) We do not have local or state policy guidance regarding desired housing mix outcomes. Given this starting point, we do not have a reasonable way to use available data about existing housing mix to project future housing mix across the many diverse markets in the state. An additional challenge is that, while lower-income households are more likely to be renters in multi-family developments, this may not be reflective of their housing preferences. Creating targets that assume that lower-income households

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<sup>32</sup> See the discussion of data limitations in the Methods chapter (Chapter 3) and Appendix A. Unit type data in the Census are based on self-reported survey information and are often inaccurate and incomplete, and other data sets are not available in a consistent format across the entire state. Some regions (Metro and Rogue Valley) have invested in improved data about unit type. Our comparison of the information in these data sets to the Census unit types showed substantial differences in results.

should be housed in multifamily developments risks perpetuating a lack of housing choice for lower-income households.

If the legislature or DLCD have a desired future mix of unit types, the RHNA could be useful in measuring progress toward that mix. Even in this case, improved statewide data about housing mix would be needed. This need for improved data is covered as part of a later recommendation.

- **Need to define the role of the RHNA for cities under 10,000 people.** Cities larger than 10,000 people are required to develop a local HNA and HPS every 6 to 8 years, creating a clear avenue for integrating the RHNA into local planning processes. It is less clear how the RHNA would be used by cities smaller than 10,000 people which do not have the same requirements. The North Coast Region only has two cities above 10,000 required to complete Housing Production Strategies. Oregon has 192 cities smaller than 10,000 people. Some of these cities are growing relatively quickly and are likely to conduct an HNA every decade or so. These include the 26 cities with a population of 5,000 to 10,000 people. Oregon also has many small cities, some of which are growing very slowly, including 83 cities smaller than 1,000 people.

Further direction on the role RHNA could or should play in local HNAs for cities smaller than 10,000 people will be important. It may make sense to focus efforts on cities that are growing relatively fast, especially those above 5,000 people, or look strategically within the regions to support housing planning efforts in some smaller cities. From ECONorthwest's experience conducting HNAs, we can say that some of these small cities have not updated their HNA and Comprehensive Plan Housing policies in 20 years or more, if they have ever updated them from the city's first comprehensive plan.

- **Changes to the regional boundaries would likely require substantial revisions to the recommended methodology.** The regional boundaries used in the Recommended RHNA methodology effectively group together cities based on commute sheds (which suggest interrelations among cities jobs and housing markets) and similarities in housing markets (especially city growth rates). Stakeholders have also generally agreed that the regional boundaries are consistent with their local understanding of housing markets.

Additional stakeholder outreach will continue to explore regional boundaries. We feel confident that the Recommended methodology is the best starting place for those conversations. At the same time, they are not perfect. Changes that stakeholders may want to see may not be possible. The regions selected for the Recommended version of the RHNA derive from the boundaries used for Public Use Microdata Sample (PUMS) data from the American Community Survey (ACS), as described in Appendix A and Appendix B. PUMS data is the only consistent and commonly available data source available to answer many of the questions posed in HB 2003. Making further changes to



the boundaries, in many cases, could result in the need to use a different underlying data source, which could change the nature of the analysis itself.

- **Consider whether the RHNA methodology could be varied for regions with improved data and modeling capabilities.** For example, the Portland Metro region has better information than is generally available state-wide about existing housing stock in the RLIS database, and an existing process for planning to meet housing need across jurisdictional boundaries. And, because the region has a larger and more diverse population than other parts of the state, it also has more complete information about unmet housing need across demographic categories. Over time, other regions may develop unique data sources or planning processes that provide opportunities for having allocations done at the regional level, rather than by OHCS, or with methodologies that differ from the methodologies for regions that do not have access to these datasets. This is an issue that should be considered in the context of broader stakeholder engagement.

## Initial Recommendation #2: Determine Focus for Local Unit Production Efforts

Local governments will face difficult implementation challenges in meeting housing need. Each will need to consider approaches to increasing housing production along with infrastructure that will be needed to enable unit construction and services to support the residents in those units.<sup>33</sup> This recommendation focuses on the implementation related to *unit production to meet need by income*, which is among the driving purposes behind including the RHNA as part of a comprehensive implementation system.

Targeting and tracking progress toward the income-based unit production targets in the RHNA will be challenging. There is currently no consistent way to gather building-level rent data over time to monitor how newly-constructed units stack up to targets for affordability by income. Nor is there a consistent way to understand if households are sorting into buildings by income: some households may be cost-burdening themselves, some may be renting down even in units that are rent-restricted, or some are renting at affordable levels.

The RHNA time frame creates additional challenges. The RHNA provides 20 year targets by income category<sup>34</sup>, but market forces will change the nature of production in any given year in ways that local governments can neither control nor predict. And, some households with incomes in one category – say below 30% of MFI – may be appropriately housed in a unit affordable to a higher-income category with the use of a housing voucher, making it difficult to

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<sup>33</sup> Services include infrastructure, utilities, and other government supports, but services can also include supports for renters and others seeking housing, such as rental assistance, education about homeownership options, and the wrap-around services to support those in permanent supportive housing. All of these services should be considered as part of a comprehensive system for housing implementation.

<sup>34</sup> These could be augmented with shorter term targets as well, as described earlier in this Recommendations Chapter.

directly translate unit need to unit production. For all of these reasons and others, determining and monitoring compliance with income-based targets over time will be very challenging.

At the same time, progress must be made, and local and state governments will need some way to track and monitor progress. It will be necessary to focus local implementation, monitoring, and evaluation efforts.

Preliminarily, it may make sense to focus on (a) **total unit production**; (b) **production of publicly-supported units**; and (c) **changes in unmet need over time**. Each of these potential areas of focus requires more discussion and analysis, and other areas may also be appropriate to explore.<sup>35</sup> Following are some key questions and issues to begin a conversation with stakeholders.

## A. Total unit production

Building new housing supply is critical to meeting housing need, no matter what end of the income affordability range it serves. When markets are undersupplied, prices rise. Building new housing, even if it is in the high-market segment, can keep higher-income households from moving down-market and bidding up the price of existing housing that would otherwise be affordable to middle- and lower-income households. When there is not enough supply in the high-end of the market segment, demand from higher-income households increases total demand and prices while further crowding out housing options for lower-income households.<sup>36</sup>

Tracking progress toward total production goals from the RHNA is straightforward and can use local permitting data as well as Census data as appropriate.

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<sup>35</sup> HB 2003 requires evaluating progress toward meeting the goals in HPSs. The ideas in this initial recommendation, if they advance, should be integrated into the overall monitoring process for local government action.

<sup>36</sup> Rosenthal, Stuart S. 2014. "Are Private Markets and Filtering a Viable Source of Low-Income Housing? Estimates from a "Repeat Income" Model." *The American Economic Review* 104(2): 687-706.

Muth, R. 1972. "A Vintage Model of the Housing Stock." *Regional Science Association* 30: 141-56.

Sweeny, James L. 1974. "A Commodity Hierarchy Model of the Rental Housing Market. *Journal of Urban Economics* 1: 288-323.



## B. Publicly-supported housing production

Building new market-rate housing cannot solve housing affordability issues across all income levels, especially in the near-term. Publicly-supported (subsidized) affordable units must be part of the strategy, because the housing market will not produce units at the lowest price points.

Understanding the need for an equitable distribution of publicly-supported affordable housing units<sup>37</sup> is a key component of HB 2003. These units will require the greatest amount of effort, investment, and coordination among the many public and non-profit players who have a role to play in advancing this type of unit production. This will be particularly relevant if the RHNA moves forward and communities that have expensive markets and little track record of producing publicly-supported units must plan to increase their share of unit production.

The need for these units is great. Statewide, nearly half of all new unit need (about 273,000 units) over the next 20 years will come from households at or below 80% of MFI. Of this, two-thirds (nearly 171,000 units) would serve households under 50% of MFI. Over time, if Oregon's communities make progress on overcoming underproduction, some of this need (for those between roughly 50% and 80% of MFI) could be met by units produced by the market, without direct public support and funding. But even in the best case, the market will not produce new units that meet the needs of those below 50% of MFI. Simply put, the overall magnitude of need is not likely to be met without an increased focus on planning for and funding the production of publicly-supported affordable units.

One way to tie this to the RHNA would be to connect targets to need at the lowest end of the income spectrum (below 50%) that are least likely to be produced by the unaided market. This percentage varies by region (from a low of 22% in the northeast region to a high of 48% in the southeast region<sup>38</sup>). This regional percentage could provide a straightforward and useful goal for publicly-supported housing production. HPSs could plan to accommodate at least their region's target amount of all newly constructed units as publicly-supported in each HPS planning cycle. Because these units include public money, data about the total number of publicly-supported units produced could be readily tracked, though some effort will be required to compile this information at the local and state level in consistent formats. This

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<sup>37</sup> For the sake of this research, "publicly-supported units" are defined as units that are built with any local, state, or federal funding source to house those who need units affordable at rental or sales prices that cannot support market-rate construction. In general in the current housing market in Oregon, any unit affordable at or below 50% - 80% of MFI is unlikely to be constructed without public support. More detail on this is included in Chapter 6.

<sup>38</sup> The variation is so great, in part, because the Southeast region (which has 48% of its need below 50% MFI) has a small number of new units (1,503) and one third of new units address the needs of people experiencing homelessness, nearly all of whom are assumed to have income below 50% of MFI. In contrast, the Northeast region (which has 22% of its need below 50% MFI) has a larger forecast of new units (17,630), only 5% of which are to address the needs of people experiencing homelessness. The result is largely based on the existing regional income distribution.

target would be updated with each RHNA cycle, to reflect changes as a result of successes in unit production and other market-based changes.

This RHNA-based approach would be helpful for understanding how *new unit production* is meeting the identified need for publicly-supported housing. Because this need includes underproduction (calibrated to cost-burdening) and housing for the homeless, this approach would begin to address overall community needs (existing and future).

Supplementing this with approaches that consider how the *entire housing stock* is meeting the need for publicly-supported housing will require more conversation, and more analysis of the current distribution of publicly-supported housing. It will very likely also require improved data and information about housing vouchers and units that have already been produced with state and local housing subsidies and are rent restricted to advance.

Regardless of how it is measured, local governments likely cannot meet targets for publicly-supported unit production without federal or state support and funding. OHCS is the state's main funder of affordable housing. OHCS will continue to seek resources to ensure the preservation of existing publicly supported housing so that affordability periods associated with existing units do not expire. The Legislature has invested in the Local Innovation Fast Track (LIFT) program to develop new housing. In order to achieve needed supply, local resources will also be needed.

### C. Changes in unmet need over time

In addition to tracking total and publicly-supported units relative to RHNA targets, it will be important to understand how need by income category is being met over time through the combination of new unit production, vouchers and other rent supports, and the availability of existing housing in the market. Statewide, 47% of households will need units that are affordable to those at or below 80% of MFI over the next 20 years. These are the households that are most likely to experience cost-burdening or otherwise have unmet housing needs. Local government efforts to meet housing need should focus on partnerships to meet the needs of these households, using all available funding sources and tools to connect them with newly-constructed publicly-supported units or available market-rate units.

The HPS rule-making process is currently considering several options for tracking local unmet need using local data. The RHNA may also provide an additional useful input for tracking local unmet housing need through tracking changes in unmet need at the regional level, including tracking of regional underproduction and need for units for households experiencing homelessness. If jurisdictions increase production by more than population growth, underproduction will decrease. The benefit of this additional production can be measured by looking at regional rates of cost burdening by income level, and locally the total rate of cost burdening. Tracking regional metrics would encourage coordination of implementation at the regional level.

### Initial Recommendation #3:

## Use the RHNA as One Component of an Equitable Housing Implementation System

The legislature's focus in the RHNA portion of HB 2003 was on increasing equity in the distribution of affordable housing, in other words, on *income equity*.<sup>39</sup> To address this, the team sought methods that would account for the needs of the lowest-income Oregonians in future housing production, while also making strides toward overcoming past failures to meet housing need through new housing production. Using the RHNA as a basis for local planning efforts will increase regional income equity in housing.

At the same time, additional emphasis on other aspects of equity, particularly racial equity, will be critical to making progress toward advancing more equitable housing outcomes in Oregon. If the RHNA is made a regular practice, we recommend the continued inclusion (and continual improvement) of data on differences in housing outcomes by demographic category. This data must then inform local housing production strategies and be used to direct other local policies aimed at increasing equity in housing.

Policymakers should also consider more specificity toward racial equity with the overall implementation of HB 2003. For example, if the legislature is interested in seeing more fair housing principles built into Oregon's land use planning system, this would require or support demographic considerations like race, disability, and age in housing access to be required in the planning process. Cities without a local Consolidated Plan and Analysis of Impediments are not required to do a detailed analysis of compliance with Federal Fair Housing laws. Clarity on legislative intent could help to target the data that the RHNA can provide to better support local planning efforts toward policy goals, and ensure that the analysis provided in the RHNA is then connected to local planning efforts.

The term 'affordable' creates a similar definitional issue. In this analysis, we have used the common threshold of rent or sales price not exceeding 30% of gross income to define affordability, but some stakeholders have suggested other definitions may be more appropriate, such as those that take into account transportation costs. Legislative clarity on this question would be helpful.

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<sup>39</sup> See Chapter 2 for details on this topic.

## Initial Recommendation #4: Improve Data Over Time

The methodological decisions made throughout the RHNA development process required the use of existing data sources. Throughout the report, we have highlighted instances where data limited the analysis, or where additional data sources would allow for different approaches to be considered. The following recommendations present possible options for improving on the currently available data sources, and how they would benefit the RHNA process:

- **Annual local unit count by unit type:** Currently only a few regional datasets exist statewide Metro's Regional Land Information System (RLIS) and Rogue Valley Council of Governments (RVCOG)) that track the number of housing units annually by unit type. The lack of data availability statewide limits the ability to understand recent development trends (and density) as well as local housing underproduction. Washington State (through the department of commerce) and California (through the Department of Revenue) both maintain annual datasets by County and City for number of housing units by type. These datasets are used as an input in the California RHNA process. Without these data, integrating unit type mix into the RHNA is not advisable.
- **Local stock of publicly-supported housing (including vouchers) by affordability level:** OHCS currently maintains a database of affordable rental housing properties funded by federal, state, or local entities across the state. While the database is fairly comprehensive, it does not capture all units that are rent/price regulated through local programs (for example inclusionary housing), nor does it capture the affordability of units not constructed by OHCS or the various voucher programs. More comprehensive data would allow for a better understanding of the current distribution of publicly-supported housing and allow us to engage in deeper discussions about metrics and goals for an equitable distribution.
- **Registry on rental unit stock by number of bedrooms and the market rent:** As part of the implementation and monitoring of unit production and income targets, there needs to be a process for gathering data for every HNA (every 6 or 8 years). There are no publicly available datasets that currently capture the rental rates at any local level statewide. The lack of accurate data makes it extremely difficult to accurately understand the current distribution of affordability at the local level, or to track changes in this distribution over time. Data that captured rent would provide many options for improving the RHNA methodology and also allow for the monitoring of progress on meeting housing production targets.
- **Homeless population count and income level:** We used two sources of data to count the number of households experiencing homelessness. The Point-in-Time (PIT) data are collected every two years, while the McKinney-Vento data measure households that are doubled-up or living in hotel/motel that have school aged children. Both datasets would benefit from improvements. In addition to more accurate data on the number of households experiencing homelessness, data on the income level (need) of these

households is very limited. OHCS had limited data available for this project on the income distribution within regions through the Emergency Housing Assistance (EHA) and State Housing Assistance (SHAP) programs. Expanding data collection on the income level would better align the income targets with the need of households experiencing homelessness.

- **Local data on demographics and housing need:** The only statewide data source available to measure the equitable outcomes of housing need by race/ethnicity and other demographic characteristics is the Comprehensive Housing Affordability Strategy (CHAS). There are limitations to the reliability of CHAS data at the local level (see Appendix A). While a lesser problem, CHAS data are also taken for a 5-year sample and are always at a minimum several years out of date. To understand the current equitable distribution of housing (in addition to changes over time) a new data source or survey that more accurately captures variables of interest for desired population groups is required.
- **Off campus student housing units and pricing:** the impact and availability of off campus housing was discussed as a potential input into the RHNA methodology. No data exists statewide on the number of housing units or the rental rates.
- **Tribal housing availability and need:** Tribal areas are not cities and yet are distinct from other areas defined as “outside UGB” in our methodology. In order to begin to specifically account for tribal areas’ housing need, there would need to be consultation with Oregon’s Federally Recognized Tribes to determine their interest in participating in the RHNA. It could be possible for PSU’s population forecast to include forecasts for populations on tribal areas. Then at a minimum, we could specify the housing needed for tribal areas as it is specified for cities in Oregon. More appropriately, however, we believe that a study such as the one being done in Washington State<sup>40</sup> would more accurately define current and future housing need for tribes and tribal areas in Oregon.

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<sup>40</sup> Washington State’s Department of Commerce is sponsoring development of an Assessment of Housing Needs of American Indians, Alaska Natives, and Native Hawaiians in Washington State. The project is expected to be completed in January 2021. The final report for this project will in part address state, federal, local and industry investments in rental and homeowner housing for Native Americans and provide policy recommendations to support the development of sufficient and safe housing for Native Americans on and outside of tribal areas and address other systemic barriers that prevent or impede access to safe and sufficient housing by Native Americans.

## Initial Recommendation #5: Review the RHNA After Each Iteration for Improvements in Future RHNAs

In addition to improving the data that provides inputs to the RHNA methodology, we see opportunity for other improvements as implementation of the RHNA continues. A robust and ongoing stakeholder engagement process should help to inform an understanding of opportunities to improve the RHNA throughout its use to better support local efforts to move toward housing equity. These efforts should be stakeholder driven, and create opportunities for OHCS (if it is the RHNA's implementing body) to engage in a process of continual improvement. Below are a few questions to contemplate in future iterations:

- The current version of the RHNA assumes that household income distribution remains constant over time. Are there methodological benefits to attempting to project changes in distribution? If so, what would be the basis for forecasting changes to household income?
- Over time, local data regarding housing stock, unit production, and asking rent may improve in some regions or across the state. Would it be worth trading off a consistently-applied statewide methodology for an approach that uses improved local data in some regions? How would this be implemented?
- How should housing needs for agricultural workers be considered?
- How could or should student housing needs be considered?
- What role, if any, should quality of housing and housing accessibility play in the RHNA, especially given data limitations?



## Initial Recommendation #6: Additional Outreach is Needed to Inform Implementation

In the process of developing the RHNA, the project team engaged a range of stakeholders in technical conversations about details of developing the methodology. These stakeholders included representatives of cities of various sizes around the state, experts in affordable housing finance and construction, experts in evaluation of and solutions to end homelessness, economists, and others. The Department of Land Conservation and Development, the Department of Administrative Services, and the Governor's office were deeply involved in details of defining and finalizing the methodology recommended in this report. All of their input was incredibly valuable.

The complexity of implementation challenges outlined in this report suggest the need for far more work. Robust partnerships and champions across all levels of government and among citizens will be necessary to enable progress to be made. Success will require additional outreach to engage a much wider range of stakeholders to inform implementation with the lived experiences of those who experience housing discrimination and have the greatest housing need, to identify impediments in the path to implementation, and to build momentum for successful local-level implementation. That additional engagement will need to happen in partnership with DLCD as the implementing body of the housing planning system.

Given the need to focus on increasing the supply of publicly-supported housing – and increase of state-level funding to do so – OHCS will continue to engage stakeholders in support of the implementing the goals of the Statewide Housing Plan. Additionally, further work is needed to engage tribal communities, communities of color, those who experience or represent those who experience disabilities, and those who understand the needs for senior housing. Additional engagement with local government elected officials and planners will also be needed to confirm and understand the intersection of the RHNA with the existing land use planning and housing implementation system. Our project team needs to further explore the role that regional boundaries play in the RHNA results, in support of decision-making about which regions to use in future versions of the RHNA. This exploration will occur in Fall 2020, concurrent with the stakeholder engagement described above.

## Conclusion

Incorporating the RHNA into Oregon's housing implementation framework will require our existing system to evolve. This process will not be without challenges. But the magnitude of need underscores the importance of action. These initial recommendations provide a first set of steps and ideas for moving forward that OHCS, DLCD, and others would need to build upon to advance the RHNA to statewide use. Stakeholder engagement will help to shape and improve these recommendations.



If advancing the RHNA is not possible even after OHCS continues to refine these recommendations, through this inquiry, the project team has identified some methodological steps that local governments could take to improve the current housing need analysis and land use planning system. Specifically, local governments could:

- Add a count of local homeless populations to the Housing Need Analysis, so that HNAs and HPSs can more explicitly address the needs of this group. Deriving homeless counts at the city level can be challenging with existing data in much of the state. The RHNA methodology uses regional estimates – which better match with available data sets – and allocates those estimates to cities. However, local estimates could be possible through partnerships with local homeless service providers and other datasets that DLCD has explored through its rulemaking process for Housing Production Strategies.
- Explore options to address underproduction in local HNAs. This too will be much more difficult to undertake at the local level (as opposed to the regional level). By definition housing underproduction is a regional concept. An individual city's ratio of housing units relative to the number of households is a reflection of broader market conditions. Individual cities can influence this by producing more units of housing. However doing so in the context of a region that continues to underproduce housing might mask the impact in that jurisdiction, as their prices would remain relatively affordable compared to cities that do not produce additional housing and have their prices increase. Additional sources of data that track housing production locally would make this conceptually possible.
- Require local governments to address the need for publicly-supported units in their HNAs and HPSs. The inaugural run of the RHNA provides a state level estimate – 30% of all units – which could serve as an appropriate starting-place target.

It must be emphasized, however, that these changes to local processes miss the opportunity to advance toward the vision implicit in HB 2003: a consistent, statewide methodology that increases geographic equity in the production of affordable units, and would present additional implementation challenges from asking this to be done locally instead of statewide.

Even after OHCS finalizes its recommendations, the HB 2003 legislation requires additional research and opportunities for engagement. By March 1, 2021, DLCD must make recommendations about the questions the legislature posed.<sup>41</sup> Broadly, these questions include the appropriateness of the RHNA allocation methodology; how cost effective, reliable, accurate, repeatable, and predictable the RHNA methodology is; how the RHNA relates to statewide planning goals; and whether different regional boundaries would be more appropriate.

OHCS looks forward to the opportunity to continue the conversation with DLCD as it grapples with these questions.

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<sup>41</sup> House Bill 2003, Section 2 (1)

# Appendix A. Data Source Evaluation

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This appendix outlines potential tradeoffs and notes important considerations about each of the data sources evaluated for two main components of our analysis: (1) Data about housing and demographics; and (2) Data about people experiencing homelessness.

## Housing Data Source Evaluation

The three data sources of interest are the American Community Survey (ACS) standard tables, the Public Use Microdata Sample (PUMS), and the Comprehensive Housing Affordability Strategy (CHAS). These three data sets all derive from the ACS conducted by the Census Bureau and provide different levels of detail on valuable measures of housing affordability and demographic characteristics.

### Known deficiencies with Census data

The reliability of estimates from any survey is dependent on random sampling of large enough size so that the sample population is representative of the actual population. Deficiency in survey data can stem from attempting to estimate a variable of interest from a small population or a small segment of a large population. For example, disaggregating a state-wide data set by a small or medium-sized city, income category, race, and housing characteristics is likely to yield statistically unreliable results because the segmented population is too small to draw inferences from. In general, larger cities and more aggregated data are more reliable.

Given that census data is widely used to inform policy and funding decisions, its users must consider potential for error in the data. In particular, while CHAS is a useful resource for policymakers because it is a customized data set for cities developed by the Department of Housing and Urban Development (HUD) in conjunction with the Census Bureau, the estimates for places with population under 50,000 may be too close to zero to be reliable. Similar caution is warranted in the regional data sets analyzed in this report. For example, even in regions with 500,000 residents, an estimate of the number of renters who pay more than 30% of income on rent and have no one in the household who speaks English very well can be too small to make meaningful interpretations.

In general, estimating housing characteristics for a demographic group with 5,000 or fewer people should be avoided. Small cities with fewer than 10,000 residents can only estimate one demographic characteristic or one housing characteristic without producing large margins of error. However, characteristics that segment the population into small fractions, such as race or English proficiency, are still likely to result in unreliable estimates. Combining two or more characteristics will also lead to unreliable estimates for small cities. Medium cities with 10,000 to 50,000 residents likely could combine a housing characteristic with a demographic characteristic (e.g. cost burden among renters, tenure among people 65 years and older) while avoiding a large margin of error. Medium cities should also avoid characteristics that segment the

population into small fractions. Large cities with more than 50,000 residents likely could combine any single housing characteristic with any single demographic characteristic. As the city size grows, it becomes possible to combine more than two characteristics (e.g. cost burden among renters 65 years or older).

Inaccuracies in census data are more prevalent among people of color for reasons beyond small sample size. People of color may be reluctant to identify with racial or ethnic minority groups in surveys or records due to historical discriminations experienced by those populations. Some social scientists refer to history of genocide, persecution, and cultural obliteration that can lead to undercounting and misrepresentation of people of color in census-based data.<sup>42</sup> The Census Bureau also acknowledged the 2010 Census undercounted certain racial and ethnic groups and renters because they were harder to locate, contact, persuade, or interview.<sup>43</sup> Inaccurate reporting is particularly prevalent among Hispanic groups that inconsistently choose between White and Other categories for their race. Moreover, aggregation of people into groups such as Black/African American, Asian, or Native American overlooks large disparities that exist within the populations. The disparities contribute to larger margins of error and decrease the likelihood of statistical significance of the survey results.

Furthermore, many researchers and the Census Bureau have concluded that the decennial census and surveys such as the ACS undercount young children between the ages of 0 and 4. Undercounting of young children is more likely if the children are of Hispanic origin or a racial minority, live in renter-occupied housing, or are not related to the householder or are relatives other than biological and adopted children.<sup>44</sup>

More deliberate methods of research are needed to overcome inaccuracies in the data related to people of color. To improve the accuracy of the collected data, surveys should be administered by people in the community with whom the respondents can relate and easily communicate. The questions should allow for broader designations for race and ethnicity. Also, researchers should engage communities in all steps of the research process through approaches like community-based participatory research. Changes that empower communities to collaborate in identifying common problems can aid in addressing disparities that exist among and within racial and ethnic groups.

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<sup>42</sup> Curry-Stevens, Ann, Amanda Cross-Hemmer, Nichole Maher, and Julia Meier. "The Politics of Data: Uncovering Whiteness in Conventional Social Policy and Social Work Research." *Sociology Mind* 1, no. 4 (2011): 183-191.

<sup>43</sup> U.S. Government Accountability Office. *2020 Census: Actions Needed to Address Challenges to Enumerating Hard-to-Count Groups*. GAO-18-599. Washington, DC, 2018. Accessed July 6, 2020. <https://www.gao.gov/assets/700/693450.pdf>.

<sup>44</sup> U.S. Census Bureau. *Investigating the 2010 Undercount of Young Children – Summary of Recent Research*. Washington, DC, 2019. Accessed July 6, 2020. <https://www2.census.gov/programs-surveys/decennial/2020/program-management/final-analysis-reports/2020-report-2010-undercount-children-summary-recent-research.pdf>

## Evaluation of census-based data options

The analysis conducted to compare data sources used two different regions that served as benchmarks. We selected the Portland Metro region (composed of Clackamas, Multnomah, and Washington Counties) and Deschutes County as the benchmarks. Deschutes County was chosen due to a specific feature of the PUMS data. PUMS data is not provided at traditional census geographies but rather at Public Use Microdata Areas (PUMAs). It is possible for multiple PUMAs to be within a single county or a single PUMA to make up multiple counties. One of the PUMAs in Oregon is a near one-to-one match with Deschutes County, which allows a like-for-like comparison across the ACS and CHAS data sets. Similar matchups with multiple PUMA boundaries composing the Portland Metro region also allow for this comparison.

There are four distinct features of each dataset that provide the grounds for which to compare them. Those features are:

- Time Horizon
- Geographic Availability
- Detail
- Data Quality

The following sections compare the relative strengths and weaknesses for each data source among the above categories.

### Time Horizon

Each of the three data sources analyzed is updated at regularly scheduled times, which is an important consideration when determining which data source to use for an analysis that will be repeated through time. The time horizon of each data source will have important implications for the frequency of analysis and how relevant the analysis will be to the state's housing sector.

PUMS data is produced annually with a nearly two-year lag. The 2018 1-year PUMS files were released on November 14, 2019, and the 2014–2018 5-year PUMS files were released on January 30, 2020. The 5-year data does not describe any specific month or year within the period but rather the five-year time period. PUMS is made available on an annual basis and across the entire state. In terms of release frequency, PUMS is the most ideal of the three data sources.

ACS standard tables are available for two different time horizons depending on the area. For areas with populations of 65,000 or more the ACS publishes 1-year estimates. In areas with populations less than 65,000 the ACS publishes 5-year data. Both the 1-year and 5-year ACS standard tables are updated and released each year with a nearly two-year lag. Thus, at the time of writing this report, the most recent ACS data is available in the 1-year format for 2018 and the 5-year format for 2014–2018.

While new ACS data is released every year, the 5-year sample should not be compared to previous 5-year samples. Since the 5-year ACS data reflects the whole period, comparing two consecutive year 5-year ACS datasets would mean that four of the five years in the sample are overlapping. This limitation provides a major obstacle to using ACS data statewide on regular intervals. An alternative to using the ACS data is to use the decennial census data which is provided across all geographies and is a better estimate of the population but is updated only every ten years and has limited questions, which is far from ideal.

CHAS data suffers from a similar obstacle to ACS standard tables but is actually more problematic in a couple of ways. CHAS data is only available as a five-year sample and is produced on a three-year lag. The most recent CHAS data is for the 2012–2016 period. The delay in data availability and the five-year time range make CHAS data an unappealing option for timely analysis.

### Geographic Availability

Both the ACS standard tables and the CHAS data are produced at various census-defined geographies, including counties and places. This provides a lot of flexibility for creating regions from the bottom up or specifying regions that currently conform to census geographies.

The PUMS data is provided only at the PUMAs which do not neatly conform to census geographies. PUMAs are defined by non-overlapping areas of about 100,000 residents within a state. In Oregon, however, many counties' borders match up with one or multiple PUMAs or a PUMA boundary includes multiple entire counties. The PUMA boundaries are updated every decennial census, which could provide additional complications when comparing PUMAs across a longtime horizon. Since PUMAs do not map to any census geography, they are less flexible in terms of what regions can be aggregated together. Essentially, an analysis using PUMS data is confined to working at the PUMA geography.

### Detail

Of the three data sources, the ACS standard tables provide the least amount of data as it pertains to housing affordability. The ACS standard tables provide counts of renters and other demographic data, but those groups are fixed. The primary challenge when using ACS standard tables is that only a few crosstabs are provided. For example, the data estimates the number of households with gross rent in specified groups but does not estimate gross rent for renters by number of bedrooms. For many of the desired analyses, it would be ideal to be able to compare the population among multiple different metrics, but the ACS standard tables provide the flexibility in this regard.

Most of the concerns with the ACS standard tables are alleviated with the CHAS data because it provides additional crosstabs. Specifically, the CHAS data provides estimates of rent by affordability bin, household income, and bedroom count. This type of detail allows for far more specific analysis than what is possible with the ACS standard tables. One challenge with the CHAS data (which is also present in the ACS standard tables) is that the analysis is restricted to

the groups reported in the data. For example, the CHAS data reports the number of renters who pay 50-80% of Median Family Income (MFI), but there is no way to disaggregate this statistic into the number of renters who pay between 50-75% of MFI.

The PUMS data contains a representative sample of individual responses to the ACS. The data is anonymized and reported at the household level and the population level with weights to indicate the number of households or people they represent. The weighting allows users to tabulate the distribution of any specific metric across the population. Reporting data at the household level and the population level provides the most level of detail and allows users to aggregate the data using the weights in many different ways. In the previous example, the PUMS data would allow for an analysis of the number of renters renting at any affordability level. There are no predefined groups with the PUMS data. The added flexibility makes the PUMS data ideal for estimating some of the more gradual housing metrics.

## Data Quality

Since PUMAs are restricted to areas of approximately 100,000 residents the PUMS data cannot estimate metrics for extremely small populations. Many of the areas reported in the ACS standard tables and the CHAS data have very small populations, so the estimates that the datasets provide have large margins of error. Additionally, the five-year time horizon for the ACS data and the CHAS data can confound many metrics which are more sensitive to year over year changes. Finally, the decennial census has the highest level of data quality because it surveys the entire population. However, it is updated only every ten years and asks a limited number of questions.

## Summary

Exhibit 113 summarizes an evaluation of the tradeoffs for each data source.

In the end, we determined that the ACS standard tables alone could not produce the analysis needed. ACS standard tables do not provide enough information about the relationships between household income, housing types, and housing costs. The CHAS data provides this data but may have unacceptably high margins of error and is only available for 5-year samples. **For most of the analysis, we determined that the best available data source is PUMS. PUMS has the most recent data, allows for flexibility in analysis, and is more accurate. We used PUMS data for the analysis presented in this report, except where otherwise noted.**



### Exhibit 113. Selected Requirements of HB 2003: A Methodology for RHNAs

Source: ECONorthwest evaluation of data sources

Data Source	Available for One Point in Time in 2018	Updated within Last 2- years	Available for Multiple Geographies	Flexibility for Semi-Custom Analysis	More Accurate (smaller margins of error)
ACS	No Not available in small geographies	Yes	Yes	No	No Margin of Error may be very high
PUMS	Yes	Yes	No Only for PUMA areas <sup>45</sup>	Yes	Yes
CHAS	No	No Most recent: 2012-2016	Yes	Yes	No Margin of Error may be very high

## Data about People Experiencing Homelessness

Gathering reliable data from individuals experiencing homelessness is difficult precisely because they are unstably housed. People can cycle in and out of homelessness and move around communities and shelters. Moreover, the definition of homelessness can vary between communities. Individuals and families temporarily living with relatives or friends are insecurely housed, but they are often neglected from homelessness data. Even if an individual is identified as lacking sufficient housing, they may be reluctant to share information.

Data on homelessness collected by the HUD and its partner agencies at the state and local levels is stored in Homeless Management Information System (HMIS). The system is used to provide an annual estimate of unduplicated counts of individuals who access an emergency shelter, transitional housing, or a permanent supportive housing (PSH) program. The data includes demographic characteristics of sheltered individuals and their patterns of service use. Portland Housing Bureau (PHB) is Oregon's statewide administrator of HMIS, and OHCS is currently in the process of making recommendations for the governance structure guiding the statewide data in HMIS.

The following data sources were considered for the analysis in this report.

- **Point-in-Time (PIT) count:** The PIT count is a snapshot of individuals experiencing homelessness on a single night in a community. It records the number and characteristics (e.g., race, age, veteran status) of people who live in emergency shelters, transitional housing, rapid re-housing, Safe Havens, or PSH; as well as recording those who are unsheltered. In addition, the Housing Inventory Count (HIC) estimates the number of beds available. HUD requires that communities and Continuums of Care

<sup>45</sup> A PUMA is a region used by the U.S. Census for providing statistical and demographic information, allowing the Census to report sub-state information for areas within a state. A PUMA contains about 100,000 people. PUMAs do not overlap and do not cross state lines. PUMAs may contain multiple counties, such as in areas with sparse population such as Eastern Oregon. A county may have multiple PUMAs, such as in densely populated areas like the Portland region.



(CoC) perform the PIT count during the last ten days of January on an annual basis for sheltered people and on a biennial basis for unsheltered people. Though the PIT count is not a comprehensive survey, it serves as a measure of homelessness at a given point of time and is used for policy and funding decisions.

- **McKinney Vento data:** The McKinney Vento Homeless Assistance Act authorized, among other programs, the Education for Homeless Children and Youth (EHCY) Program to support the academic progress of children and youths experiencing homelessness. The U.S. Department of Education works with state coordinators and local liaisons to collect performance data on students experiencing homelessness. The data records the number of school-aged children who live in shelters or hotels/motels and those who are doubled up, unsheltered, or unaccompanied. This is a broader definition of homelessness than that used in the PIT.
- **Annual Homeless Assessment Report (AHAR) and Longitudinal Systems Analysis (LSA):** HUD produces an annual report to the U.S. Congress with estimates of homelessness across the nation, demographic characteristics of homeless persons, patterns of service use, and available beds. The report relies on information from the PIT counts and HMIS data. Until 2018, AHAR referred to both the report to Congress and the data communities submitted for the report. Now, the data used to generate the report is contained in LSA and is submitted to HUD via an online data submission tool called Homelessness Data Exchange (HDX), version 2.0.
- **Annual Performance Report (APR):** Communities that receive HUD funding through CoC homeless assistance grants submit a summary report for each year of operation.
- **Coordinated Entry (CE):** HUD collects standardized data on core components of CE – access, assessment, referral, and prioritization. CoCs utilizing HUD funds are required to collect the data to provide information on how quickly people are placed in stable housing and to identify bottlenecks and gaps in the strategies to address homelessness. CE data is stored in HMIS.
- **Shelter Inventory:**<sup>46</sup> In 2019, the Oregon Housing and Community Services Department (OHCS) commissioned a study to better understand and strengthen shelter policies throughout the state in an effort to more effectively assist the population experiencing homelessness. The study involved interviews with stakeholders, focus groups, a survey of shelters, a survey of people who are experiencing or have experienced homelessness, and analysis of a variety of state and federal datasets. In particular, it enumerated the number of shelter beds that might be needed to accommodate need in each of Oregon’s CoC regions.
- **OHCS Emergency Housing Assistance (EHA) and State Homeless Assistance Program (SHAP) data:** OHCS’s EHA program provides flexible, short-term funding to prevent and reduce homelessness. SHAP provides operational support for emergency shelters and related services for individuals and families experiencing homelessness. The funds

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<sup>46</sup> Oregon Housing and Community Services. (August 2019). Oregon Statewide Shelter Study.

can be used for street outreach, shelters, and data collection. Both funding sources are allocated to Community Action Agencies (CAAs) in accordance with statute via a funding formula. OHCS receives quarterly reports from CAAs on the clients served through these programs.

The data on homelessness used in this report are chosen for their relative comprehensiveness and compatibility with other datasets in this report. PIT counts provide demographic information on both sheltered and unsheltered people. Because the data had been compiled previously by OHCS at the county level through its outreach to CoCs, it could be easily aggregated to the regions used in this report in the timeline required for this analysis. In comparison, other data sources such as APR and CE may disproportionately undercount the number of unsheltered people and are available only at the CoC level.

The PIT counts are well known to provide undercounts of people experiencing homelessness. The methodology used to count the number of people experiencing homelessness is not consistent across all years or CoCs. Additionally, the visual counts conducted by volunteers on a single night will inevitably exclude people who are sleeping in places that are difficult to access, temporarily placed in hospitals or jails, or living doubled up. Furthermore, the undercounts may vary significantly across various subgroups of the population (e.g., race, ethnicity, gender, language, disability, veteran status). That said, the PIT counts are the best data available to the project team about people experiencing homelessness on a county-by-county basis. Appendix B describes the approach we used to account for the people experiencing homelessness who are undercounted in the PIT counts.

In addition, the project team supplemented the PIT counts with McKinney Vento data in this analysis (as described in Appendix B) to account for children who are living doubled up or in hotels and motels. Other sheltered or unsheltered children in the data are not added to the PIT counts because they are assumed to be already accounted for in the PIT counts.

## Appendix B. Detailed Methodology

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Developing the methodology envisioned in HB 2003 required its own evaluative process. This appendix presents an analysis of the methodological options for conducting the Regional Housing Needs Analysis (RHNA) and meeting the other requirements of HB 2003, with a description of the decisions that the project team made at each step. In particular, this chapter provides details about the following categories of methodological choices:

- **Regions.** The first steps in developing the RHNA methodology were selecting the data best suited to develop the RHNA (see Appendix A for an evaluation of data sources) and determining the regions to use in the analysis. HB 2003 requires an analysis at the regional level but provides flexibility for the research to define the geographies that comprise those regions. This appendix describes the options we considered in selecting regions.
- **California's Approach to a Regional Housing Needs Analysis.** This section draws from California's experience in conducting a statewide RHNA, which the State has done for nearly five decades. The methodologies used in this report and presented in this appendix builds from what California does.
- **RHNA + Allocation to Cities.** This section provides descriptions of the steps in developing the RHNA and allocation methodologies on a step-by-step basis. It describes the options and decisions about assumptions used in the development of the RHNA and local allocation.
- **Existing Housing Shortage: Housing supply by income and affordability.** HB 2003 requires an analysis of housing shortage at the city level without specifying a requirement at the regional level. As we describe in the section about developing the RHNA, we considered multiple approaches to estimating the current shortage of production of housing. One of the approaches was an estimate of the shortage of housing based on the existing stock of housing at each income level, focusing on cost burdened households. While this approach was not the approach selected to estimate underproduction in the RHNA, it does meet the requirements of HB 2003. The results of this analysis for each city are presented in Appendix E.

The process of developing the methodology for the RHNA was developed in two parts:

- **Beta RHNA** started with an examination of the approach that California took to conducting regional housing needs analysis. Beta RHNA quickly departed from the methodology used in California, as described in this appendix. The comparatively short timeline for completing the project meant that we had to quickly develop a methodology for completing the RHNA in a way that was fully compliant with all requirements of HB 2003. Some of the requirements of HB 2003 made developing a RHNA challenging.

- **Recommended RHNA**, which we conceptualized as the Oregon Method for conducting a RHNA, builds from what we learned in developing the Beta RHNA methodology. The tight schedule of the project required the project team to quickly identify options to improve Beta RHNA. At the outset of developing the Recommended RHNA, we were unsure if we would be able to produce the full results of the RHNA in a way that is compliant with HB 2003. For the most part, the Recommended RHNA complies with the requirements of HB 2003.

One of the issues with the tight schedule is that it allowed minimal time to get input from stakeholders about options in the Beta RHNA. To the extent possible, we considered input from stakeholders in development of the Recommended RHNA. Appendix F presents a summary of stakeholder involvement.

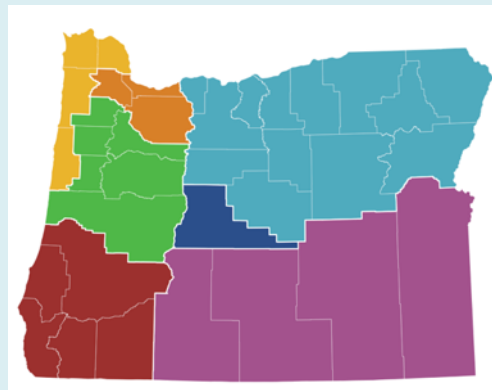
In this appendix, we focus on the methodology we used to develop both versions of the RHNA.

## Regions

The first step in completing a RHNA 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 data set that could be used to define regions has its own level of geographic specificity, choices about regions are integrally tied to choices about data.

House Bill 2003 directed OHCS to conduct a RHNA based on the regions used by the Regional Solutions Teams, unless it was more appropriate to define regions differently based on ease or cost of collection and/or analysis of data. HB 2003 also directed OHCS to consider commuting, employment, and housing markets when defining regions.

**The punchline:** After evaluation of several options, the team selected regions consistent with the map to the right for the Recommended RHNA. We used these regions, rather than the Regional Solutions Team's map as (1) the analysis relies on PUMS\* and the selected regional boundaries are all based on PUMA\* geographies; (2) with multiple PUMAs in each region, the margin of error on analysis, especially detailed analysis that compares housing type and household income, is more likely to be an acceptable margin of error; and (3) discussions with stakeholders suggested that larger geographies are generally preferable to smaller regions.



*\*Note: PUMS is based on ACS data. The Census Bureau produces PUMS files so that data users can create custom tables that are not available through pre-tabulated (or summary) ACS data tables. PUMS are available for geographies of about 100,000 people, called Public Use Microdata Areas (PUMAs). Oregon has 31 PUMAs, with most PUMAs located in the more densely populated western part of the state.*

### Key analytic issues in developing regions

Defining regions for this analysis required identifying the source of data that the team would use throughout the analysis. The source of data needs to be consistently available statewide, available at an appropriate geographic level, as timely as possible, as accurate as possible (especially for the purpose of evaluating housing need across various demographic variables—see Chapter 5), and flexible enough to allow for comparisons necessary to deliver the analysis required by House Bill 2003.<sup>47</sup> The data sources that met these requirements were:

<sup>47</sup> House Bill 2003 required an analysis of housing by housing type (such as attached and detached single-family housing, multifamily housing and manufactured dwellings or mobile homes) and housing affordable at all income

- **2018 American Community Survey (ACS).** Completed every year by the U.S. Census Bureau, the ACS is a sample of households in the United States. The ACS collects detailed information about households, household characteristics, housing characteristics, housing costs, housing value, income, and other characteristics.
- **2018 Public Use Microdata Sample from Census (PUMS).** PUMS is based on ACS data and includes the same information as the ACS. The Census Bureau produces the PUMS files so that data users can create custom tables that are not available through pre-tabulated (or summary) ACS data tables. PUMS are available for geographies of about 100,000 people, called Public Use Microdata Areas (PUMAs). Oregon has 31 PUMAs, with most PUMAs located in the more densely populated western part of the state.
- **2012–2016 Comprehensive Housing Affordability Strategy (CHAS).** This data is a custom tabulation of the five-year ACS developed by the U.S. Census Bureau for the U.S. Department of Housing and Urban Development (HUD). CHAS data is used in producing consolidated plans, helping local governments plan how to spend Federal housing and community development funding. CHAS data includes analysis of housing costs by household income, as well as housing costs by type of housing unit.

ECONorthwest and OHCS worked together to evaluate these data sources to determine the best source of data for completing this analysis. Appendix A describes the process of evaluating the data sources used in the RHNA. **For most of the analysis, we determined that the best available data source is PUMS. PUMS has the most recent data, allows for flexibility in analysis, and is more accurate.** We used PUMS data for the analysis presented in this report, except where otherwise noted.

## Regions considered

Once we identified PUMS as the best available data source, we began to define the regions for the RHNA. PUMS data is available for unique regions called PUMAs, which is a sub-state region containing about 100,000 people. Exhibit 114 shows the divisions of regions we considered for this project.

Map A in Exhibit 114 shows the Regional Solutions Teams' regions and the PUMAs in Oregon. As Map A shows, the Regional Solutions Teams' regions do not line up well with PUMAs. Dividing PUMAs would require statistical analysis that would make the data unreliable, creating substantial doubt in the quality of the data as the basis for this analysis. As a result, we could not use these regions as the basis for this analysis. Map B, Map C, and Map D in Exhibit 114 show examples of regions of Oregon, based on PUMA boundaries.

In selecting the regions to use in this analysis, we considered technical factors such as:

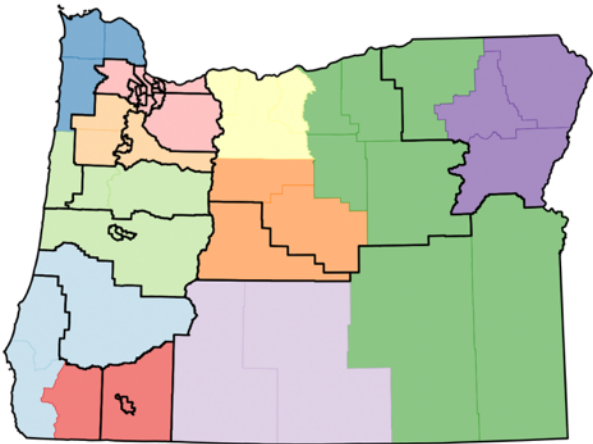
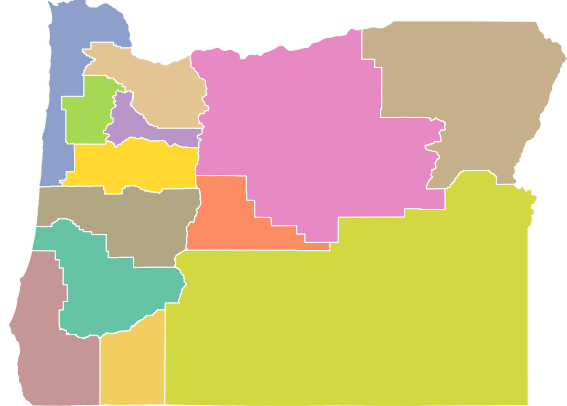
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levels (such as very low income, low income, moderate income, and high income). These comparisons are not available as standard tables in the American Community Survey (ACS).

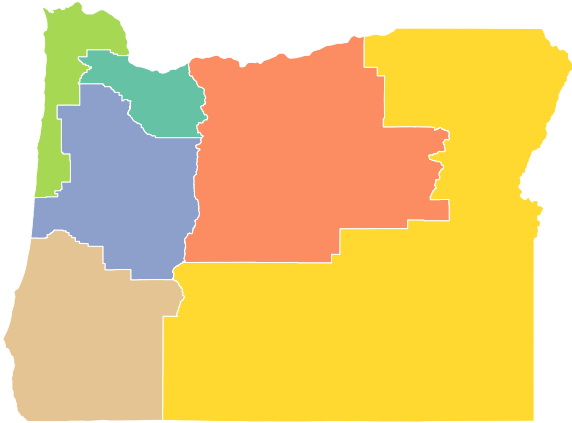
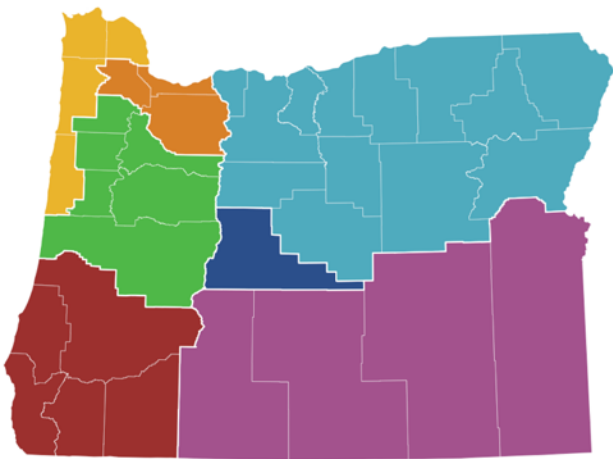
- Potential margins of error depending on the number of people in each region
- The amounts of similarity and dissimilarity within housing markets in a region (e.g., the differences in housing markets in Deschutes County, other counties in Central Oregon, and counties along the Columbia River Gorge)
- Commute flows across the state, which help define connections between where people live and work within a region
- Input from stakeholder discussions
- House Bill 2003 calls for analysis and reporting for “Metro,” which is the Portland Metro urban growth boundary (UGB). The Metro UGB is not a geography for which Census data is available. The best approximation is the three-county area that the Metro UGB is located within, including Multnomah, Clackamas, and Washington Counties.

Exhibit 114. RHNA Regions Considered in the Analysis, Oregon

Source: ECONorthwest using PUMA-derived regions.

Geographic Regions Considered	Description of Regions and Considerations
	<p><b>Map A. PUMAs with Regional Solutions regions</b></p> <p>The colored areas on the map are the Regional Solution Teams’ regions. The black outlines show PUMAs throughout Oregon.</p> <p>PUMAs cross regions in several areas, such as in Eastern Oregon, where the Greater Eastern Oregon Region is broken into three different PUMAs. As a result, we could not use the Regional Solution Teams’ regions to define the regions for this project.</p>
	<p><b>Map B. More regions</b></p> <p>This map shows 13 regions in Oregon, all of which have one or more PUMAs in the regions. Some counties, such as Deschutes County, is a single PUMA and the county is shown as its own region. While other regions, such as the Portland region, have both multiple PUMAs and counties within the region. This was the map originally suggested for use.</p>



Geographic Regions Considered	Description of Regions and Considerations
	<p><b>Map C. Fewer regions - Preferred map for the Beta RHNA</b></p> <p>This option is similar to Map B, but with six regions, rather than 13 regions. The advantage of having fewer regions is having larger amounts of sample data in PUMS, thus decreasing margins of error. In addition, the regions are drawn, as well as can be, to combine areas that have common housing markets conditions. For example, most coastal counties are grouped into two regions.</p>
	<p><b>Map D. Revised regions - Preferred map for the Recommended RHNA</b></p> <p>This option builds from Map C but separates Deschutes County from the North Central region. The primary reason for this move is that expected growth in Deschutes County is substantially higher than in the other North Central counties. This map also puts Baker, Union, Wallowa, and Umatilla counties into the North Central region because commuting is common between cities along Interstate 84.</p>

## Selected regions for the Beta RHNA

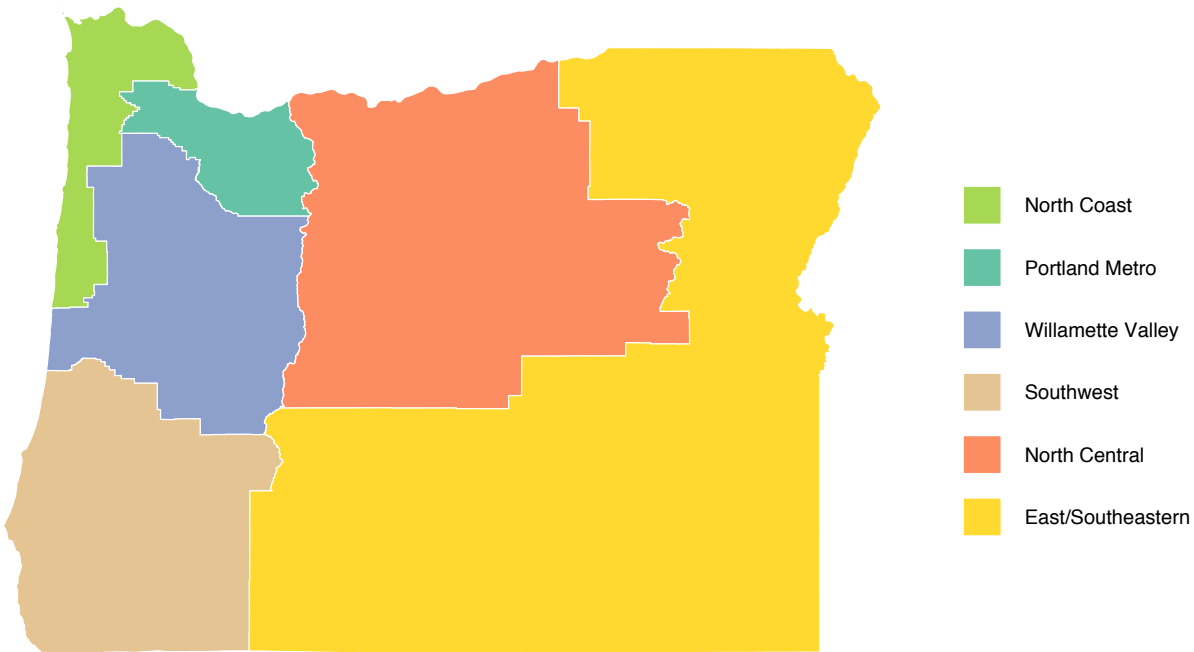
Exhibit 115 presents the regions selected for use in this analysis. We chose Map C from Exhibit 114 for the following reasons:

- The regional boundaries are all based on PUMA geographies, with multiple PUMAs in each region.
- With multiple PUMAs in each region, the margin of error on analysis, especially detailed analysis that compares housing type and household income, is more likely to be an acceptable margin of error.
- Discussions with stakeholders suggested that larger geographies are generally preferable to smaller regions, assuming that the allocation method would direct housing need within a region. For example, within the Willamette Valley region, the housing markets in areas such as Polk and Marion Counties are considered together. The region

with the greatest diversity in housing markets is the North Central region, which includes places like Bend, Madras, Hood River, The Dalles, and very rural areas such as Wheeler County.

Exhibit 115. Regions used in the Beta RHNA, Oregon, 2020

Source: ECONorthwest.



### Refinements of regions for the Recommended RHNA

In examining the results from the Beta RHNA and further examining commute flows (Exhibit 117), we identified the following issues:

- The forecast for growth in Deschutes County is substantially greater than growth expected in the rest of the North Central region. When we removed Deschutes County from the North Central region, the allocation of new growth decreased substantially to other cities in the North Central region, such as Hood River or The Dalles. Much of this new growth is forecast for places like Bend and Redmond.
- The commute flows in Exhibit 117 show that Bend is connected to places like Redmond, Madras, and Prineville but not within the broader North Central region.
- The commute flows in Exhibit 117 show that places in the North Central and northern part of the East/Southeastern regions are connected, such as Hood River, The Dalles, Pendleton, La Grande, and Ontario. In truth, these cities are linked by Interstate 84.

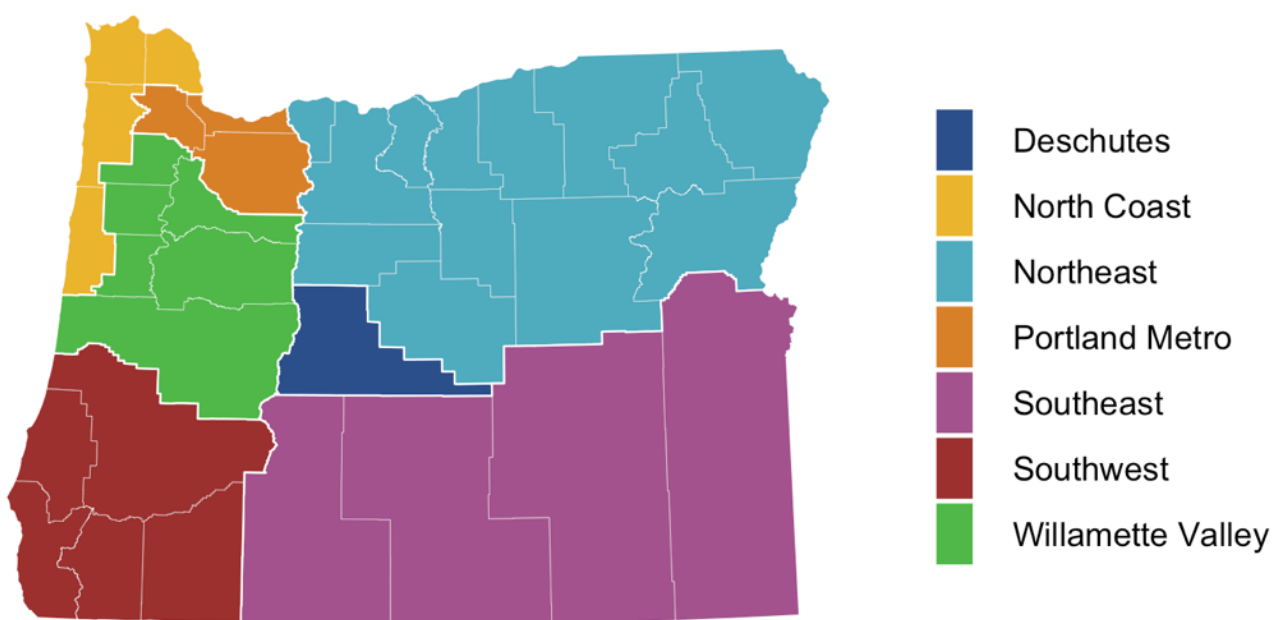
As a result, we moved Deschutes into its own region and moved Baker, Union, Wallowa, and Umatilla counties into the newly configured Northeast region. That left Klamath, Lake, Harney, and Malheur Counties in the newly reconfigured Southeast region. These changes were possible within the boundaries of PUMAs (shown in Map A in Exhibit 114).

The commute flows in Exhibit 117 show a strong connection between the Salem area and the Portland region. We considered moving Marion, Polk, and Yamhill Counties from the Willamette Valley region to the Portland Metro region. We decided against this move for three reasons: (1) the regulatory framework for the urban areas within the Portland Metro Urban Growth Boundary is substantially different than the rest of the state, (2) the data available about housing in the Portland Metro region is different and better quality than the data available in the rest of the state,<sup>48</sup> and (3) there is also a strong connection in commuting between Salem and Eugene. As a result, we left Marion, Polk, and Yamhill Counties in the Willamette Valley region.

The Recommended RHNA is based on the map in Exhibit 116.

**Exhibit 116. Regions used in the Recommended RHNA, Oregon, 2020**

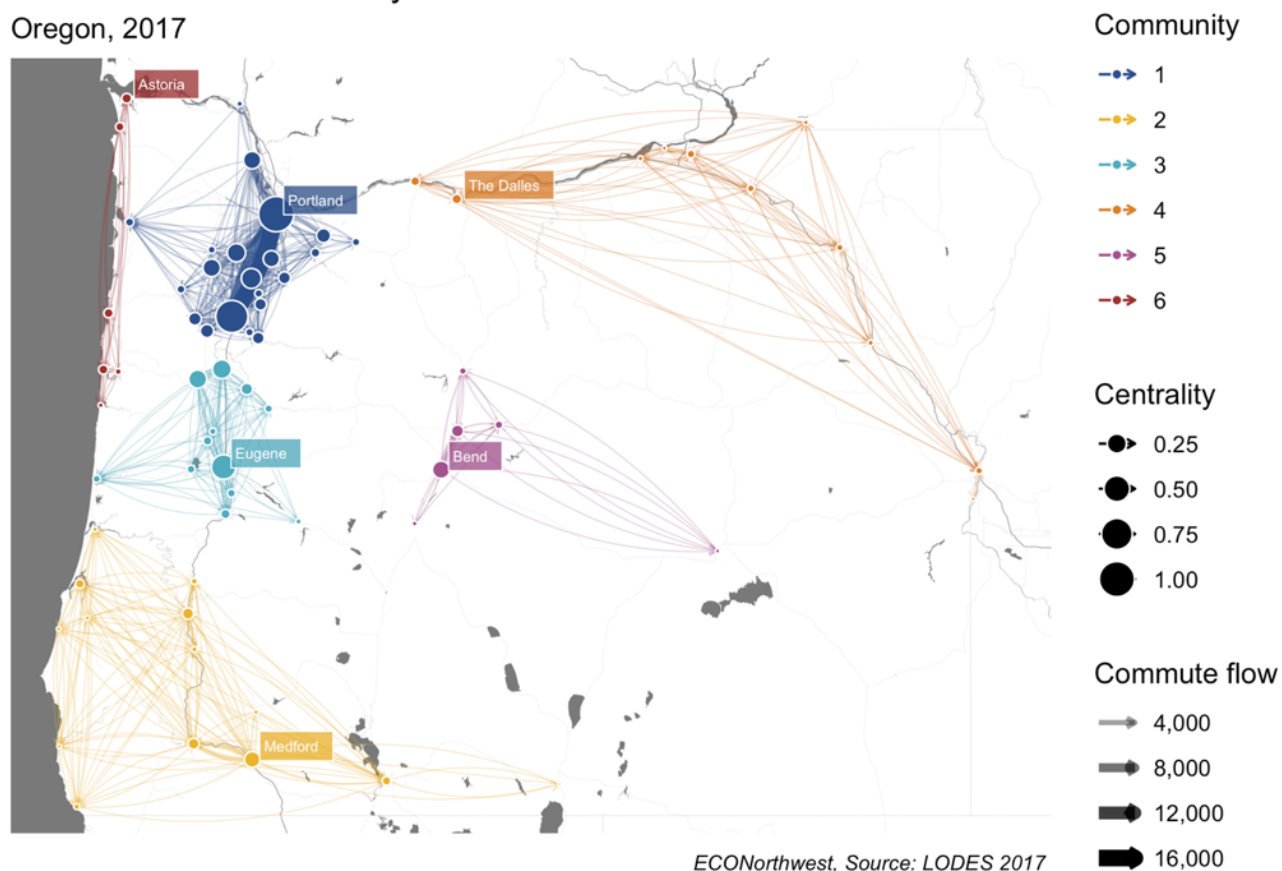
Source: ECONorthwest.



<sup>48</sup> For example, the Regional Land Information System (RLIS) database and the Multifamily Housing Inventory database include information about the existing housing stock in Clackamas, Washington, and Multnomah Counties. This type of information is unavailable in most parts of Oregon.

Exhibit 117. Commute Flow Community Detection, Oregon, 2017  
Source: ECONorthwest, LODES 2017.

## Commute flow community detection Oregon, 2017



**Notes:**  
**Community:** The grouping of nodes that display a statistically significant relationship with each other based on the volume of flow between them. Flows between different communities is not displayed.  
**Centrality:** The degree to which a node serves as a major hub to other nodes within the network. Higher values denote more connections, and the node with the highest centrality within its community is labelled.

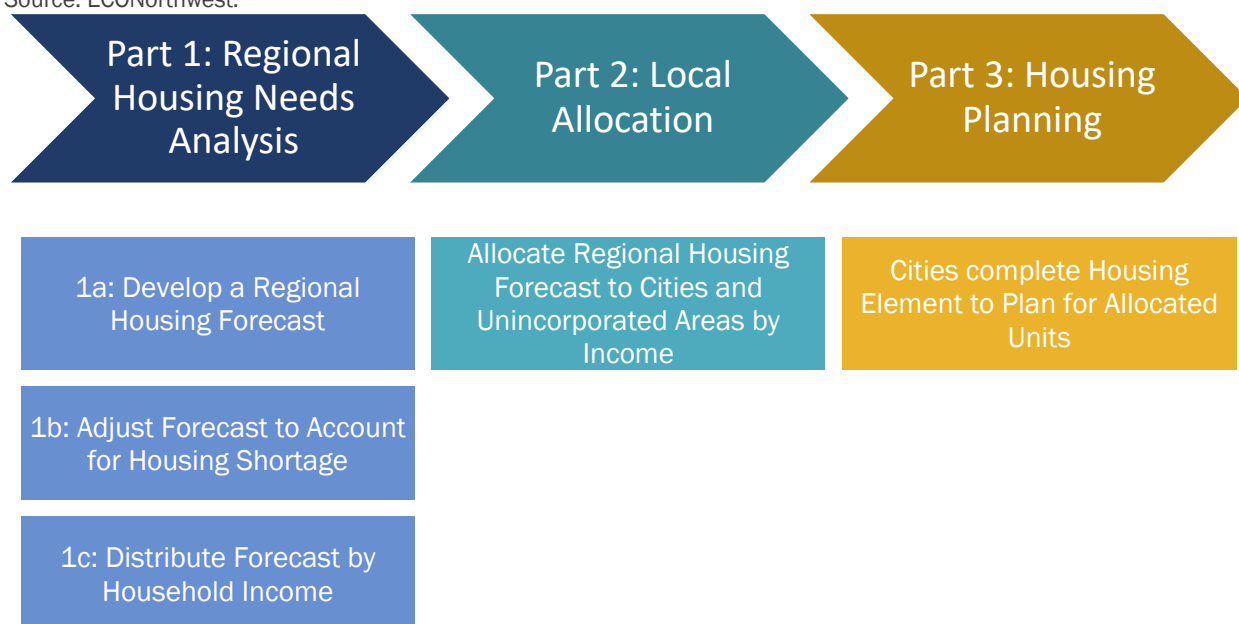
## California's Approach to a Regional Housing Needs Analysis

California's existing regional housing need analysis methodology is most similar to what House Bill 2003 requires, and the research in this report builds from a model that has been used statewide in California for decades. In this report, we use information about California's regional housing needs analysis that was correct as of 2019. Since then, California's regional housing needs analysis requirements have had many possible methodology updates discussed, including AB3040. This bill was introduced in the 2020 legislative session, and would provide credits towards local jurisdictions unit allocations by providing quadplex zoning by right in neighborhoods currently with exclusionary single-family detached zoning.

Exhibit 118 shows the three major parts of the California system: (1) The RHNA is completed by the State of California's Housing and Community Development Department (HCD). It determines the number of units needed in each income category to accommodate regional growth for the planning period. (2) Each region then undertakes its own unique process to allocate those projected units to the local jurisdictions, so that each city has a target for the number of units that it must produce to accommodate expected growth by income category. (3) Local governments must then adopt a housing element for their comprehensive plans that identifies the actions they will take to support and enable unit development.











Exhibit 118. Generalized Overview of the California RHNA Framework

Source: ECONorthwest.



The California RHNA method is a reasonable starting place because it is so similar to what HB 2003 requires, both in terms of requirements in HB 2003 and our interpretation of the outcomes desired from HB 2003. However, it also has several consequential differences, as described in Exhibit 119.



Exhibit 119. Comparison of the California RHNA to the Requirements of House Bill 2003 for a RHNA  
Source: ECONorthwest.

California's RHNA method is similar to the method required by House Bill 2003 because it...	California's RHNA method is different from the method required by House Bill 2003 because it...
<p>Is implemented statewide</p>  <p>Sets unit production targets for local governments</p>  <p>Accounts for the regionality of housing markets; projects housing need first at the regional level, allocating that need to local jurisdictions</p>  <p>Explicitly accounts for units needed by income category, to focus attention on unit affordability</p>  <p>Attempts to account for current underproduction of units as well as projected future need</p> 	<p>Does not result in housing production targets by unit type (single family, missing middle, multi-family)</p>  <p>Has a shorter forecast period. House Bill 2003 requires this analysis to project 20 years of need. California's method projects six to eight years of need</p>  <p>Draws on datasets that are not available in Oregon. California's Department of Finance tracks household formation rates, actual unit production and demolitions at the jurisdictional level, and other key variables.</p>  <p>Does not directly account for households experiencing homelessness<sup>49</sup></p>  <p>Lacks analysis that supports a consistent approach to address equity<sup>50</sup> across various demographic groups<sup>51</sup></p>  <p>Does not explicitly address equity in need for distribution of publicly supported housing, as required in House Bill 2003.</p>

<sup>49</sup> Addressing homelessness is not a direct requirement of HB 2003 but the project team thinks it is central to the issues addressed in Oregon's RHNA to get to the intended outcomes of HB 2003, including estimating the total shortage of housing.

<sup>50</sup> Addressing equity is not a direct requirement of HB 2003 but the project team thinks it is central to the issues addressed in Oregon's RHNA to get to the intended outcomes of HB 2003.

<sup>51</sup> The California RHNA analysis itself does not provide information about unmet housing needs across different demographic groups. But some regions address equity issues as part of their allocation processes. In 2018, California Assembly Bill 686 required that cities' housing elements are consistent with federal laws to affirmatively further fair housing.

	 <p>Does not calculate housing stock and shortage at the city level.</p> 
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For these reasons described in the body of this report, the method that results in this report's findings is substantially different from the California method, even though its structure and objectives are similar. However, because it was our starting place for this analysis, the California method is referenced throughout this document. We have also borrowed terminology from California. We refer to the regional need projection as a *Regional Housing Need Analysis* (or *RHNA*) and to the local (city-level) unit targets, which derive from the RHNA, as an *allocation*.

## RHNA and Allocation to Cities

This section details the methodological steps for conducting the RHNA and local allocation analysis. We organize the methods into six separate steps, and for each step, we include a detailed analysis of the options considered prior to selecting an approach. The steps in the methodology are shown in Exhibit 120, which documents each step as well as the various approaches considered for each step. In Exhibit 120, boxes outlined in green identify the approach(es) selected for the Beta RHNA; boxes outlined in orange signify a change in the approach option(s) selected for the Recommended RHNA.

In developing the Beta RHNA, we started with an examination of the methods that California use to conduct a RHNA and allocate housing to cities. We quickly realized that, while the California approach provided guidance, developing a RHNA to meet the requirements of HB 2003 (which are fundamentally different than California's requirements) would require deviating sharply from California's approach.

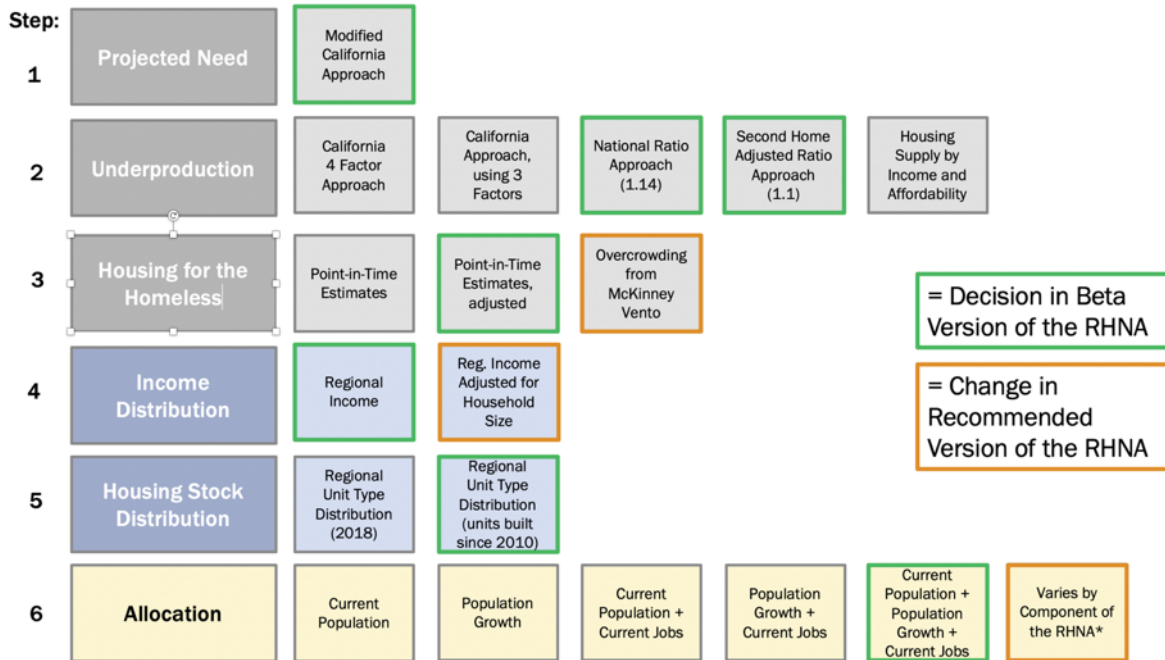
We built the Recommended RHNA from the Beta RHNA, with the intention to better fit Oregon's unique circumstances and incorporate approaches to increasing the likelihood of production of affordable housing and better meet the direction of HB 2003 to produce a forecast based on an equitable distribution of publicly supported housing within a region.



## Exhibit 120. Six Steps to Conducting a RHNA for Oregon, Including Approach Options

Source: ECONorthwest.

\*Note: Exhibit 17 shows the allocation approach used in the Recommended Version of the RHNA



The sum total of housing need in a region has three components (shown as Step 1, 2, and 3 in grey in Exhibit 120 and outlined below).

- Projected need:** the number of units needed to accommodate future population growth over 20 years. Statewide, this sums to 443,000 units, or 76% of the total needed units. To project need, we used the regional population forecasts from Portland State University's Population Research Center, and transformed the population forecast to a number of households using PUMS data for the current average number of people per household in each region. Household growth is then projected over a 20-year period and multiplied by the national ratio of housing units per households (1.14) as the target ratio.
- Underproduction:** the number of units that have not been produced to date in the region, but are needed to accommodate the current population. Regional need sums to 110,000 units, or 19% of the total needed units in the state. We estimated underproduction relative to the ratio of households to units nationally, adjusted in some regions to account for second homes. Regions that have produced fewer units than the national ratio suggests that they have produced fewer housing units than are needed to accommodate the region's current population.

The use of a national ratio of housing units to households is a defining feature of the RHNA methodology and is used in each of the components of regional need.

Housing markets need more than one unit for each new household to allow for vacancy, demolition, and second home production. For every household in the U.S., our national housing stock has 1.14 units. Oregon's communities will need to maintain at least this ratio in its housing market to accommodate future growth.

- **Housing for the homeless:** the number of units needed to house those who are currently experiencing homelessness and are otherwise unaccounted for in the data. These households need units right now, and without this component, would be captured in neither the projected need nor the underproduction components. Statewide, this sums to 29,000 units, or 5% of the total needed units.

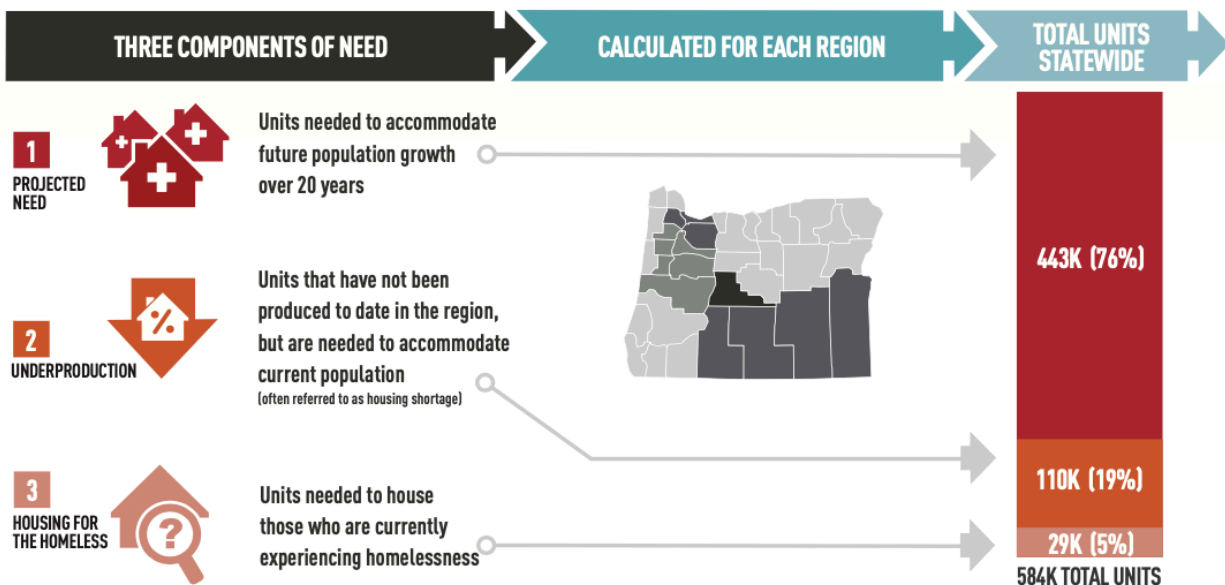
The sum of total housing need is then allocated into affordability categories housing types in Steps 4 and 5.

Allocation of RHNA represents Step 6 (shown in yellow in Exhibit 120). Once all units are estimated and distributed by income and housing type (Step 1 through 5), the RHNA is complete for the region. The allocation step describes the process of allocating the regional results down to local jurisdictions (cities and unincorporated areas). The first step in the allocation is determining the number of units each city is allocated.

Exhibit 121 shows the three components of need used to develop the RHNA. The remainder of this appendix describes the steps involved in executing the RHNA methodology.

Exhibit 121. Components of the Estimation of Total Housing Units Needed by Region

Source: ECONorthwest, 2020



## Step 1: Project regional housing need

Step 1 involved developing a 20-year housing forecast for regions in Oregon based on population growth.

### Step 1: Key analytic issues

- *Data Availability:* In Oregon, two primary sources for population / household projections exist. They are Portland State University's Population Research Center population forecasts and Metro's household forecasts. PSU's forecasts are developed for cities and counties outside of Metro's urban growth boundary (UGB) and Metro's forecasts are developed for cities and portions of counties inside of Metro's UGB. These are the forecasts that cities are required to use when completing a housing needs analysis consistent with Goal 10.<sup>52</sup> In addition, HB 2003 specified that the PSU forecast should be considered in a forecast of units.<sup>53</sup>
- *Market Dynamics and Household Characteristics:* The project team used information about group quarters, household size, and housing vacancy and used 2018 PUMS and ACS data.
- *Units needed per household:* The ratio of future units to future households will have implication for future housing vacancies and housing performance. We discuss this issue more below.

### Step 1: Approach

We first looked to California's RHNA method to inform our development of regional housing forecasts based on a sample spreadsheet that California's Department of Housing and Community Development (HCD) used to develop the RHNA for the Sacramento Region. In attempting to replicate the California method, we found that California uses data not available in Oregon, such as an inventory of housing by type of housing for each city or a database with annual constructions and demolition data by city. The State of Oregon does not have access to these types of databases for each city in Oregon and few cities have this type of information readily available. For Step 1 we follow the process outlined in Exhibit 122 and described below.

#### Exhibit 122. Overview of Approach for Step 1: Project Housing Need

Source: ECONorthwest.



<sup>52</sup> OAR 660-032, Population Forecasts.

<sup>53</sup> House Bill 2003 Section 1 part 5(b).

1. **Begin with Population Forecast.** This analysis first takes the population forecast for counties (population projected for 2040, less population projected for 2020) and sums them by region. This population forecast provides the foundation for forecasting housing growth over the 2020 to 2040 period.
  - *Data source used:* **Portland State University’s Population Research Center population forecasts for each county.** We used the most current version of PSU’s forecasts for each county. In all cases, we estimate for forecast of growth from 2020 through 2040.
2. **Remove Group Quarters.**<sup>54</sup> Because persons in group quarters do not live in standard housing units, we deduct the population in group quarters from the population forecast. To make this deduction, we assume that the same share of people will live in group quarters in the 2020 to 2040 period as the share of people living in group quarters as of 2018. California’s method makes the same deduction using the same method.
  - *Data source used:* **US Census American Community Survey (ACS), (2018).**<sup>55</sup> The ACS provides data about the population in group quarters as county-level estimates, which we aggregated to our regions. Then, we calculated the percent of the population living in group quarters by region. We apply the percentages to the population forecast for each region.
3. **Convert Population Forecast to Household Forecast.** Next, the analysis converts the population forecast to a household forecast, using an average household size by region. Like California, we assume that household size remains stable over the 20-year period.
  - *Data source used:* **U.S. Census Public Use Microdata Sample (PUMS), (2018).**
4. **Apply a Ratio of Units per Household.** Finally, the analysis converts the household forecast to a housing unit forecast using a ratio of dwelling units for every new household. The reason for this step is to maintain a healthy housing market with proper vacancy rates, an absence of overcrowding and cost burdening, and room for demolitions and replacements over time. Accounting for this healthy housing market requires the planning and construction of more than one dwelling unit for every new household added. The potential approaches are:
  - a) *Ratio of 1:1:* To calculate future need in California, the Department of Finance assumes that every new household needs a new dwelling unit. This is a 1:1 ratio of new households formed to new dwelling units needed.

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<sup>54</sup> The Census Bureau's definition of group quarters is as follows: “A group quarters is a place where people live or stay, in a group living arrangement, that is owned or managed by an entity or organization providing housing and/or services for the residents. The Census Bureau classifies all people not living in housing units (house, apartment, mobile home, rented rooms) as living in group quarters. There are two types of group quarters: (1) institutional, such as correctional facilities, nursing homes, or mental hospitals and (2) Non-Institutional, such as college dormitories, military barracks, group homes, missions, or shelters.”

<sup>55</sup> We use 2014–2018 five-year ACS estimates when 2018 one-year ACS estimates are not available.

- b) Ratio of 1.14: The U.S. averages 1.14 dwelling units for every one household based on the current housing stock in 2018.

- *Data source used: U.S. Census American Community Survey (ACS), (2018).*

## Step 1: Results

Exhibit 123 shows the results for the new housing unit forecast for the 2020-2040 period for the Beta RHNA regions and the Recommended RHNA regions.

Exhibit 123. Projected Need for the 2020–2040 Period Used in the Beta and Recommended RHNA  
Source: ECONorthwest using PUMS data (data rounded).

Beta RHNA Regions	Housing Unit Forecast for 20-years	Recommended RHNA Regions	Housing Unit Forecast for 20-years
Portland Metro	223,783	Portland Metro	224,683
North Coast	13,378	North Coast	14,731
Willamette Valley	100,053	Willamette Valley	101,704
Southwest	32,804	Southwest	34,896
North Central	60,321	Deschutes	49,856
East/South East	4,810	Northeast	16,731
		Southeast	965

**Step 1 selected approach:** We selected the national target ratio of 1.14 new units required per new household formed to plan for a housing market that provides a better balance of housing units per household.

If we assumed a 1:1 ratio, we would not be planning for an appropriate housing vacancy. Rather, we would be consistently underbuilding housing over the planning period.

We use the same Step 1 approach for the Beta and the Recommended RHNA.

## Step 2: Estimate current underproduction

Currently, the local housing needs analysis does not account for historical underproduction of units. The second step in the RHNA is to understand and account for historical underproduction of housing.

One of the key reasons that Oregon has a housing affordability crisis is that housing production has not kept pace with population growth and household formation. The consequence of underproduction is rising rents and sales prices, which creates increasing affordability pressure on Oregon's households, especially the lowest income households. The result is increasing cost burden, especially for renter households, as well as overcrowding and homelessness. While simply increasing production of housing will not solve the affordability crisis on its own, increasing production would slow or reverse future increases in rents and sales prices and provide opportunities to decrease overcrowding and homelessness.

### Step 2: Key analytical issues

Estimating underproduction is challenging, in that it is an estimate of what was not done (i.e., production of enough housing to keep pace with household growth). The challenge of estimating underproduction is the challenge of proving a negative. This step must be undertaken carefully, using the best available data. We considered the following key questions while developing our approach:

- Should we estimate underproduction regionally or locally?
- Should we adjust the regional housing forecast, like California does?<sup>56</sup>
- How do we avoid over or under counting underproduction, given that we are separately counting housing for the people experiencing homelessness (Step 3) and future populations (Step 1)?

To ensure we are selecting the best approach, we tested California's adjustment approach as one option to calculate underproduction, as described below. Then we tested their adjustment approach with a small modification as another option. Finally, we modeled three other approaches, each of which had merits and drawbacks, as described below.

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<sup>56</sup> California addresses current housing shortage by making four adjustments to their housing forecast (our Step 1). California makes adjustments for overcrowding, vacancy, unit replacement and demolitions, and cost burdening.

## Step 2: Approaches

Our team tested five approaches to estimating underproduction, which is an estimate of shortage of housing units in Oregon.

### A – California four factor approach

Approach A used California’s approach to account for units that are missing from the housing supply by adjusting the forecast of housing need upwards to account for overcrowding, vacancy, unit replacement, and cost burdening:

1. **Overcrowding:** Overcrowding is defined as having too many occupants per room in a dwelling unit (thresholds vary). In California, an adjustment is applied to regions’ housing forecasts to account for overcrowding, which is the share of units that have more than one occupant per room.
2. **Vacancy:** Low vacancy rates are a sign of a housing market with insufficient units to meet demand. California’s method used a standard assumption of 5% vacancy, and if rental or for sale dwelling unit vacancy rate was less than 5%, they added units to reach a 5% target. We replicated this for each region and included it in the underproduction estimate.
3. **Unit Replacement and Demolition:** California maintains data on housing replacements and demolitions and uses this data to determine 10-year average replacement/demolition rate assumptions by region. This data set is not available in Oregon. Therefore, we assume a 0.5% replacement/demolition assumption, based on California’s minimum estimate for unit replacement, and applied that factor to our estimate of shortage.
4. **Cost Burdening:** For every cost burdened renter household (households spending more than 30% of their income on housing costs) California measures cost burdening for two population growths - households with 0-50% median household income and households with 50% or more of median household income. In regions with cost burden rates higher than the national cost burden average, California adds the difference in cost burden rates to the future housing need. California considers both renter households and owner households in its cost burden adjustment. In this analysis, we added one dwelling unit to the underproduction estimate for every cost burdened renter household over the national cost burden rate.

The advantages of this method are it incorporates information about issues that are clearly issues for the underproduction of units, like overcrowding or low vacancy rates. The drawbacks of this method are that it is based on data unavailable in Oregon (such as unit replacement and demolition data) and the poor quality of vacancy data from the ACS. Also, this approach assumes that the national rate of cost burdening is an acceptable level of cost burdening. More importantly, adding one unit for every cost burdened household likely overestimates the housing underproduction.



As a result, we did not select this approach to estimating underproduction.

#### B – Modified California approach

Approach B of Step 2 modifies Approach A to address the overestimation in Approach A. This approach holds three of California’s four adjustment factors static, only modifying the cost burden factor. Instead of using a comparison to the national cost burden rate (as in Approach A), in this approach we assumed that each cost burdened household would need a new, affordable unit. The project team rejected this approach as it overstates underproduction by assuming that every cost burdened household needs a new unit. In reality, cost burdened households need an *affordable* unit.

#### C – National ratio approach

Approach C estimates underproduction using a single metric: housing unit to household ratio. The metric is based on the national ratio of 1.14 dwelling units for every one household, based on current housing stock in 2018. In this approach, the team identified regions where the *existing* ratio of units to households falls below the national average of 1.14. For these regions, we calculate how many units would be needed to reach the national average. Those units are the estimated underproduction. This approach is conceptually similar to the ratio approach taken in Step 1. The difference is that we apply the ratio to existing households rather than projected new households.

#### D – Second home adjusted ratio approach

In Approach C, some regions did not show an underproduction of housing, including the North Coast, North Central, and East/Southeast. We hypothesized the reason these areas did not show a deficit may be the prevalence of second homes, as two of these three areas are known for their tourism and vacation homes.

Approach D is similar to Approach C but relies on a different ratio for the adjustment, to remove second homes from the ratio of housing units to households. In this approach we use a ratio of 1.1 dwelling units for every one household. The ratio is based on the national ratio that discounts second homes (e.g., vacation homes). In this approach, the team identified regions where the adjusted ratio falls below 1.10 dwelling units. For these regions, we calculate how many units would be needed to reach the 1.10 average.

#### E – Housing supply by income and affordability approach

The final approach tested in Step 2 involves the development of a cross tabulation that compares two variables: (1) housing stock (affordable to households in different income groups) and (2) households by income groups. Approach E seeks to identify any mismatches (i.e., a surplus or deficit of units affordable and available to households by income category). As described later in this chapter (see “Housing Supply by Income and Affordability”), this analysis is conducted at the city level. For Step 2 of the RHNA, we aggregated the city level results to the regional level.

This approach relies on 2012–2016 CHAS data from the U.S. Department of Housing and Urban Development. This timeframe does not match the rest of the analysis (which primarily uses 2018

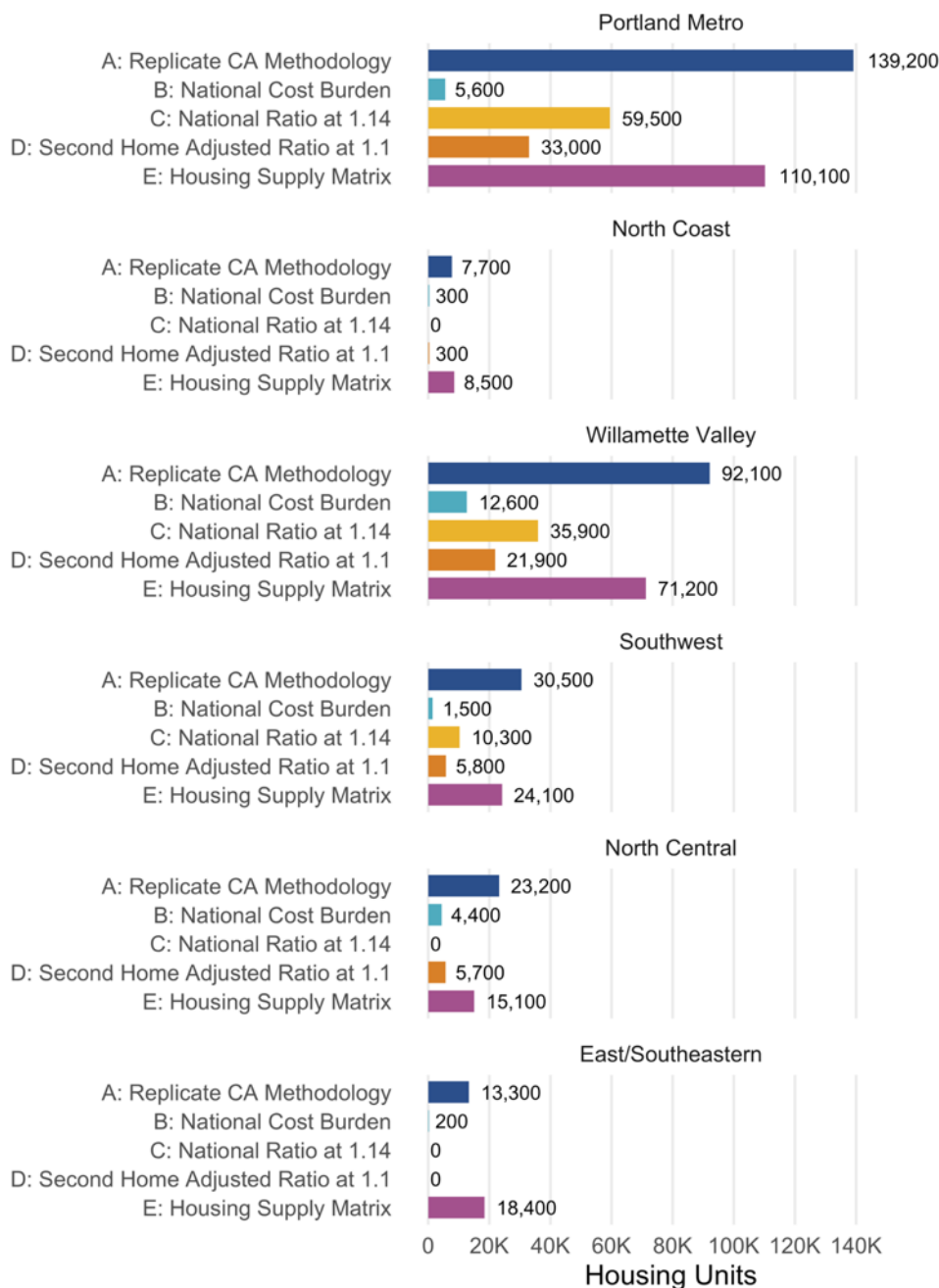
data). In addition, this approach assumes that each cost burdened household will need an additional unit. Cost burdened households need an additional *affordable* unit. Using this approach would result in an overproduction of housing. For these reasons, we did not select this approach for estimating underproduction.

## Step 2: Comparison and results of tested approaches

Exhibit 124 compares units estimated as underproduction using the five approaches.

### Exhibit 124. Comparison of Shortage Approaches, Beta RHNA, 2020

Source: ECONorthwest using PUMS and CHAS data.



We selected a combination of approaches C and D (see below) because they increase the number of dwelling units relative to households, directly improving the issues of underproduction. Approach A and B rely on data that is either poor quality or not available in

Oregon. Approach E is based on poor quality data and would result in potential overproduction of housing.

Exhibit 125 shows the estimates of underproductions in the Beta and Recommended RHNA. The estimate of underproduction only changed for regions that changed, Deschutes, Northeast, and Southeast.

Exhibit 125. Underproduction Estimates Used in the Beta and Recommended RHNA  
Source: ECONorthwest using PUMS data (data rounded).

Beta RHNA Regions	Underproduction Estimates	Recommended RHNA Regions	Underproduction Estimates
Portland Metro	59,448	Portland Metro	59,448
North Coast	295	North Coast	295
Willamette Valley	35,913	Willamette Valley	35,913
Southwest	10,287	Southwest	10,287
North Central	5,719	Deschutes	4,837
East/Southeast	-	Northeast	-
		Southeast	-

**Step 2 selected approach:** We selected two approaches for Step 2: Approach C and Approach D. We used approach D for regions with an above average amount of second homes (i.e., North Central and North Coast). All other regions relied on Approach C.

We use the same Step 2 approach for the Beta and the Recommended RHNA. However, the regions changed for the Recommended RHNA (we instead used approach D for the Recommended RHNA regions: Deschutes, North Coast, and Northeast).

### Step 3: Estimate housing for the homeless

Step 3 estimates the amount of housing needed to accommodate the population of people experiencing homelessness in Oregon by region.

#### Step 3: Key analytical issues

- *Equity Outcomes:* Local housing needs analyses do not attempt to account for units needed for people experiencing homelessness. The RHNA offers a distinct opportunity to develop new planning protocols that enable more equitable housing outcomes for people experiencing homelessness in Oregon. It was particularly important to the project team that the analysis estimated the number of units needed to accommodate this group. We expected the estimate of need for this group to be large—beyond what could be reasonably supported through current public subsidy or policy. This does not negate the need to understand and plan for these units.
- *Data Corrections and Limitations:* In addition to being important from an equity perspective, accounting for an estimate of current number of people experiencing homelessness in this RHNA was practical because Step 1 and Step 2 rely on Census data and PSU PRC data. Many people experiencing homelessness, particularly those experiencing *chronic* homelessness,<sup>57</sup> may not be fully counted in the Census. PSU's population forecast program does not forecast houseless populations as a specific subgroup.

Finally, we understand that most data sources that enumerate homelessness are rife with limitations. We considered options for estimating the number of people experiencing homelessness (as described in Appendix A) and selected the three approaches below to give the best available estimate.

#### Step 3: Approaches

We tested three approaches in Step 3.

##### A – Point-in-time estimate

One source for information about the number of people experiencing homelessness in Oregon is the Point-in-Time count (PIT). The PIT is a count of individuals and households experiencing homelessness by county on a single night. These data are used for policy and funding decisions. The Department of Housing and Urban Development (HUD) requires that Continuums of Care (CoCs) perform the PIT count during the last ten days of January on an annual basis for sheltered people and on a biennial basis for unsheltered people. The PIT is not comprehensive. Rather, it serves as a snapshot of homelessness at a given point in time. Given this, we know that using this source likely undercounts homelessness in Oregon's counties. Despite this

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<sup>57</sup> Chronic homelessness: people who have experienced homelessness for at least a year—or repeatedly—while struggling with a disabling condition such as a serious mental illness, substance use disorder, or physical disability.

limitation, Option A estimates homelessness using 2019 PIT data. We selected this source because:

- Data was available by county at the time the analysis took place
- Household counts were available (however “only children” households were excluded)
- Sheltered and unsheltered households were counted<sup>58</sup>

In this approach, we combined total sheltered and unsheltered households experiencing homelessness by county. We summed the county-level estimates by region to estimate the number of people experiencing homelessness in each region.

#### B – Point-in-time estimate with multiplier

Option B attempts to address shortcomings of the PIT counts. Literature is clear that PIT counts undercount people experiencing homelessness. The counts simply miss some individuals and households at the time that the count is conducted—and the limited research on this topic suggests that the actual number of people experiencing homelessness (either sheltered or unsheltered homelessness) may be 130–160% higher than PIT estimates.<sup>59</sup>

In addition, many households experience homelessness for only a period of months; counts taken at a specific time do not represent the total number of people who may experience homelessness over the course of an entire year. One study conducted in Portland suggested that the annualized number of households experiencing homelessness may be as much as 190% of the PIT count. In this analysis, we are attempting to estimate the number of additional units needed to provide housing for people experiencing homelessness at any given time, not annualized over a year.

Option B provides a better estimate of people experiencing homelessness. We opted to apply a multiplier of 160% (the higher end of the 130 to 160% undercount range) to achieve our results.

#### C – McKinney Vento data

The McKinney Vento data is collected by school districts. Given the systematic undercount of people experiencing homelessness in the PIT data, it was reasonable to expect that Option B

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<sup>58</sup> The PIT categorizes homelessness in one of two ways: unsheltered and sheltered. Unsheltered homelessness involves a nighttime residence in a public space unintended for human habitation (e.g., street, sidewalk, outdoor camp). Sheltered homelessness involves residence in a place (e.g., shelter, transitional housing) that provides services to individuals and families who would otherwise be unsheltered.

<sup>59</sup> The estimate of a 130% undercount in the PIT is based on the following report: Kim Hopper, Marybeth Shinn, Eugene Laska, Morris Meisner, and Joseph Wanderling, 2008: Estimating Numbers of Unsheltered Homeless People Through Plant-Capture and Postcount Survey Methods. American Journal of Public Health 98, 1438–1442, <https://doi.org/10.2105/AJPH.2005.083600>.

The estimate of a 160% undercount in the PIT is based on the following report: Wilder Research, Homelessness in Minnesota - Findings from the 2015 Minnesota Homeless Study (2016). <http://mnhomeless.org/minnesota-homeless-study/reports-and-fact-sheets/2015/2015-homelessness-in-minnesota-11-16.pdf>

continued to undercount the number of households experiencing homelessness, particularly those who are living doubled up with friends and family, a type of homelessness not captured by the PIT. McKinney Vento data provides information about school-aged children in households experiencing homelessness. We used the McKinney Vento data to help estimate the number of households with children experiencing homelessness in overcrowded situations (defined as “doubled up” in the McKinney Vento data) or in other temporary housing (e.g., motel or hotels).

The McKinney Vento data reports the number of individual children experiencing homelessness. To convert to households experiencing homelessness, we used the average number of school-aged children per household in each region. The result is an estimate of the number of households with children who are living in an overcrowding situation. This estimate cannot account for households without children who are living in overcrowded situations, so we know that we are still undercounting the overall population experiencing homelessness.

### Comparison and results of the tested approaches

Exhibit 126 presents the estimates of people experiencing homelessness for the Beta and the Recommended RHNA.

**Exhibit 126. Estimates of Housing Needed for the Homeless Used in the Beta and Recommended RHNA**

Source: ECONorthwest using PIT and McKinney Vento data.

Beta RHNA		PIT Count	Recommended		McKinney Vento	PIT Count +
Regions	PIT Count	Scaled up by 160%	RHNA Regions	Scaled up by 160%	Estimate of Overcrowding	
Portland Metro	4,408	7,053	Portland Metro	7,053	3,630	10,683
North Coast	924	1,478	North Coast	1,478	831	2,309
Willamette Valley	3,676	5,882	Willamette Valley	5,882	3,091	8,973
Southwest	1,537	2,459	Southwest	2,459	2,119	4,578
North Central	749	1,198	Deschutes	965	230	1,195
East/Southeast	271	434	Northeast	461	438	899
			Southeast	206	332	538

**Step 3 selected approach:** For the Beta RHNA, we selected Option B: *Point-in-Time Estimate with Multiplier* as it represents a more accurate approach to estimate the number of households experiencing homelessness in Oregon, relative to the raw PIT count.

For the Recommended RHNA, we combined Option B and Option C to estimate the number of households experiencing homelessness by region.



## Step 4: Distribute need by income

Step 4 combines the estimated housing need (aggregate of Step 1, 2, and 3) and distributes it by income level for each region in the Beta RHNA. It ensures that Oregon plans for housing affordable to households at all income levels. Exhibit 127 illustrates the relationship of Steps 1 through 3 to the regional income categories as used in the Beta version of the RHNA.

**Exhibit 127. Distribution of Needed Units by Income category in Willamette Valley Region, Beta RHNA**

Source: ECONorthwest.

Note: “du” is dwelling unit and “MFI” is median family income.

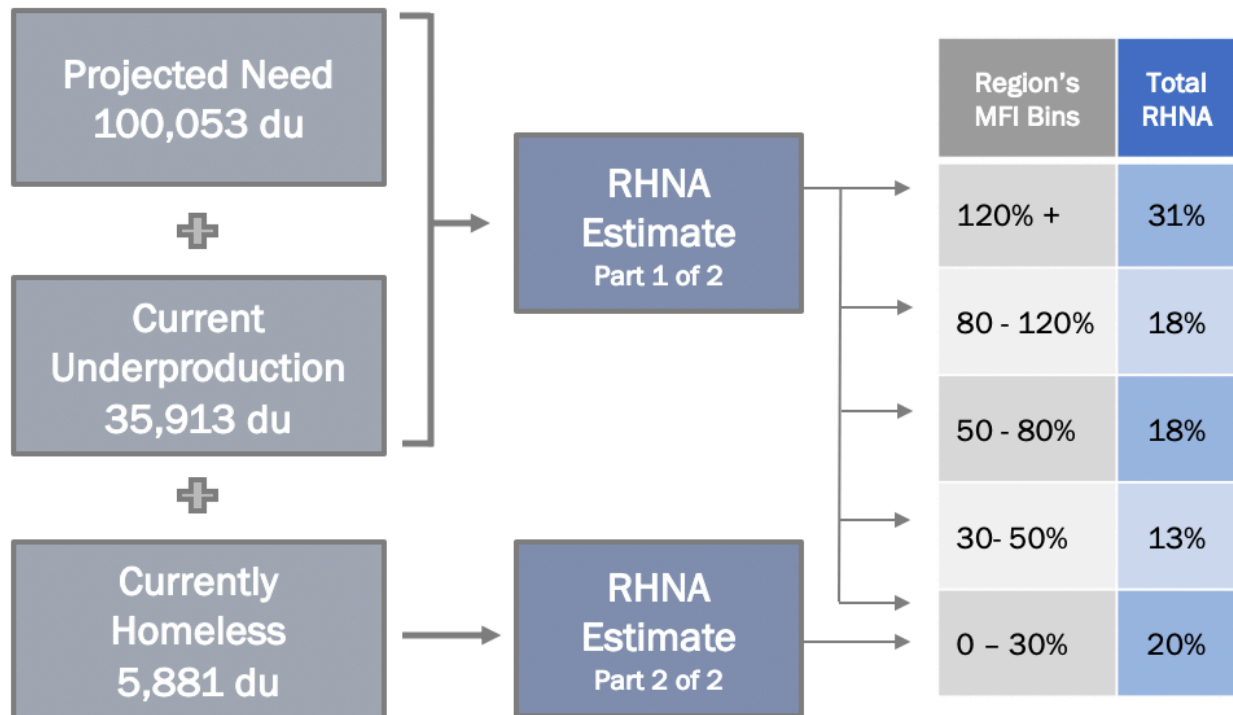
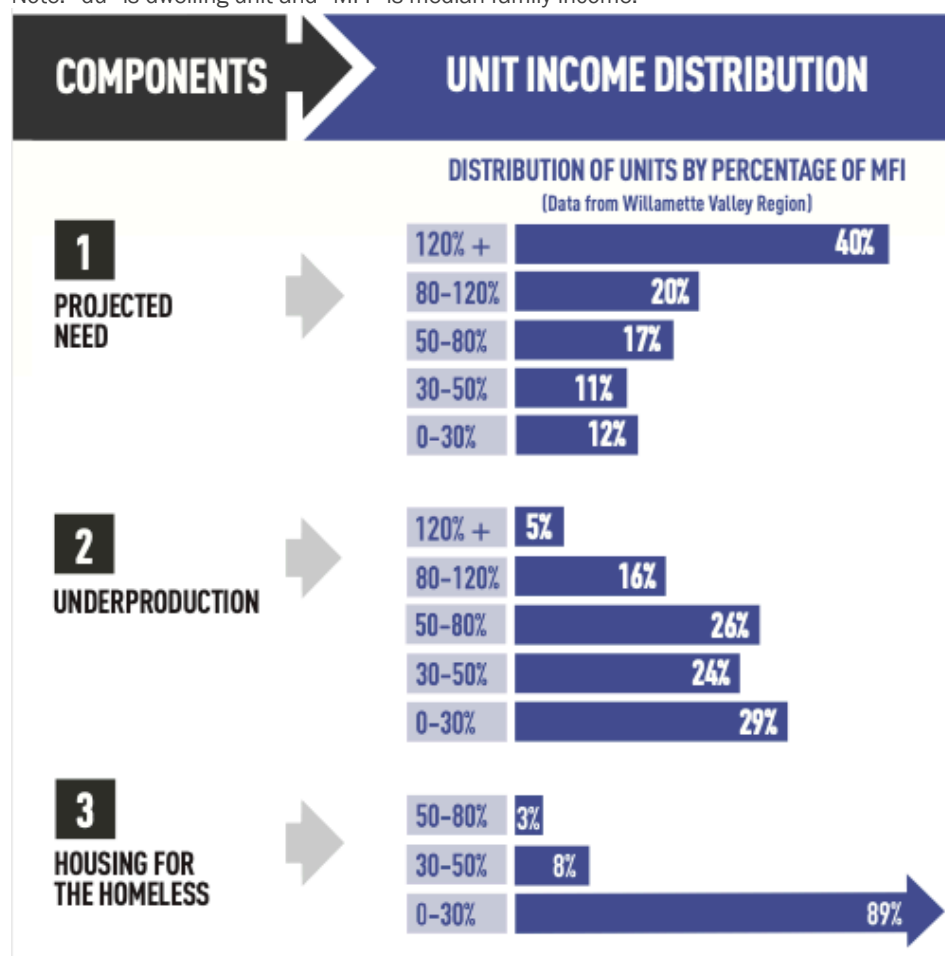


Exhibit 128 shows the methodology used in the Recommended RHNA to distribute housing need by income category. The Recommended RHNA uses a different approach to distributing housing need by income category for each component of the RHNA, as described below in Approach C: Income distribution by component of the Recommended RHNA.

Exhibit 128. Distribution of Needed Units by Income category in Willamette Valley Region, Recommended RHNA

Source: ECONorthwest.

Note: “du” is dwelling unit and “MFI” is median family income.



#### Step 4: Key analytical issues

- *Estimate of a regional median family income (MFI) for 2018.* For some regions, such as the Portland Metro Region, the HUD MFI is the same for all counties in the region. For other regions, such as the Willamette Valley, there are individual HUD MFIs in different counties of the region. For example, in 2018 Lane County’s MFI for a family of four was \$64,100, Benton County’s was \$84,100, Linn’s was \$59,700, Marion and Polk Counties’ was \$67,300, and Yamhill’s was \$81,400.
- *Future income distribution:* In this step, we assume the future income distribution will be the same as the current income distribution. For example, if a region had 12% of

households with income in the 0-30% category, we assumed that in the future 12% of households would be in this income category. This is consistent with the assumptions used in California's method and in Oregon's local housing needs analysis. The project team received feedback from stakeholders that this analysis should apply a future, forecasted income distribution to distribute need (rather than rely on a current income distribution). We chose not to attempt to forecast future income distribution because there are no statewide (or regional) forecasts of income to form the basis of that analysis.

- *Adjusting income for household size.* The regional MFI is for a family of four. When a household is qualifying for a rent subsidized unit, HUD (and OHCS) consider the household size and number of bedrooms in the unit and adjust the qualifying income and unit affordability. Without adjusting income for household size, a studio apartment may appear as affordable as a three-bedroom apartment but on a square foot basis, the studio may be more expensive.

## Step 4: Approaches

### Approach A: Income distribution, not adjusted for household size

Step 4 tested and selected a single approach for the Beta RHNA. We relied on a regional income distribution based on respective regions' existing Median Family Income (MFI). We used the following five<sup>60</sup> groups to distribute need by:

- **Extremely Low-Income:** 0-30% of MFI
- **Very Low Income:** 30-50% of MFI
- **Low-Income:** 50-80% of MFI
- **Medium Income:** 80-120% of MFI
- **High Income:** +120% of MFI

As mentioned above, the challenge for this step is that MFI is only available at the county level, and our study regions are groupings of counties. Thus, to arrive at a single MFI for each region, we proceeded to population weight county MFIs to create a composite estimate for the regions used in this analysis. The population weighting relied on 2020 county population from the Portland State University's Population Research Center forecast. In the example of the Willamette Valley, where the six counties have five MFIs, the regional MFI used in this study was \$68,200.

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<sup>60</sup> California distributes need into four affordability groups. Those groups are: (1) Very-Low Income at 0-50% of MHI, (2) Low Income at 50-80% of MHI, (3) Moderate Income at 80-120% of MHI, and (4) Above Moderate Income at 120% of MHI or more. While Extremely Low Income is still broken out (0-30% of MHI), this group is included in the Very-Low Income category for planning purposes.

Further, HB 2003 only requires four income categories, but OHCS thought that the equity and implementation considerations were important enough to separate out ELI, see Chapter 2.

To provide an example of this step, the following presents the income group results for a hypothetical region with a composite MFI estimate of \$80,000.

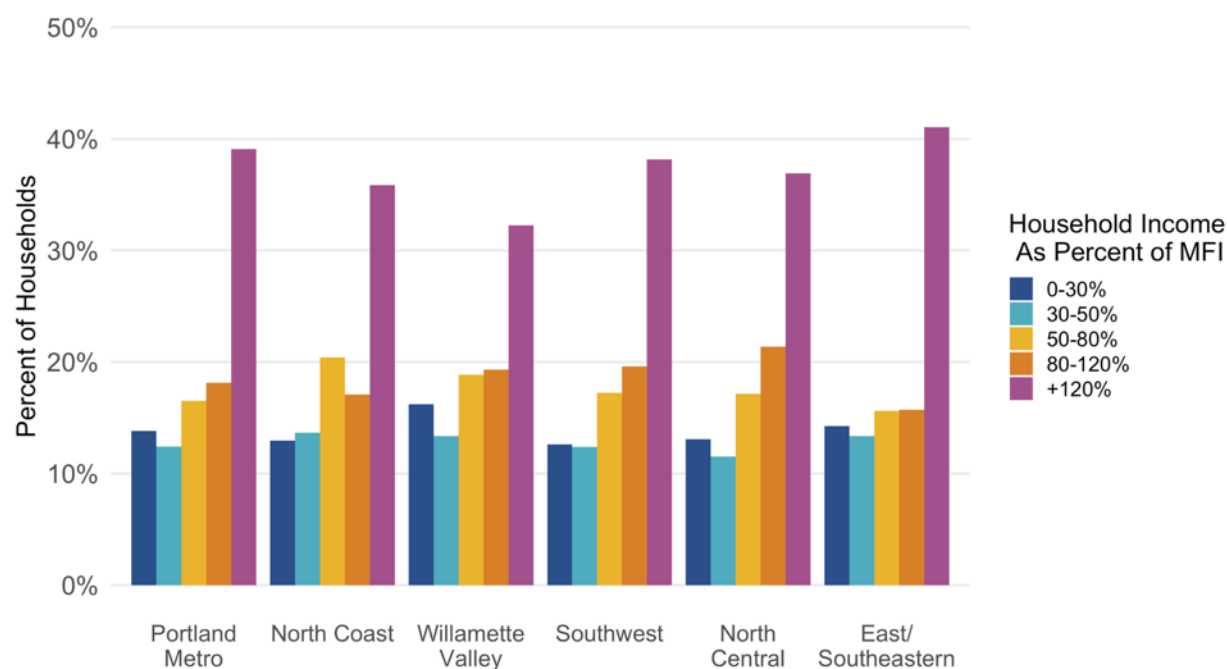
- **Extremely Low-Income:** \$0-\$24,000
- **Very Low Income:** \$24,000-\$40,000
- **Low-Income:** \$40,000-\$64,000
- **Medium Income:** \$64,000-\$96,000
- **High Income:** \$96,000 +

Once all of the income groups by MFI were defined for regions, we placed every household within the region into one of the five income groups based on their incomes. We calculated the share of households in each group. Then, we allowed those percentages to determine the share of units (estimated in Step 1 and 2) distributed into each group. In the Beta RHNA, all of the units for households experiencing homelessness (Step 3) were placed in the extremely low-income category.

Exhibit 129 shows the distribution of households by income for the study regions after grouping each household based on MFI. In the sample displayed in Exhibit 129, we find that a large share of regions' households falls into the +120% group. This implies that a larger share of each regions' *housing need* would similarly fall in the +120% group.

**Exhibit 129. Distribution of Households by Income Category, by Region, Beta RHNA**

Source: ECONorthwest using PUMS data



#### Approach B: Income distribution, adjusted for household size

Approach B starts with the same regional MFIs and income categories that were used in Approach A. Approach B adjusts these income categories to account for household size. The reason for adjusting the income distribution is to align with HUD guidance about housing affordability by household and unit size. When OHCS plans new income-restricted housing development, they use this guidance from HUD.

HUD's guidance on adjustment factors for households are as follows:

- 1-person household is considered equivalent to 70% of MFI.
- 2-person household is considered equivalent to 80% of MFI.
- 3-person household is considered equivalent to 90% of MFI.
- 4-person household is the measure of the reference household size, and is therefore at 100% of MFI
- 5-person household is considered equivalent to 108% of MFI, households of greater than 5 people add 8% of MFI for each additional household member.

HUD's guidance on adjustment factors for dwelling units are as follows:

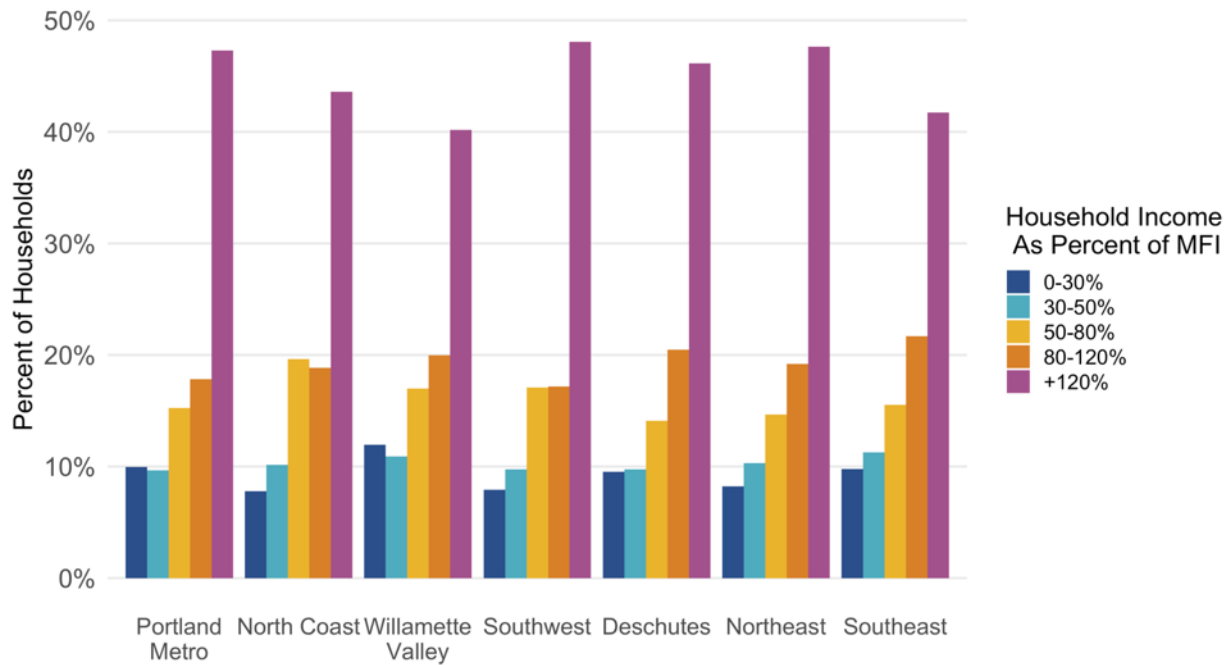
- A studio unit that is considered affordable at 70% MFI is considered equivalent to a unit affordable at 100% MFI.
- A one-bedroom unit that is considered affordable at 75% MFI is considered equivalent to a unit affordable at 100% MFI.
- A two-bedroom unit that is considered affordable at 90% MFI is considered equivalent to a unit affordable at 100% MFI.
- A three-bedroom unit that is considered affordable at 104% MFI is considered equivalent to a unit affordable at 100% MFI.

Exhibit 28 shows income based on these household size adjustments. In general, these changes in distribution decrease the percentage of households in the lower income groupings (less than 50% MFI) and increase the percentage of households in the higher income groupings (more than 120% of MFI). The percentage of households in middle-income groupings (50% to 120% of MFI) stays nearly the same in most regions.

The reason that this methodology is preferable is it more accurately describes affordability by household size and unit size. Using this approach makes it clear that a studio unit with rent above what is affordable to a single-person household at 70% MFI is not an affordable unit, even though it may appear so based on overall average rents.

### Exhibit 130. Distribution of Households by Income Adjusted Category, by Region, Recommended RHNA

Source: ECONorthwest using PUMS data

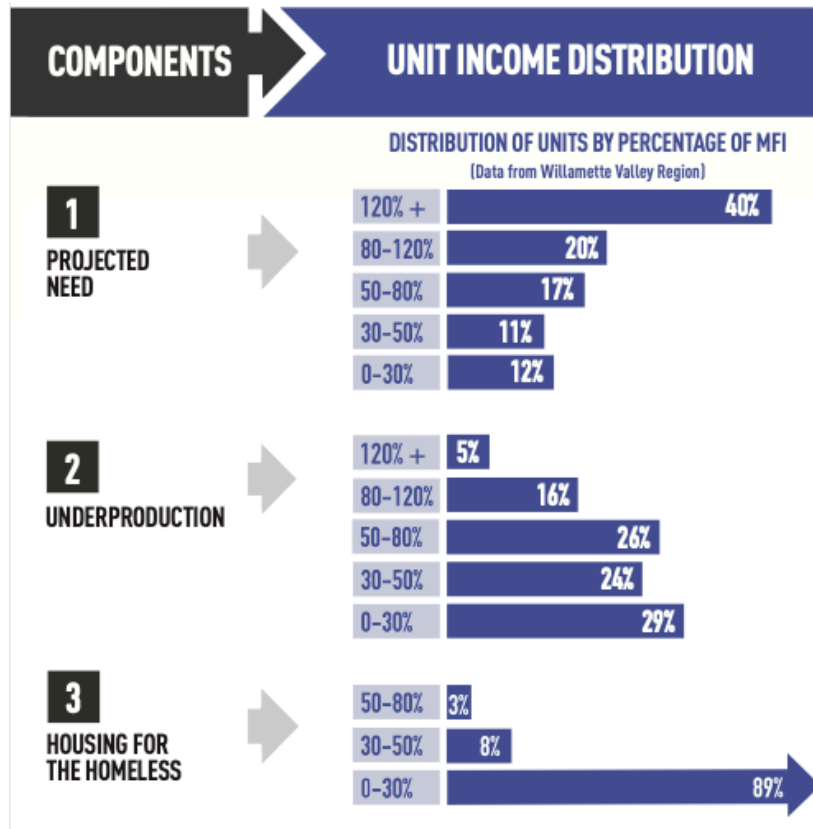


#### Approach C: Income distribution by component of the Recommended RHNA

Approach C started with the adjusted distribution households by income in Approach B (Exhibit 130). In Approach C, we used different income distributions for each component of the RHNA shown in Exhibit 131. The income distributions were based on:

- **Projected Need.** This is the income distribution shown in Exhibit 130, which is unique to each region.
- **Underproduction.** Underproduced units are allocated based on the current need for units by household income. Rather than using the current distribution of household income, unit income categories for the currently underproduced units use cost burdening as a proxy to identify current need. The share of households that are cost burdened in the region by income level is an indicator of underproduction, and should better account for needs of lower income Oregonians.
- **Housing for the Homeless.** There is no existing, high quality dataset with information about the incomes of people who are experiencing homelessness, but we know that many households that are experiencing homelessness have incomes and still cannot find an available home that is affordable to them. To provide a starting place for understanding the distribution of households experiencing homelessness by income, we used OHCS data from EHA/SHAP. A large portion (89%) of households whose income is captured in the EHA / SHAP have incomes that are in the 0-30% of MFI range.

Exhibit 131. Distribution of Needed Units by Income Category, Recommended RHNA  
Source: ECONorthwest



#### Step 4: Comparison and example results of the tested approaches

Exhibit 132 shows an example, for the Willamette Valley region, of the regional income distribution used in the Beta RHNA (unadjusted by household size) and the adjusted income distribution used in the Recommended RHNA.

Exhibit 132. Regional Income Distribution, Willamette Valley region  
Source: ECONorthwest using PUMS data

Median Family Income	Beta RHNA		Recommended RHNA	
	Share of Units	Number of Units	Share of Units	Number of Units
120%+	31%	43,832	29%	42,745
80 - 120%	19%	26,283	18%	25,998
50 - 80%	18%	25,633	18%	26,791
30-50%	13%	18,172	14%	20,558
0-30%	20%	27,936	21%	30,498



**Step 4 selected approach:** In the Beta RHNA, we distributed need into five income groups using a distribution based on regional median family income (MFI), (i.e., Approach A). The forecast of new units needed, with the exception of units needed for people experiencing homelessness, is based on the regional distribution of households by income level. Units estimated for people experiencing homelessness are distributed to the 0-30% of MFI group only.

In the Recommended RHNA, we distribute need based on the regional, adjusted for household size, (i.e., Approach B) and based on different income distributions for each component of the RHNA (i.e., Approach C).

## Step 5: Distribute need by housing type

Step 5 takes housing need (aggregate of Step 1, 2, and 3), which was distributed by income level and further distributes units by housing type.

### Step 5: Key analytical issues

- *Mix of housing.* One of the key questions for distributing housing need across types of housing was what should the distribution be based on? In a local housing needs analysis, a city considers the distribution of housing stock by these four types of housing based on the most recent American Community Survey Census data.
- *Time period for the mix of housing.* The next question was whether it was best to look at the historical mix of the entire existing housing stock in a region or the mix of more recently developed housing.
- *Housing Types.* Step 5 was implemented as a requirement of HB 2003 to estimate housing by type. The housing types highlighted in HB 2003 for inclusion in the analysis were: single-family detached housing, single-family attached housing, multifamily housing, and manufactured housing or mobile homes. As we developed the Beta RHNA, we found that allocating housing in these four housing types often resulted in misleading results, such as the need for substantial amounts of single-family detached housing affordable to households earning 0-30% of MFI.
- *Lack of Data Availability.* The reason for the misleading results (described in the bullet above) is that we use monthly housing payments as a proxy to estimate the affordability of a house. Households may have apparently low incomes, but substantial wealth. An alternative to suitable data about wealth would be to use local data about housing prices, such as data from Metro's RLIS database or consistent housing stock data from county tax assessors, possibly supplemented by statewide data on addresses. But this data is not uniformly available across the state.
- *Lack of a clearly defined policy objective for housing type distribution.* HB 2003 describes what "need" by income means (e.g., housing affordable to households with a variety of incomes), but it does not prescribe policy objectives that help us define when / how a household "needs" a particular housing type.

As a result of these issues and a recognition of the changes in zoning policy that will result from HB 2001,<sup>61</sup> we decided to combine the housing types into two categories:

- **Single-Family and Missing Middle Housing:** this category includes single-family detached housing, manufactured or mobile homes, single-family attached housing, multifamily housing with two to four units per structure, and other housing. This term

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<sup>61</sup> H.B. 2001, 2019 Biennium, 2017 Reg. Sess. (OR. 2017).

<https://olis.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2001/Enrolled>

is inclusive of less traditional forms of housing (such as accessory dwelling units, cottage clusters, and tiny homes clustered on lots).

- **Multifamily Housing:** this category includes structures with five or more units per lot.

The new categories aid in the readability of results in Chapter 3 and it address the intent of HB 2001 which requires jurisdictions to enable missing middle housing in traditionally single-family zoning districts. Further, given the lack of a clearly defined policy objective for housing type distribution, use of the two housing type categories provides some flexibility to local jurisdictions' when planning for housing.

However, to address the requirements of HB 2003, Step 5 results (distributed into the four housing type categories) are presented in Appendix C.

## Step 5: Approach

We tested two approaches to determine the time period for the regional mix of housing.

### A – Regional mix of housing stock 2018 (current)

Approach A relied on a regional housing stock distribution based on total housing. Using 2018 data from PUMS, we summed housing into the four types of housing shown in Exhibit 133 and calculated the percent of total housing in each region. For example, in the Willamette Valley region, the housing mix for all stock in 2018 was: 64% single-family detached housing, 4% single-family attached housing, 23% multifamily housing, and 9% manufactured housing or mobile homes.

### B – Regional stock developed since 2010

Approach B relied on a regional housing stock distribution based on housing built from 2010 to 2018. Using 2018 data from PUMS, we summed housing into the four types of housing shown in Exhibit 133 and calculated the percent of total housing in each region. For example, in the Willamette Valley region, the housing mix for all stock constructed since 2010 was: 57% single-family detached housing, 1% single-family attached housing, 38% multifamily housing, and 4% manufactured housing or mobile homes.

## Step 5: Comparison of tested approaches

Exhibit 133 shows that, for several regions (Portland Metro, Willamette Valley, and Northern Coast) Approach B reduces the amount of single-family detached housing units forecasted as part of the analysis. It increases the number of multifamily housing units for all regions except the Eastern Region. When compared with Option A, Option B increases the number of forecasted multifamily units by 14,500.

## Exhibit 133 Comparison of housing distribution for all stock in 2018 and units built since 2010, example regions

Source: PUMS

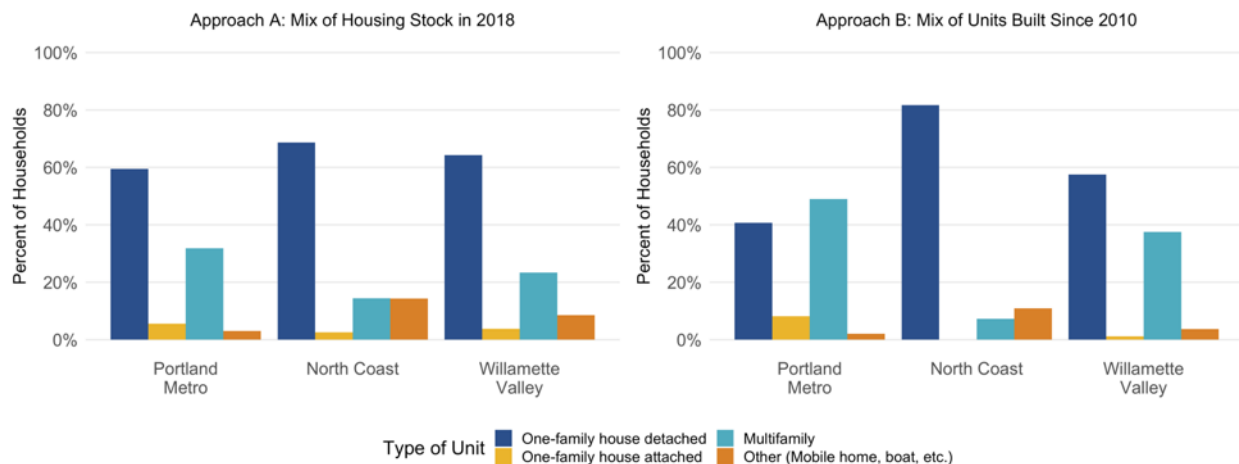
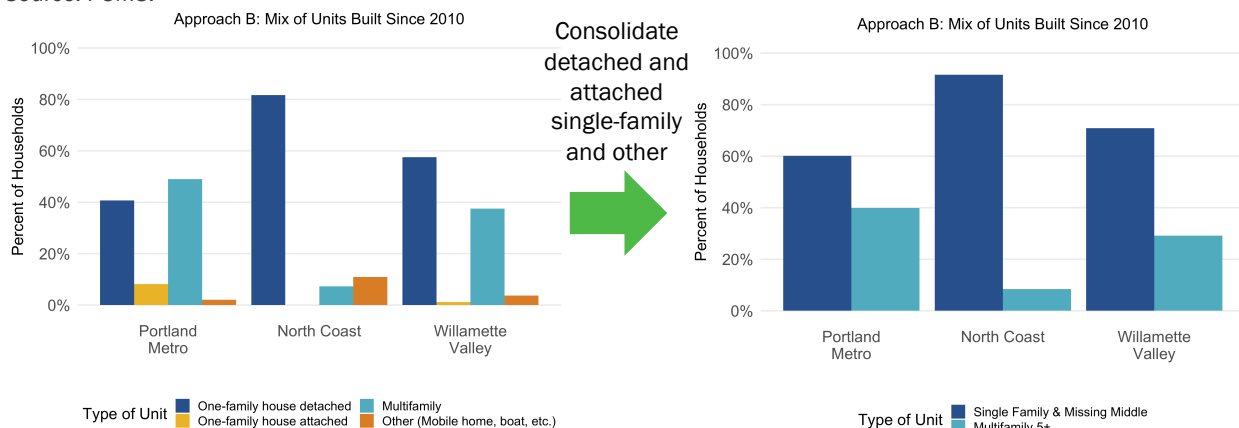


Exhibit 134 shows the consolidation of Approach B Mix of Units Built Since 2010 into two housing types: Single Family & Missing Middle Housing and Multifamily Housing.

## Exhibit 134. Consolidation of housing types, example regions

Source: PUMS.



## C – Do not include housing types in the RHNA

House Bill 2003 called for a RHNA methodology that considered both housing type and housing affordability. The Beta version of the RHNA used both housing type and affordability. In both cases, the Beta version used the regional averages of housing mix and income affordability to forecast future housing need. The results, presented in Appendix C, were sometimes nonsensical.

The problems are twofold: (1) sometimes the available data is flawed<sup>62</sup> and (2) some cities are developing with more multifamily housing than the region. For example, Appendix C shows only 14% of Bend's new housing was forecast to be multifamily and all of that was allocated to

<sup>62</sup> See the discussion of data limitations in Appendix A.

the 0-30% MFI income category. Another example was for City of Portland, where 50% of new housing was forecast to be multifamily housing by the Beta version of the RHNA. Portland's 2015 HNA showed that 77% of new housing would be multifamily housing.

As a result, the Recommended version of the RHNA does not include allocation by housing type. The Recommended RHNA provides information about unit types based on the existing mix of housing types.

**Step 5 selected approach:** In the Beta RHNA, we determined that starting with the regional distribution of housing built from 2010 to 2018 (Approach B) was the best available information. Using the regional distribution ensures that all cities are at least planning for the mix of housing currently in the region. Further, this option represents a housing stock distribution that is more consistent with recent development trends and land use patterns.

The Recommended RHNA does not allocate housing to housing types, at either the regional or the local level, consistent with Approach C.

## Step 6: Allocate need to local jurisdictions

Step 6 is the part of the methodology where regional housing need is distributed down to cities and unincorporated areas of counties within the region. In the Beta RHNA, Step 6 starts with the regional RHNA distributed by income and housing type, completed in Steps 1 through 5 and in the green rectangle in Exhibit 135. Step 6 is in the red rectangle in Exhibit 135.

Exhibit 135. Framework for a RHNA to Address Requirements of HB 2003, Beta version of the RHNA  
Source: ECONorthwest.

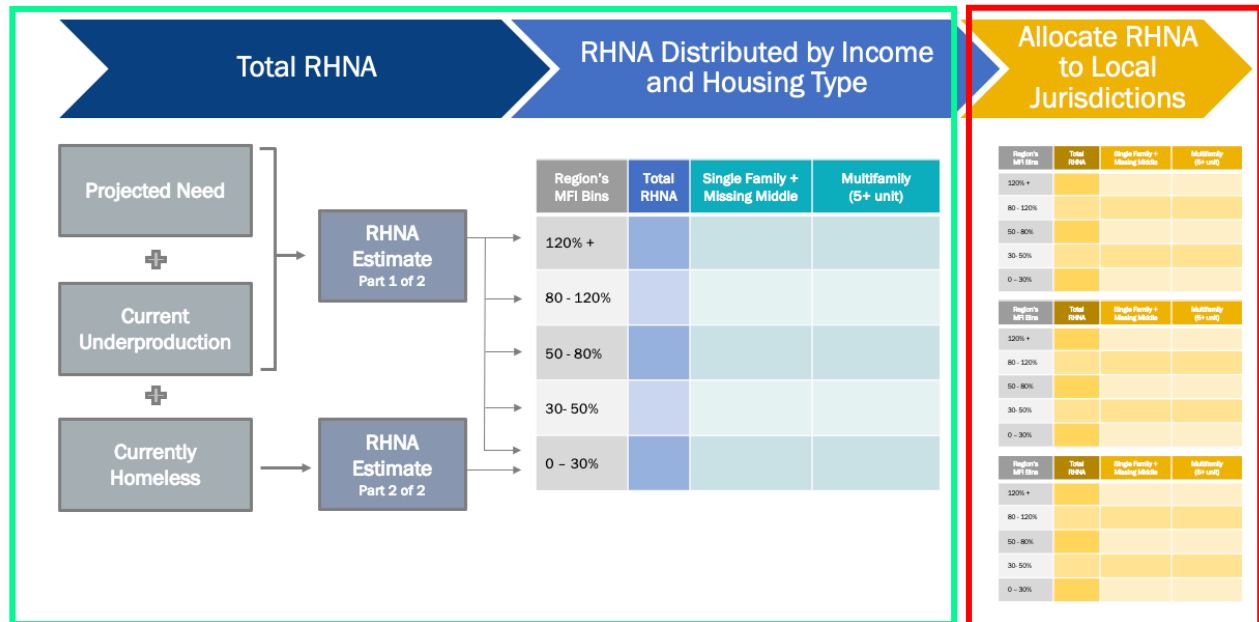
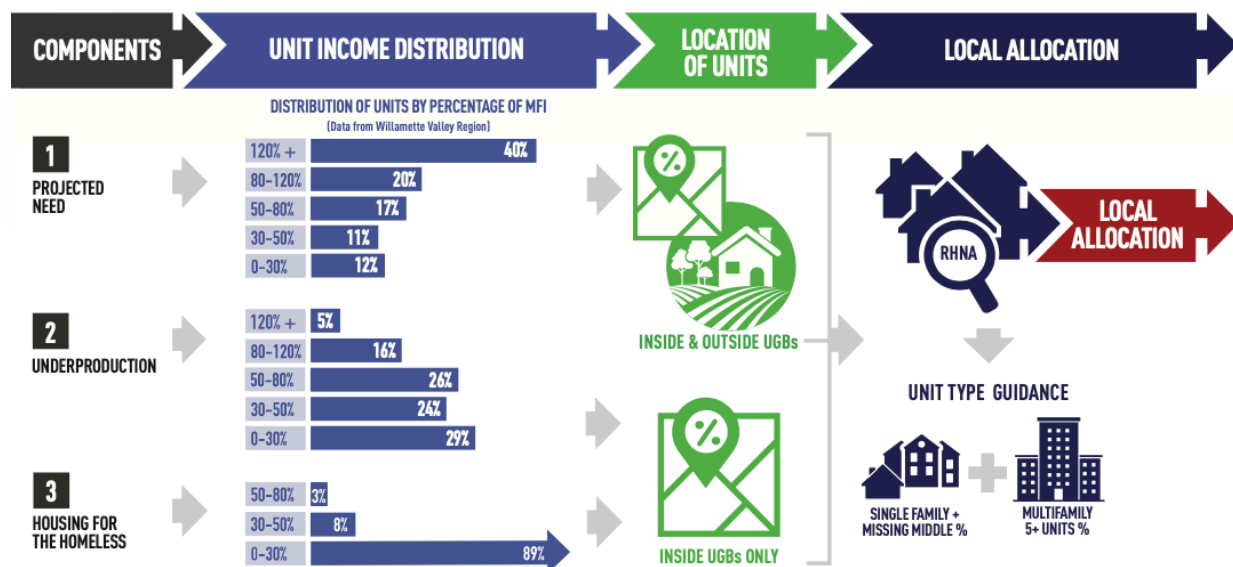


Exhibit 136 shows an overview of the steps in the full RHNA methodology for the Recommended RHNA. It builds from the components of regional need (projected need, underproduction, and housing for the homeless), shows how each of those components are distributed by income and geography, and then indicates the next steps, which are allocation of units to cities with guidance provided regarding the types of units that might be needed. Each of the steps in this overview required more detailed choices and assumptions. These details are summarized in the next sections of this chapter following this overview, organized to show how each of the components of regional need work through each of the steps described in Exhibit 2.

Exhibit 136. Recommended Version Methodology Overview

Source: ECONorthwest, 2020



After calculating total regional need (derived from the components of projected need, underproduction, and housing for the homeless), the methodology has the following steps:

- **Distribute each of the components of total need to income categories.** The income categories are based on the regional MFI categories, which take into account household size and the number of bedrooms and differ for each component.
- **Determine location of units relative to the urban growth boundaries of cities within each region.** The methodology recognizes the importance of Oregon’s land use context of Urban Growth Boundaries (UGBs) in determining where and how growth will occur by limiting the amount of growth that will occur in rural areas. Most, but not all future growth will occur inside of city urban growth boundaries; some growth will occur outside of those boundaries, and the methodology varies that pattern by component.

Specifically, only housing needed to accommodate future population growth is allocated outside of UGBs, based on population forecasts from PSU—inside UGBs units are distributed based on forecasted population growth and the number of current jobs. Each



UGB in a region is allocated units based on their share of the forecasted growth for all UGBs in the region (50% weight), and based on their current share of all jobs inside UGBs in the region (50% weight).

- **Local Allocation.** Finally, each component of regional need is allocated to local jurisdictions (cities), within the income categories appropriate to that components. For allocation inside UGBs, units are distributed based on the jurisdiction's regional share of either forecasted or current population (50%) and current jobs (50%). The population weight for projected need is based on forecasted population growth, and for underproduction and homeless units, it is based on current population.

The incorporation of jobs into the allocation methodology was a result of discussions with stakeholders and State staff. The purpose of including jobs data is to prioritize access to opportunity, account for a needed balance between the location of housing and jobs, and recognize that housing demand is related to job growth. Many factors were considered for measuring access to opportunity, such as transportation proximity, income distribution, live/work commute flows, etc. Ultimately the distribution of jobs was selected because the data is readily available, can consistently be applied statewide, and is appropriate to understanding how regional housing growth might be distributed to cities (rather than to neighborhoods or transportation corridors). Access to transit, for example, would be difficult to apply within regions across the state as the level of service varies within and across regions. Access to transit may be more relevant in local housing needs planning than in intraregional planning.

The result of Step 6 is completion of the RHNA: Allocation of all housing to cities and unincorporated areas for the entire state.

## Step 6: Key analytical issues

- *Allowing variations in allocation methodologies among regions:* One of the key questions was whether to require all regions to use the same allocation approach or to allow variation among regions in allocation approaches. In the Beta RHNA, we used one allocation approach for all regions in Oregon. In the Recommended RHNA, we allowed allocation approaches to vary between regions, as described below.
- *Key information used in the allocations:* The key information used in the Beta RHNA's allocation was current population, population growth (forecasts of growth), and current jobs. The allocation in the Beta RHNA considered five combinations of these variables. In the Recommended RHNA, we used these same sources of data but applied different assumptions about allocation by component of the RHNA. The sources of data we used in this analysis were:
  - *Current population:* The current population data was from the Portland State University's Annual Population Estimates, which report population by city limits for 2019.

- *Population growth:* We use the most recent versions of the Portland State University forecasts from the Oregon Population Forecast Program forecast as the basis for population growth in each county (aggregated to the regions), for each city,<sup>63</sup> and rural unincorporated areas.
- *Current jobs:* Information about current jobs is from the Census' Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LODES) in 2017, which provides information about employment by city and for unincorporated areas. LODES provide the location of place of work, which is different than the number of people living in the city who have a job.
- *Location of units within or outside of an urban growth boundary:* Step 6 determines the allocation of housing units within UGBs versus rural unincorporated areas. Different approaches will produce mixed results. Thus, for each approach, we tested the balance of units allocated inside/outside of UGBs, with the objective of allocating fewer units to areas outside of UGBs. In the Beta RHNA, we did not strictly control the amount of housing allocated to rural areas outside of UGBs. In the Recommended RHNA, we limited allocation to rural areas outside of UGBs.

The analysis makes no specific assumptions about expansion of UGBs. The population forecasts are for the UGBs for individual cities (except in the Portland Metro region). Within the Portland Metro region, the analysis only accounts for potential expansion into Urban Reserves if that anticipated expansion is accounted for in the population forecasts. Local HNAs determine whether a city has sufficient capacity to accommodate the forecast of growth. In instances when UGB expansion is necessary, expansion of the Portland Metro UGB and individual city UGBs typically take years to execute and it is not possible to predict if and when any particular expansion will occur.

In both the Beta and Recommended RHNA, we started by differentiating the way that units were allocated to cities and to rural unincorporated areas, as described below:

- **All regions except the Portland Metro region**
  - Cities (UGBs) were allocated housing for the projected need, underproduction, and for people experiencing homelessness
  - Unincorporated areas outside of UGBs were only allocated housing for projected need, based on the amount of growth forecast for unincorporated areas in PSU's forecast.
- **Portland Metro region**
  - Cities within the Metro UGB were allocated housing for the projected need, underproduction, and for people experiencing homelessness

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<sup>63</sup> Note: PSU forecasts population with city UGBs.

- Urban unincorporated areas by county inside the Metro UGB were allocated housing for the projected need, underproduction, and for people experiencing homelessness
- Cities (UGBs) outside of Metro UGB were allocated housing for the projected need, underproduction, and for people experiencing homelessness
- Unincorporated areas outside of UGBs were only allocated housing for projected need, based on the amount of growth forecast for unincorporated areas in PSU's forecast.

## Step 6a: Approaches in allocations in the Beta RHNA

The Beta RHNA tested five approaches to allocating units from the region to cities (step 6).

Exhibit 140 shows examples of the allocations for selected cities. Once the number of units is allocated to all cities, units are further distributed by income and housing type, using the regional averages and approaches described in Step 4 and Step 5, as shown in Exhibit 135.

### A – Current population

Approach A of Step 6 allocates need based on current population. Approach A determines the share of the regions' current population within each city and unincorporated area. Units are allocated to each city according to that distribution. For example, within the Willamette Valley Region 17% of the current population is located in Eugene UGB, 2% in Newberg UGB, and 0.3% in Harrisburg UGB. Thus, 17% of the region's housing need would be distributed to Eugene UGB, 2% to Newberg UGB, and 0.3% to Harrisburg UGB. Eugene UGB would receive the largest allocation of need at 17%.

### B – Population growth to 2040 based on official forecasts

Approach B allocates need based on population growth (2040). Allocation follows the same procedures as Approach A – however, the unit of analysis is the share of future population based on the PSU forecasts, rather than current population.

### C – Weighted current population and current jobs

Approach C allocates need based on current population and the current jobs distribution by weighting each variable at 50%. Introducing jobs is a key assumption which is intended to allocate more units closer to concentrations of employment.

### D – Weighted 2040 population growth and current jobs

Approach D allocates need based on population growth (2040) and current jobs distribution by weighting each variable at 50%. This approach seeks to balance the concentration of units where growth is expected.

### E – Weighted current population, 2040 population growth, and current jobs

The final approach in the Beta RHNA, Approach E, allocates need based on current population, projected population growth (2040), and current jobs distribution. We weighted 25% on current

population and 25% on projected population growth and 50% on current jobs. This approach allows for the expectation that some cities across the state are decreasing in population.

## Step 6b: Approaches in allocations in the Recommended RHNA

The approaches used in the Recommended RHNA build from the Beta RHNA. The Recommended RHNA uses approach F, summarized below.

### F – Recommended RHNA

The allocation methodology used for the Recommended RHNA builds from Approach A through E, above. It assumes a different allocation weighting for each of the three components of the RHNA: projected need (50% population growth and 50% current jobs), underproduction (50% current population and 50% current jobs), and housing for the homeless (50% current population and 50% current jobs).

### Projected need

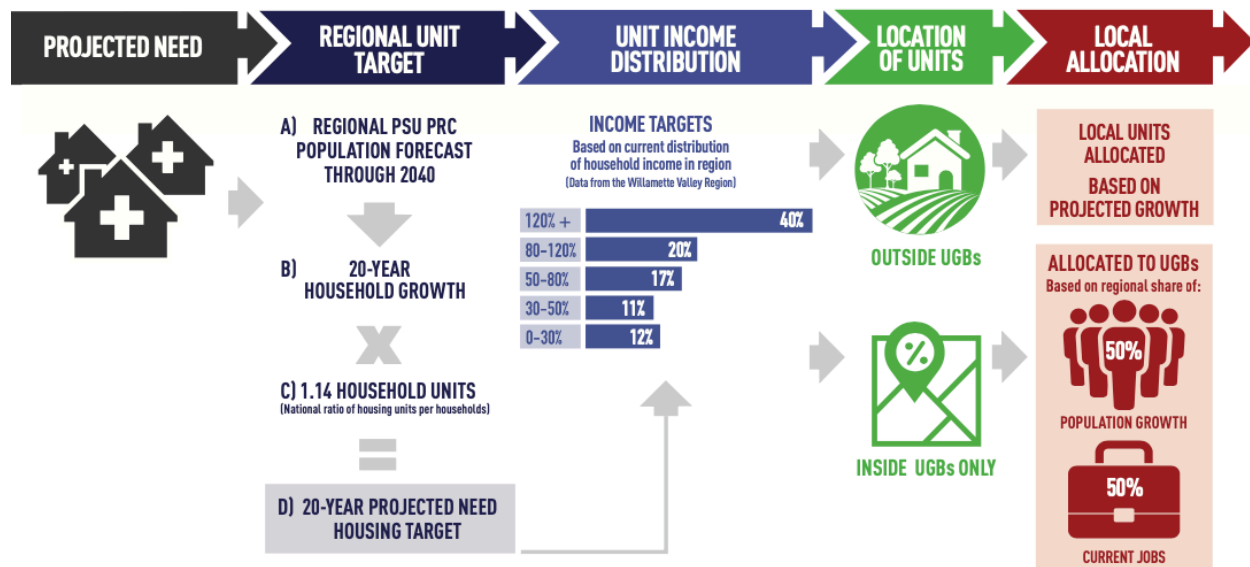
Exhibit 137 provides an overview of how each region's projected need moves through the steps of the RHNA methodology, and the key assumptions made at each step.

To project need, we begin with the population forecast from Portland State University's Population Research Center (PRC) for each region as described in Exhibit 122. To distribute those units by income, we use the regional distribution of household income in Exhibit 130.

To determine how much of the projected growth will occur inside and outside of UGBs, we use PRC data on estimated population growth at the city and unincorporated county levels and aggregate to our selected region. The units located inside and outside of UGBs each have the same income distribution, matching the region. The units within UGBs were allocated 50% based on the forecast for population growth and 50% based on the location of current jobs.

### Exhibit 137. Projected Need Methodology

Source: ECONorthwest, 2020



## Underproduction

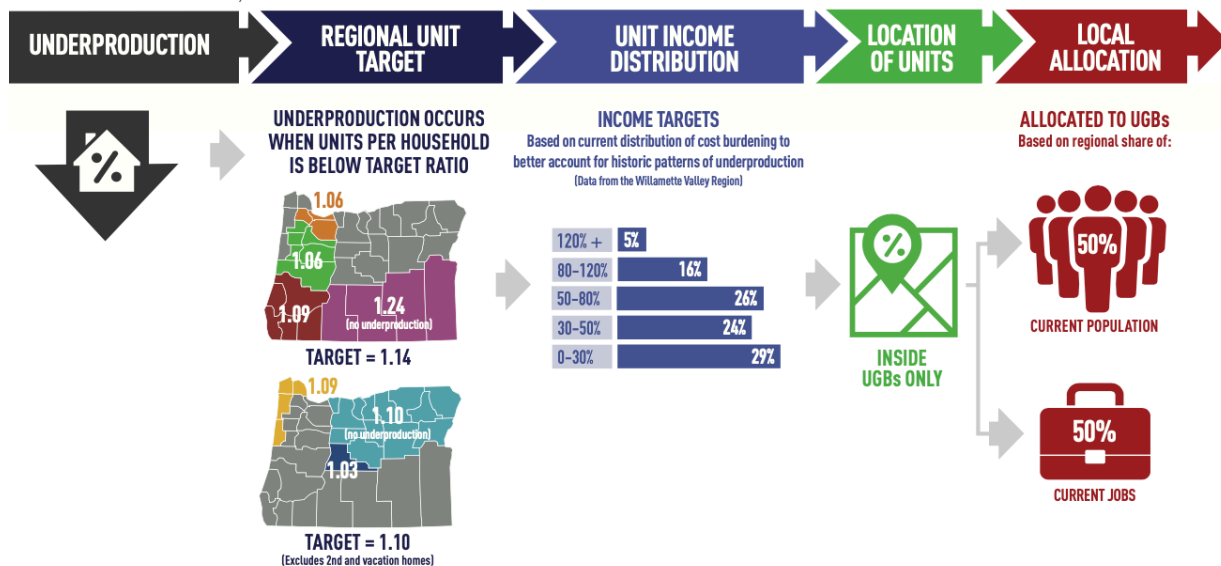
Exhibit 138 shows how housing needed to address underproduction moves through the steps of the RHNA methodology, and the key assumptions made at each step. This component accounts for the number of housing units that are not available in a region, but should be if the region met at least the national ratio of units to households of 1.14. More than one unit is needed per household to account for vacancy, demolition, and second homes. If a region has less than 1.14 units per household, housing is too scarce, and prices will rise. When this occurs, households with the lowest incomes will struggle most to find units, cost burdening will increase, and rates of homelessness may also increase.

Underproduced units were allocated based on the current need for units by household income. Rather than using the current distribution of household income (used in Exhibit 137), unit income categories for the currently underproduced units used cost burdening as a proxy to identify current need. The share of households that are cost burdened in the region by income level is an indicator of underproduction and should better account for needs of lower income Oregonians.

Underproduced units were allocated inside UGBs only, to reflect statewide land use goals prioritizing development inside of urbanized areas. Units were allocated 50% based on the forecast for current growth and 50% based on the location of current jobs.

Exhibit 138. Underproduction Methodology

Source: ECONorthwest, 2020



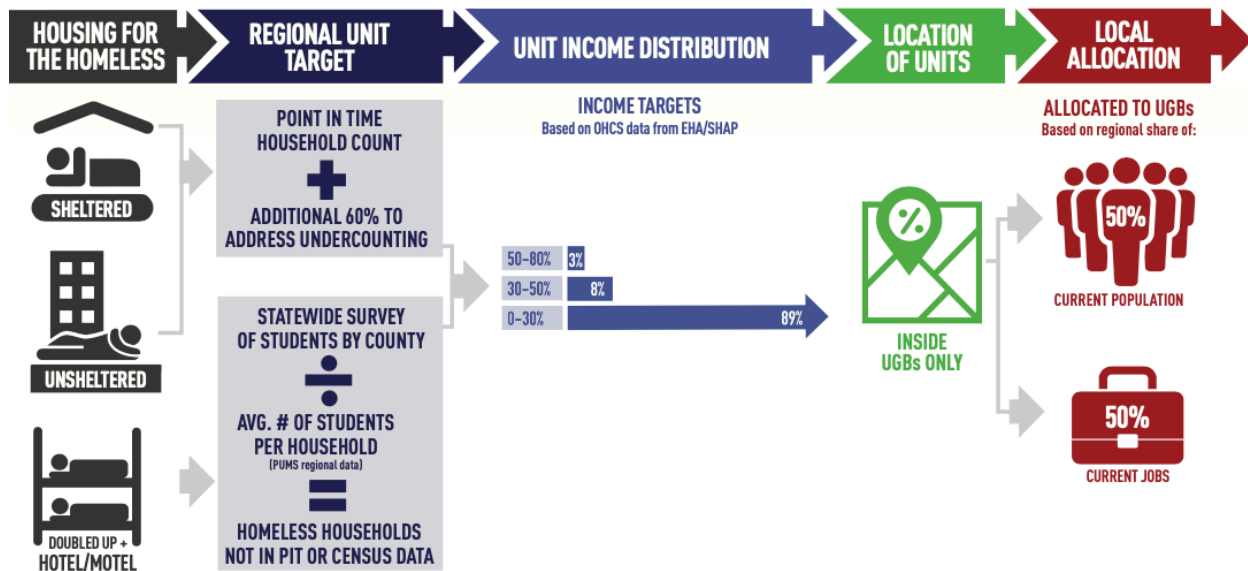
## Housing for the homeless

Exhibit 139 provides an overview of how the population was estimated regionally, distributed to income categories, and allocated to cities. The need for housing for the homeless is determined through Step 3: Estimate housing for the homeless.

We allocated all units inside UGBs only, reflecting Oregon’s land use planning goals to concentrate development inside of UGBs and proximate to existing infrastructure and services. Units were allocated 50% based on the forecast for current growth and 50% based on the location of current jobs.

Exhibit 139. Housing for the Homeless Methodology

Source: ECONorthwest, 2020





## Step 6: Comparison and example results of tested approaches

Exhibit 140 shows a sample allocation to cities across the state for illustration purposes from the Beta RHNA and the Recommended RHNA. During work with stakeholders, when presenting the results of the Beta RHNA, we presented option E.

In the Recommended RHNA, option F is a variation on option E as described in the section above.

**Exhibit 140. Sample City Allocation Approach Comparison, Beta and Recommended RHNA**

Source: ECONorthwest.

	Beta RHNA					F
	A	B	C	D	E	
UGB	Current Population	Population Growth (2040)	Current Population and Current Jobs	Population Growth and Current Jobs	Current Population, Population Growth, and Current Jobs	Recommended RHNA
Beaverton	15,817	9,286	17,014	13,748	13,150	15,043
Bend UGB	20,316	33,306	25,074	31,569	29,190	36,392
Eugene UGB	24,139	20,393	27,685	25,817	24,039	30,020
Gresham	17,975	8,108	14,646	9,713	11,377	11,299
Hillsboro	16,366	15,827	20,053	19,783	17,940	20,503
Hood River UGB	2,127	1,836	3,023	2,877	2,429	1,486
Portland	102,978	126,006	120,864	132,378	123,435	133,732
Roseburg UGB	2,695	3,863	3,750	4,334	3,806	5,285
Salem/Keizer UGB	31,682	41,498	34,372	39,287	37,935	42,413
Tigard	8,274	9,783	11,484	12,239	10,633	12,448
West Linn	4,299	1,136	2,874	1,293	2,005	1,741
Ontario UGB	264	19	410	288	215	248
Pendleton UGB	372	632	433	563	532	1,269

Exhibit 141 directly compares the results of the Beta RHNA and the Recommended RHNA for the selected cities. With a few exceptions, the Recommended RHNA resulted in larger allocations to the sample cities. The main differences in the RHNA allocation methodology are described in the following were:

- Limiting allocation of new housing outside of UGBs to the forecasts of population growth, including only allocating underproduction and housing for homelessness within a UGB.
- The different approaches to weighting the allocation, with projected need weighted equally between the forecast for growth and current jobs and underproduction and

housing for homelessness weighted equally between current population and current jobs, as shown in Exhibit 15 and Exhibit 17.

**Exhibit 141. Sample City Allocation Approach Comparison from the Beta and Recommended RHNA**  
Source: ECONorthwest.

UGB	Beta RHNA Approach E	Recommended RHNA Approach F	Difference
Beaverton	13,150	15,043	1,893
Bend UGB	29,190	36,392	7,202
Eugene UGB	24,039	30,020	5,981
Gresham	11,377	11,299	(78)
Hillsboro	17,940	20,503	2,563
Hood River UGB	2,429	1,486	(943)
Portland	123,435	133,732	10,297
Roseburg UGB	3,806	5,285	1,479
Salem/Keizer UGB	37,935	42,413	4,478
Tigard	10,633	12,448	1,815
West Linn	2,005	1,741	(264)
Ontario UGB	215	248	33
Pendleton UGB	532	1,269	737

Exhibit 142 compares the allocation of housing in rural unincorporated areas from the Beta and Recommended RHNA methods. In nearly all regions, allocations to areas outside of any UGB decreased.

**Exhibit 142. Comparison Units Allocated to Rural Unincorporated Areas from the Beta and Recommended RHNA**  
Source: ECONorthwest.

Region	Units Outside of Any UGB		
	Beta RHNA Approach E	Recommended RHNA Approach F	Difference
Portland Metro	7,345	2,038	(5,307)
North Coast	2,968	1,428	(1,540)
Willamette Valley	12,458	2,519	(9,939)
Southwest	7,660	1,975	(5,685)
Deschutes	12,224	7,261	(4,963)
Northeast	24,206	3,990	(20,216)
Southeast	1,180	175	(1,005)
Oregon	68,041	19,386	(48,655)

Note: For the Portland Metro region, this table does **not** include units in Urban Unincorporated areas, specifically

unincorporated areas of Clackamas, Washington, or Multnomah counties within the Metro UGB. Like all the other regions, this table only shows units allocated to rural unincorporated areas in the Portland Metro region.

### **Step 6 selected approach:**

For the Beta RHNA, we selected Approach E as the preferred alternative for allocating units. Approach E reflected the interconnectedness of jobs and housing choices and also to acknowledge that not all cities grow at the same rate. We understood that weighting jobs was an important factor that skewed the allocation of need toward urban areas (e.g. inside cities, rather than unincorporated areas/areas outside of UGBs). In this sense, Approach C was similarly a contender for selection, however, it did not account for the distribution of future population (2040) which impacts the results by further reducing the number of units allocated to unincorporated areas/areas outside UGBs.

In the Recommended RHNA, we selected Approach F as the preferred alternative for allocating units. Approach F has all the advantage of Approach E, but it also allows for distribution of units by income level to be done differently for projected need, underproduction, and housing for the homeless. It also allows for allocation of underproduction and housing for the homeless within UGBs and not in rural unincorporated areas outside of UGBs.

## Existing Housing Shortage: Housing Supply by Income and Affordability

This section presents a methodology to analyze *existing* housing supply by price point relative to *existing* households by income. The purpose of the analysis is to determine the extent to which there are any mismatches in a community's housing stock. For example, we would identify a housing mismatch in a community with a larger share of low-income households and a relatively smaller share of housing units affordable to low-income households.

This analysis is a requirement of HB 2003. In Section 1, HB 2003 directs OHCS, in coordination with DLCD and DAS, to develop “a housing shortage analysis for each city and Metro.” The “shortage analysis” must classify housing by:

- Housing type, including attached and detached single-family housing, multifamily housing and manufactured dwellings or mobile homes; and
- Affordability, by housing that is affordable to households with: (A) Very low income; (B) Low income; (C) Moderate income; or (D) High income.

### Key analytical issues

- **Defining shortage:** There are several ways to understand the concept of a housing shortage. **HB 2003 asks us to specifically consider the shortage in the context of affordability – does the community have enough units at appropriate price points to meet housing needs?** This suggests an evaluation of cost burdening, to understand how many households are paying a larger share of their monthly income on housing than is generally considered acceptable (30%). Accordingly, we define shortage as the amount of housing needed, at particular price points, to “eliminate” cost burdening.
- **Data availability and datasets:** This analysis uses CHAS 2012–2016 data, rather than PUMS. This analysis does not use PUMS because PUMS does not provide the needed data which is a direct comparison of housing costs (for renters and owners) with what is affordable to the household without being cost burdened. Limitations of CHAS data are:
  - CHAS data is available for the 2012–2016 period, which is older than the 2018 available in PUMS.
  - CHAS data is provided at the local level, however, local data for cities is representative of city's city limits, rather than Urban Growth Boundaries (UGBs).
  - The analysis aggregates housing units that are affordable to different income groups by tenure. However, housing unit affordability groups differ by tenure. Renter-occupied housing is grouped into these four categories: 0–30%, 30–50%, 50–80%, and 80% or more of MFI. Owner-occupied housing is grouped into these four categories: 0–50%, 50–80%, 80–120%, and 120% or more of MFI. To address this inconsistency, the analysis collapses housing affordability groups and uses 0–50%, 50–80%, and 80% or more of MFI. This reduces the analysis' level of granularity.

While we identify several limitations with the data source, the project team did distinguish this source as the most suitable dataset for this standalone analysis. In that, we needed a dataset that was available statewide and by region, that was relatively high quality, and that had the variables that would allow us to calculate housing supply and income mismatches at the city level. While this analysis uses a different data source from the rest of the RHNA, this analysis is distinct from the RHNA. As a result, we deemed the deviation acceptable.

### Methods for developing the analysis of shortage of existing housing supply by income and affordability

The analysis of the shortage of existing housing supply by income and affordability analysis has the following steps:

1. **Organize the dataset.** We collected (1) housing unit data by tenure and affordability bracket and (2) household data by income category for all cities in Oregon. Owner-occupied and renter-occupied unit data were collapsed into a single category that did not differentiate by tenure. To collapse the data, we also collapsed the affordability and income categories into the following groupings: 0–50%, 50–80%, and 80% or more of MFI.<sup>64</sup>
2. **Assess how households sort into units by income.** Exhibit 8 presents a sample of the results for the City of Portland.
3. **Determine whether housing supply is sufficient in each income group.** The goal of this step is to quantify the amount of housing that would be needed for no household to be cost burdened. In other words, how many additional units would be needed in each income category so that every household could rent / buy a housing unit without spending more than 30% of their income on housing costs? We group results from step 2 in three categories.
  - *Cost burdened:* identified in red in Exhibit 143, these households are paying 30% of their income or more on housing costs
  - *Matched:* identified in green, these households are renting or own housing at price ranges commensurate with their income level.
  - *Renting or Buying Down:* identified in blue in Exhibit 143, these households are paying less than what they can afford on housing cost

Step 3 shows the results of this analysis for Bend, in Exhibit 143. For every household that is cost burdened, we indicate that one additional unit is needed in the community. For example, for Bend, the analysis identifies a need for 1,315 dwelling units available to households with income below 50% of MFI to ensure that no existing household is cost burdened.

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<sup>64</sup> CHAS data presents different income categories for renter housing than for owner-occupied housing. This analysis used the three income categories described above to simplify the analysis and present a consistent result.

Exhibit 143. Housing Supply by Income and Affordability Results, Sample City  
Source: ECONorthwest.

Unit Affordability		Household Income			
		0-50% MFI	50-80% MFI	+80% MFI	
City: Bend					
0-50%		1,315	535	1,025	"Renting / Buying Down"
50-80%	Cost Burdened	2,320	2,155	4,350	
+80%		1,680	2,040	12,440	

The project team recognizes that some households that can afford higher amenity (more expensive) housing may choose to rent- or buy-down. We did not discount or adjust the results based on these households. There is no way to control households' housing choices in this way. Thus, rather than making a normative judgement about households' housing decisions, the analysis considers this reality as part of the challenge in fixing the mismatch.

The goal of this analysis is, therefore, to identify the number of units that would be needed to eliminate cost burdening for lowest income residents. However, the results of this analysis would be an oversupply of housing because cost burdened households have existing units. This is the reason that the RHNA does not use this method to identify the shortage of housing. **This analysis is a suitable way to understand how many households are cost burdened, and the shortage of affordable units, but it is not a satisfactory way to understand the number of units that are needed in a housing market.**

## Appendix C. RHNA Beta Version Results

This appendix presents the result of the Regional Housing Needs Analysis (RHNA) using the Beta methodology. It starts with a summary of the number of units needed by region and then presents the results of units needed within each regions' cities. The units needed are segmented by housing type.

### Results by Region

Exhibit 144 presents a summary of the results of the RHNA for the entire state and by region. The Manufactured and Other category includes mobile homes, trailers, boats, RVs, and vans. Multifamily includes all attached units with two or more units per structure. The units may not add up exactly to the total units due to rounding errors. Housing needs were determined for each region before they were allocated by income and housing type. All numbers were rounded after all allocations were completed.

#### Exhibit 144. RHNA Beta Version Region Summaries

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count

Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 FH count

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multi-family		
Oregon						
+120%	147,153	12,202	3,898	39,013	202,266	36%
80-120%	52,763	9,152	2,594	38,792	103,301	18%
50-80%	45,256	4,722	6,315	38,443	94,735	17%
30-50%	23,792	2,254	3,209	39,613	68,868	12%
0-30%	15,542	2,881	2,411	75,349	96,183	17%
Total Units	284,506	31,212	18,427	231,209	565,354	100%
% of Units	50%	6%	3%	41%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multi-family		

### Region: Portland Metro

+120% (\$97,680+)	71,745	8,389	672	29,938	110,744	38%
80-120% (\$65,120 to \$97,680)	16,367	7,555	482	26,973	51,377	18%
50-80% (\$40,700 to \$65,120)	10,637	3,837	1,401	30,941	46,816	16%
30-50% (\$24,420 to \$40,700)	7,143	2,254	3,051	22,777	35,226	12%
0-30% (\$0 to \$24,420)	9,479	1,106	310	35,266	46,161	16%
Total Units	115,371	23,141	5,916	145,895	290,324	100%
% of Units	40%	8%	2%	50%	100%	

### Region: North Coast

+120% (\$77,130+)	4,903	0	0	0	4,903	32%
80-120% (\$51,420 to \$77,130)	2,337	0	0	0	2,337	15%
50-80% (\$32,140 to \$51,420)	2,792	0	0	0	2,792	18%
30-50% (\$19,280 to \$32,140)	961	0	0	907	1,869	12%
0-30% (\$0 to \$19,280)	179	0	1,500	1,571	3,250	21%
Total Units	11,173	0	1,500	2,478	15,151	100%
% of Units	74%	-	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multi-family		

### Region: Willamette Valley

+120% (\$81,820+)	33,697	788	817	8,530	43,832	31%
80-120% (\$54,540 to \$81,820)	16,656	475	1,731	7,422	26,283	19%
50-80% (\$34,090 to \$54,540)	17,499	0	2,506	5,628	25,633	18%
30-50% (\$20,450 to \$34,090)	6,249	0	0	11,923	18,172	13%
0-30% (\$0 to \$20,450)	4,109	371	0	23,447	27,926	20%
Total Units	78,209	1,634	5,054	56,950	141,847	100%
% of Units	55%	1%	4%	40%	100%	

### Region: Southwest

+120% (\$66,170+)	12,912	2,060	927	544	16,443	36%
80-120% (\$44,120 to \$66,170)	4,787	283	263	3,110	8,444	19%
50-80% (\$27,570 to \$44,120)	3,188	886	1,618	1,731	7,423	16%
30-50% (\$16,540 to \$27,570)	1,340	0	0	4,005	5,344	12%
0-30% (\$0 to \$16,540)	1,091	0	323	6,482	7,896	17%
Total Units	23,317	3,229	3,132	15,873	45,550	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multi-family		
Region: North Central						
+120% (\$77,890+)	22,380	965	1,024	0	24,369	36%
80-120% (\$51,930 to \$77,890)	12,223	839	87	955	14,105	21%
50-80% (\$32,450 to \$51,930)	10,768	0	551	0	11,319	17%
30-50% (\$19,470 to \$32,450)	7,615	0	0	0	7,615	11%
0-30% (\$0 to \$19,470)	0	1,404	277	8,149	9,830	15%
Total Units	52,986	3,208	1,939	9,105	67,238	100%
% of Units	79%	5%	3%	14%	100%	
Region: East/Southeastern						
+120% (\$63,510+)	1,517	0	458	0	1,975	38%
80-120% (\$42,340 to \$63,510)	393	0	31	332	756	14%
50-80% (\$26,460 to \$42,340)	371	0	238	143	752	14%
30-50% (\$15,880 to \$26,460)	484	0	158	0	642	12%
0-30% (\$0 to \$15,880)	685	0	0	434	1,119	21%
Total Units	3,450	0	886	908	5,244	100%
% of Units	66%	-	17%	17%	100%	

## Results by City

This section presents the results of the RHNA Beta Version for each region and the cities within the regions. The Manufactured and Other category includes mobile homes, trailers, boats, RVs, and vans. Multifamily includes all attached units with two or more units per structure. The units may not add up exactly to the total units and the share of units may not add up exactly to 100% due to rounding errors. Housing needs were determined for each region before they were allocated to each city and by income and housing type. All numbers were rounded after all allocations were completed.

### Cities in the Portland Metro region

#### Exhibit 145. RHNA Beta Version Results for Cities in the Portland Metro Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count

Census Bureau, 2010 ACS 1-year PUMS estimates, HUD, 2010 FH count

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
UGB: Banks						
+120%	101	12	1	42	155	38%
80-120%	23	11	1	38	72	18%
50-80%	15	5	2	43	66	16%
30-50%	10	3	4	32	49	12%
0-30%	13	2	0	49	65	16%
Total Units	162	32	8	204	407	100%
% of Units	40%	8%	2%	50%	100%	
UGB: Barlow						
+120%	2	0	0	1	4	38%
80-120%	1	0	0	1	2	18%
50-80%	0	0	0	1	1	16%
30-50%	0	0	0	1	1	12%
0-30%	0	0	0	1	1	16%
Total Units	4	1	0	5	9	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Beaverton

+120%	3,250	380	30	1,356	5,016	38%
80-120%	741	342	22	1,222	2,327	18%
50-80%	482	174	63	1,401	2,121	16%
30-50%	324	102	138	1,032	1,596	12%
0-30%	429	50	14	1,597	2,091	16%
Total Units	5,226	1,048	268	6,608	13,150	100%
% of Units	40%	8%	2%	50%	100%	

#### UGB: Canby

+120%	783	92	7	327	1,208	38%
80-120%	179	82	5	294	560	18%
50-80%	116	42	15	338	511	16%
30-50%	78	25	33	248	384	12%
0-30%	103	12	3	385	504	16%
Total Units	1,259	252	65	1,592	3,167	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Cornelius

+120%	521	61	5	217	804	38%
80-120%	119	55	4	196	373	18%
50-80%	77	28	10	225	340	16%
30-50%	52	16	22	165	256	12%
0-30%	69	8	2	256	335	16%
Total Units	838	168	43	1,059	2,108	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

**City: Damascus / area within 2015 city boundary**

+120%	1,484	173	14	619	2,290	38%
80-120%	338	156	10	558	1,062	18%
50-80%	220	79	29	640	968	16%
30-50%	148	47	63	471	728	12%
0-30%	196	23	6	729	955	16%
Total Units	2,386	479	122	3,017	6,004	100%
% of Units	40%	8%	2%	50%	100%	

**City: Durham**

+120%	55	6	1	23	85	38%
80-120%	13	6	0	21	39	18%
50-80%	8	3	1	24	36	16%
30-50%	5	2	2	17	27	12%
0-30%	7	1	0	27	35	16%
Total Units	89	18	5	112	223	100%
% of Units	40%	8%	2%	50%	100%	

**UGB: Estacada**

+120%	169	20	2	70	260	38%
80-120%	38	18	1	63	121	18%
50-80%	25	9	3	73	110	16%
30-50%	17	5	7	54	83	12%
0-30%	22	3	1	83	109	16%
Total Units	271	54	14	343	683	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### City: Fairview

+120%	198	23	2	83	306	38%
80-120%	45	21	1	74	142	18%
50-80%	29	11	4	85	129	16%
30-50%	20	6	8	63	97	12%
0-30%	26	3	1	97	127	16%
Total Units	319	64	16	403	802	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Forest Grove

+120%	1,099	128	10	458	1,696	38%
80-120%	251	116	7	413	787	18%
50-80%	163	59	21	474	717	16%
30-50%	109	35	47	349	539	12%
0-30%	145	17	5	540	707	16%
Total Units	1,767	354	91	2,234	4,446	100%
% of Units	40%	8%	2%	50%	100%	

#### UGB: Gaston

+120%	11	1	0	5	17	38%
80-120%	3	1	0	4	8	18%
50-80%	2	1	0	5	7	16%
30-50%	1	0	0	4	5	12%
0-30%	1	0	0	5	7	16%
Total Units	18	4	1	23	45	100%
% of Units	40%	8%	2%	50%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### City: Gladstone

+120%	209	24	2	87	322	38%
80-120%	48	22	1	78	149	18%
50-80%	31	11	4	90	136	16%
30-50%	21	7	9	66	102	12%
0-30%	28	3	1	103	134	16%
Total Units	335	67	17	424	844	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Gresham

+120%	2,812	329	26	1,173	4,340	38%
80-120%	641	296	19	1,057	2,013	18%
50-80%	417	150	55	1,213	1,835	16%
30-50%	280	88	120	893	1,380	12%
0-30%	371	43	12	1,382	1,809	16%
Total Units	4,521	907	232	5,717	11,377	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Happy Valley

+120%	1,159	136	11	484	1,790	38%
80-120%	264	122	8	436	830	18%
50-80%	172	62	23	500	757	16%
30-50%	115	36	49	368	569	12%
0-30%	153	18	5	570	746	16%
Total Units	1,864	374	96	2,358	4,691	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### City: Hillsboro

+120%	4,433	518	42	1,850	6,843	38%
80-120%	1,011	467	30	1,667	3,175	18%
50-80%	657	237	87	1,912	2,893	16%
30-50%	441	139	189	1,407	2,177	12%
0-30%	586	68	19	2,179	2,852	16%
Total Units	7,129	1,430	366	9,015	17,940	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Johnson City

+120%	6	1	0	3	9	38%
80-120%	1	1	0	2	4	18%
50-80%	1	0	0	3	4	16%
30-50%	1	0	0	2	3	12%
0-30%	1	0	0	3	4	16%
Total Units	10	2	0	12	24	100%
% of Units	40%	8%	2%	50%	100%	

#### City: King City

+120%	167	20	2	70	258	38%
80-120%	38	18	1	63	119	18%
50-80%	25	9	3	72	109	16%
30-50%	17	5	7	53	82	12%
0-30%	22	3	1	82	107	16%
Total Units	268	54	14	339	675	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

**City: Lake Oswego**

+120%	956	112	9	399	1,476	38%
80-120%	218	101	6	360	685	18%
50-80%	142	51	19	412	624	16%
30-50%	95	30	41	304	470	12%
0-30%	126	15	4	470	615	16%
Total Units	1,538	309	79	1,945	3,870	100%
% of Units	40%	8%	2%	50%	100%	

**City: Maywood Park**

+120%	9	1	0	4	15	38%
80-120%	2	1	0	4	7	18%
50-80%	1	1	0	4	6	16%
30-50%	1	0	0	3	5	12%
0-30%	1	0	0	5	6	16%
Total Units	15	3	1	19	38	100%
% of Units	40%	8%	2%	50%	100%	

**City: Milwaukie**

+120%	629	74	6	262	971	38%
80-120%	143	66	4	236	450	18%
50-80%	93	34	12	271	410	16%
30-50%	63	20	27	200	309	12%
0-30%	83	10	3	309	405	16%
Total Units	1,011	203	52	1,279	2,545	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Molalla

+120%	543	64	5	227	838	38%
80-120%	124	57	4	204	389	18%
50-80%	81	29	11	234	354	16%
30-50%	54	17	23	172	267	12%
0-30%	72	8	2	267	349	16%
Total Units	873	175	45	1,105	2,198	100%
% of Units	40%	8%	2%	50%	100%	

#### UGB: North Plains

+120%	282	33	3	118	436	38%
80-120%	64	30	2	106	202	18%
50-80%	42	15	6	122	184	16%
30-50%	28	9	12	90	139	12%
0-30%	37	4	1	139	182	16%
Total Units	454	91	23	574	1,143	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Oregon City

+120%	1,123	131	11	469	1,733	38%
80-120%	256	118	8	422	804	18%
50-80%	166	60	22	484	733	16%
30-50%	112	35	48	356	551	12%
0-30%	148	17	5	552	722	16%
Total Units	1,806	362	93	2,283	4,544	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### City: Portland

+120%	30,503	3,567	286	12,729	47,084	38%
80-120%	6,959	3,212	205	11,468	21,843	18%
50-80%	4,523	1,631	596	13,155	19,904	16%
30-50%	3,037	959	1,297	9,684	14,977	12%
0-30%	4,030	470	132	14,994	19,626	16%
Total Units	49,051	9,839	2,515	62,029	123,435	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Rivergrove

+120%	7	1	0	3	10	38%
80-120%	1	1	0	2	5	18%
50-80%	1	0	0	3	4	16%
30-50%	1	0	0	2	3	12%
0-30%	1	0	0	3	4	16%
Total Units	11	2	1	13	27	100%
% of Units	40%	8%	2%	50%	100%	

#### UGB: Sandy

+120%	788	92	7	329	1,216	38%
80-120%	180	83	5	296	564	18%
50-80%	117	42	15	340	514	16%
30-50%	78	25	34	250	387	12%
0-30%	104	12	3	387	507	16%
Total Units	1,267	254	65	1,602	3,188	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

**City: Sherwood**

+120%	405	47	4	169	625	38%
80-120%	92	43	3	152	290	18%
50-80%	60	22	8	175	264	16%
30-50%	40	13	17	129	199	12%
0-30%	53	6	2	199	260	16%
Total Units	651	131	33	823	1,638	100%
% of Units	40%	8%	2%	50%	100%	

**City: Tigard**

+120%	2,628	307	25	1,097	4,056	38%
80-120%	599	277	18	988	1,882	18%
50-80%	390	141	51	1,133	1,715	16%
30-50%	262	83	112	834	1,290	12%
0-30%	347	41	11	1,292	1,691	16%
Total Units	4,226	848	217	5,344	10,633	100%
% of Units	40%	8%	2%	50%	100%	

**City: Troutdale**

+120%	438	51	4	183	676	38%
80-120%	100	46	3	165	314	18%
50-80%	65	23	9	189	286	16%
30-50%	44	14	19	139	215	12%
0-30%	58	7	2	215	282	16%
Total Units	704	141	36	890	1,772	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### City: Tualatin

+120%	864	101	8	360	1,333	38%
80-120%	197	91	6	325	618	18%
50-80%	128	46	17	372	564	16%
30-50%	86	27	37	274	424	12%
0-30%	114	13	4	425	556	16%
Total Units	1,389	279	71	1,756	3,495	100%
% of Units	40%	8%	2%	50%	100%	

#### City: West Linn

+120%	496	58	5	207	765	38%
80-120%	113	52	3	186	355	18%
50-80%	73	27	10	214	323	16%
30-50%	49	16	21	157	243	12%
0-30%	65	8	2	244	319	16%
Total Units	797	160	41	1,008	2,005	100%
% of Units	40%	8%	2%	50%	100%	

#### City: Wilsonville

+120%	862	101	8	360	1,330	38%
80-120%	197	91	6	324	617	18%
50-80%	128	46	17	372	562	16%
30-50%	86	27	37	274	423	12%
0-30%	114	13	4	424	554	16%
Total Units	1,386	278	71	1,753	3,487	100%
% of Units	40%	8%	2%	50%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### City: Wood Village

+120%	109	13	1	45	168	38%
80-120%	25	11	1	41	78	18%
50-80%	16	6	2	47	71	16%
30-50%	11	3	5	34	53	12%
0-30%	14	2	0	53	70	16%
Total Units	175	35	9	221	440	100%
% of Units	40%	8%	2%	50%	100%	

#### Urban Unincorporated Clackamas County Inside the Metro UGB

+120%	3,284	384	31	1,371	5,070	38%
80-120%	749	346	22	1,235	2,352	18%
50-80%	487	176	64	1,416	2,143	16%
30-50%	327	103	140	1,043	1,613	12%
0-30%	434	51	14	1,614	2,113	16%
Total Units	5,282	1,059	271	6,679	13,291	100%
% of Units	40%	8%	2%	50%	100%	

#### Urban Unincorporated Multnomah County Inside the Metro UGB

+120%	1,417	166	13	591	2,187	38%
80-120%	323	149	10	533	1,014	18%
50-80%	210	76	28	611	924	16%
30-50%	141	45	60	450	696	12%
0-30%	187	22	6	696	911	16%
Total Units	2,278	457	117	2,881	5,733	100%
% of Units	40%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### Urban Unincorporated Washington County Inside the Metro UGB

+120%	8,131	951	76	3,393	12,550	38%
80-120%	1,855	856	55	3,057	5,822	18%
50-80%	1,206	435	159	3,506	5,305	16%
30-50%	810	255	346	2,581	3,992	12%
0-30%	1,074	125	35	3,997	5,231	16%
Total Units	13,075	2,623	670	16,534	32,901	100%
% of Units	40%	8%	2%	50%	100%	

#### Rural Unincorporated Clackamas County Outside of any UGB

+120%	1,332	156	12	556	2,056	38%
80-120%	304	140	9	501	954	18%
50-80%	197	71	26	574	869	16%
30-50%	133	42	57	423	654	12%
0-30%	176	21	6	655	857	16%
Total Units	2,142	430	110	2,709	5,390	100%
% of Units	40%	8%	2%	50%	100%	

#### Rural Unincorporated Multnomah County Outside of any UGB

+120%	143	17	1	60	221	38%
80-120%	33	15	1	54	102	18%
50-80%	21	8	3	62	93	16%
30-50%	14	4	6	45	70	12%
0-30%	19	2	1	70	92	16%
Total Units	230	46	12	291	579	100%
% of Units	39%	8%	2%	50%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
Rural Unincorporated Washington County Outside of any UGB						
+120%	340	40	3	142	525	38%
80-120%	78	36	2	128	244	18%
50-80%	50	18	7	147	222	16%
30-50%	34	11	14	108	167	12%
0-30%	45	5	1	167	219	16%
Total Units	547	110	28	692	1,377	100%
% of Units	40%	8%	2%	50%	100%	

## Cities in the North Coast region

### Exhibit 146. RHNA Beta Version Results for Cities in the North Coast Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
UGB: Astoria						
+120%	265	0	0	0	265	32%
80-120%	126	0	0	0	126	15%
50-80%	151	0	0	0	151	18%
30-50%	52	0	0	49	101	12%
0-30%	10	0	81	85	175	21%
Total Units	603	0	81	134	818	100%
% of Units	74%	0%	10%	16%	100%	
UGB: Bay City						
+120%	62	0	0	0	62	32%
80-120%	30	0	0	0	30	15%
50-80%	36	0	0	0	36	18%
30-50%	12	0	0	12	24	12%
0-30%	2	0	19	20	41	21%
Total Units	142	0	19	32	193	100%
% of Units	74%	0%	10%	16%	100%	
UGB: Cannon Beach						
+120%	63	0	0	0	63	32%
80-120%	30	0	0	0	30	15%
50-80%	36	0	0	0	36	18%
30-50%	12	0	0	12	24	12%
0-30%	2	0	19	20	42	21%
Total Units	143	0	19	32	194	100%
% of Units	74%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Clatskanie

+120%	50	0	0	0	50	32%
80-120%	24	0	0	0	24	15%
50-80%	29	0	0	0	29	18%
30-50%	10	0	0	9	19	12%
0-30%	2	0	15	16	33	21%
Total Units	115	0	15	25	155	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Columbia City

+120%	37	0	0	0	37	32%
80-120%	18	0	0	0	18	15%
50-80%	21	0	0	0	21	18%
30-50%	7	0	0	7	14	12%
0-30%	1	0	11	12	25	21%
Total Units	85	0	11	19	116	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Depoe Bay

+120%	64	0	0	0	64	32%
80-120%	31	0	0	0	31	15%
50-80%	37	0	0	0	37	18%
30-50%	13	0	0	12	25	12%
0-30%	2	0	20	21	43	21%
Total Units	147	0	20	33	199	100%
% of Units	74%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Garibaldi

+120%	24	0	0	0	24	32%
80-120%	11	0	0	0	11	15%
50-80%	14	0	0	0	14	18%
30-50%	5	0	0	4	9	12%
0-30%	1	0	7	8	16	21%
Total Units	55	0	7	12	74	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Gearhart

+120%	43	0	0	0	43	32%
80-120%	21	0	0	0	21	15%
50-80%	25	0	0	0	25	18%
30-50%	8	0	0	8	16	12%
0-30%	2	0	13	14	29	21%
Total Units	99	0	13	22	134	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Lincoln City

+120%	307	0	0	0	307	32%
80-120%	146	0	0	0	146	15%
50-80%	175	0	0	0	175	18%
30-50%	60	0	0	57	117	12%
0-30%	11	0	94	98	203	21%
Total Units	699	0	94	155	948	100%
% of Units	74%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Manzanita

+120%	49	0	0	0	49	32%
80-120%	24	0	0	0	24	15%
50-80%	28	0	0	0	28	18%
30-50%	10	0	0	9	19	12%
0-30%	2	0	15	16	33	21%
Total Units	113	0	15	25	153	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Nehalem

+120%	59	0	0	0	59	32%
80-120%	28	0	0	0	28	15%
50-80%	33	0	0	0	33	18%
30-50%	11	0	0	11	22	12%
0-30%	2	0	18	19	39	21%
Total Units	134	0	18	30	181	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Newport

+120%	492	0	0	0	492	32%
80-120%	235	0	0	0	235	15%
50-80%	280	0	0	0	280	18%
30-50%	97	0	0	91	188	12%
0-30%	18	0	151	158	326	21%
Total Units	1,122	0	151	249	1,521	100%
% of Units	74%	0%	10%	16%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Prescott

+120%	1	0	0	0	1	32%
80-120%	1	0	0	0	1	15%
50-80%	1	0	0	0	1	18%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	0	1	3	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Rainier

+120%	89	0	0	0	89	32%
80-120%	42	0	0	0	42	15%
50-80%	51	0	0	0	51	18%
30-50%	17	0	0	16	34	12%
0-30%	3	0	27	29	59	21%
Total Units	203	0	27	45	275	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Rockaway Beach

+120%	50	0	0	0	50	32%
80-120%	24	0	0	0	24	15%
50-80%	28	0	0	0	28	18%
30-50%	10	0	0	9	19	12%
0-30%	2	0	15	16	33	21%
Total Units	113	0	15	25	154	100%
% of Units	74%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

### UGB: Scappoose

+120%	485	0	0	0	485	32%
80-120%	231	0	0	0	231	15%
50-80%	276	0	0	0	276	18%
30-50%	95	0	0	90	185	12%
0-30%	18	0	148	155	321	21%
Total Units	1,104	0	148	245	1,498	100%
% of Units	74%	0%	10%	16%	100%	

### UGB: Seaside

+120%	248	0	0	0	248	32%
80-120%	118	0	0	0	118	15%
50-80%	141	0	0	0	141	18%
30-50%	49	0	0	46	94	12%
0-30%	9	0	76	79	164	21%
Total Units	564	0	76	125	765	100%
% of Units	74%	0%	10%	16%	100%	

### UGB: Siletz

+120%	36	0	0	0	36	32%
80-120%	17	0	0	0	17	15%
50-80%	20	0	0	0	20	18%
30-50%	7	0	0	7	14	12%
0-30%	1	0	11	11	24	21%
Total Units	82	0	11	18	111	100%
% of Units	74%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: St. Helens

+120%	648	0	0	0	648	32%
80-120%	309	0	0	0	309	15%
50-80%	369	0	0	0	369	18%
30-50%	127	0	0	120	247	12%
0-30%	24	0	198	208	430	21%
Total Units	1,477	0	198	328	2,003	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Tillamook

+120%	233	0	0	0	233	32%
80-120%	111	0	0	0	111	15%
50-80%	132	0	0	0	132	18%
30-50%	46	0	0	43	89	12%
0-30%	8	0	71	75	154	21%
Total Units	530	0	71	118	719	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Toledo

+120%	95	0	0	0	95	32%
80-120%	45	0	0	0	45	15%
50-80%	54	0	0	0	54	18%
30-50%	19	0	0	18	36	12%
0-30%	3	0	29	30	63	21%
Total Units	217	0	29	48	294	100%
% of Units	74%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Vernonia

+120%	42	0	0	0	42	32%
80-120%	20	0	0	0	20	15%
50-80%	24	0	0	0	24	18%
30-50%	8	0	0	8	16	12%
0-30%	2	0	13	14	28	21%
Total Units	96	0	13	21	131	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Waldport

+120%	81	0	0	0	81	32%
80-120%	38	0	0	0	38	15%
50-80%	46	0	0	0	46	18%
30-50%	16	0	0	15	31	12%
0-30%	3	0	25	26	53	21%
Total Units	183	0	25	41	249	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Warrenton

+120%	358	0	0	0	358	32%
80-120%	171	0	0	0	171	15%
50-80%	204	0	0	0	204	18%
30-50%	70	0	0	66	137	12%
0-30%	13	0	110	115	237	21%
Total Units	816	0	110	181	1,107	100%
% of Units	74%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Wheeler

+120%	15	0	0	0	15	32%
80-120%	7	0	0	0	7	15%
50-80%	9	0	0	0	9	18%
30-50%	3	0	0	3	6	12%
0-30%	1	0	5	5	10	21%
Total Units	35	0	5	8	47	100%
% of Units	74%	0%	10%	16%	100%	

#### UGB: Yachats

+120%	46	0	0	0	46	32%
80-120%	22	0	0	0	22	15%
50-80%	26	0	0	0	26	18%
30-50%	9	0	0	9	18	12%
0-30%	2	0	14	15	31	21%
Total Units	105	0	14	23	143	100%
% of Units	74%	0%	10%	16%	100%	

#### Clatsop County Outside of any UGB

+120%	148	0	0	0	148	32%
80-120%	70	0	0	0	70	15%
50-80%	84	0	0	0	84	18%
30-50%	29	0	0	27	56	12%
0-30%	5	0	45	47	98	21%
Total Units	337	0	45	75	457	100%
% of Units	73%	0%	10%	16%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
Columbia County Outside of any UGB						
+120%	376	0	0	0	376	32%
80-120%	179	0	0	0	179	15%
50-80%	214	0	0	0	214	18%
30-50%	74	0	0	70	143	12%
0-30%	14	0	115	121	249	21%
Total Units	857	0	115	190	1,163	100%
% of Units	73%	0%	10%	16%	100%	
Lincoln County Outside of any UGB						
+120%	192	0	0	0	192	32%
80-120%	91	0	0	0	91	15%
50-80%	109	0	0	0	109	18%
30-50%	38	0	0	35	73	12%
0-30%	7	0	59	61	127	21%
Total Units	436	0	59	97	592	100%
% of Units	73%	0%	10%	16%	100%	
Tillamook County Outside of any UGB						
+120%	245	0	0	0	245	32%
80-120%	117	0	0	0	117	15%
50-80%	140	0	0	0	140	18%
30-50%	48	0	0	45	93	12%
0-30%	9	0	75	78	162	21%
Total Units	558	0	75	124	757	100%
% of Units	73%	0%	10%	16%	100%	

## Cities in the Willamette Valley region

### Exhibit 147. RHNA Beta Version Results for Cities in the Willamette Valley Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
UGB: Adair Village						
+120%	84	2	2	21	110	31%
80-120%	42	1	4	19	66	19%
50-80%	44	0	6	14	64	18%
30-50%	16	0	0	30	45	13%
0-30%	10	1	0	59	70	20%
Total Units	196	4	13	143	355	100%
% of Units	55%	1%	4%	40%	100%	
UGB: Albany						
+120%	2,020	47	49	511	2,628	31%
80-120%	999	28	104	445	1,576	19%
50-80%	1,049	0	150	337	1,537	18%
30-50%	375	0	0	715	1,090	13%
0-30%	246	22	0	1,406	1,674	20%
Total Units	4,689	98	303	3,414	8,504	100%
% of Units	55%	1%	4%	40%	100%	
UGB: Amity						
+120%	40	1	1	10	52	31%
80-120%	20	1	2	9	31	19%
50-80%	21	0	3	7	31	18%
30-50%	7	0	0	14	22	13%
0-30%	5	0	0	28	33	20%
Total Units	94	2	6	68	170	100%
% of Units	55%	1%	4%	40%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Aumsville

+120%	181	4	4	46	235	31%
80-120%	89	3	9	40	141	19%
50-80%	94	0	13	30	137	18%
30-50%	33	0	0	64	97	13%
0-30%	22	2	0	126	150	20%
Total Units	419	9	27	305	760	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Aurora

+120%	39	1	1	10	51	31%
80-120%	19	1	2	9	31	19%
50-80%	20	0	3	7	30	18%
30-50%	7	0	0	14	21	13%
0-30%	5	0	0	27	33	20%
Total Units	91	2	6	67	166	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Brownsville

+120%	45	1	1	11	58	31%
80-120%	22	1	2	10	35	19%
50-80%	23	0	3	7	34	18%
30-50%	8	0	0	16	24	13%
0-30%	5	0	0	31	37	20%
Total Units	104	2	7	76	188	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Carlton

+120%	90	2	2	23	117	31%
80-120%	45	1	5	20	70	19%
50-80%	47	0	7	15	69	18%
30-50%	17	0	0	32	49	13%
0-30%	11	1	0	63	75	20%
Total Units	209	4	14	152	379	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Coburg

+120%	59	1	1	15	77	31%
80-120%	29	1	3	13	46	19%
50-80%	31	0	4	10	45	18%
30-50%	11	0	0	21	32	13%
0-30%	7	1	0	41	49	20%
Total Units	137	3	9	100	249	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Corvallis

+120%	1,977	46	48	501	2,572	31%
80-120%	977	28	102	435	1,542	19%
50-80%	1,027	0	147	330	1,504	18%
30-50%	367	0	0	700	1,066	13%
0-30%	241	22	0	1,376	1,639	20%
Total Units	4,589	96	297	3,342	8,323	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Cottage Grove

+120%	230	5	6	58	300	31%
80-120%	114	3	12	51	180	19%
50-80%	120	0	17	38	175	18%
30-50%	43	0	0	82	124	13%
0-30%	28	3	0	160	191	20%
Total Units	535	11	35	389	970	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Creswell

+120%	187	4	5	47	243	31%
80-120%	92	3	10	41	146	19%
50-80%	97	0	14	31	142	18%
30-50%	35	0	0	66	101	13%
0-30%	23	2	0	130	155	20%
Total Units	434	9	28	316	787	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Dallas

+120%	739	17	18	187	961	31%
80-120%	365	10	38	163	576	19%
50-80%	384	0	55	123	562	18%
30-50%	137	0	0	261	398	13%
0-30%	90	8	0	514	612	20%
Total Units	1,714	36	111	1,248	3,109	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Dayton

+120%	57	1	1	14	74	31%
80-120%	28	1	3	12	44	19%
50-80%	29	0	4	9	43	18%
30-50%	11	0	0	20	31	13%
0-30%	7	1	0	39	47	20%
Total Units	132	3	9	96	239	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Detroit

+120%	4	0	0	1	5	31%
80-120%	2	0	0	1	3	19%
50-80%	2	0	0	1	3	18%
30-50%	1	0	0	1	2	13%
0-30%	0	0	0	3	3	20%
Total Units	9	0	1	7	17	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Donald

+120%	72	2	2	18	93	31%
80-120%	35	1	4	16	56	19%
50-80%	37	0	5	12	55	18%
30-50%	13	0	0	25	39	13%
0-30%	9	1	0	50	59	20%
Total Units	167	3	11	121	302	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Dundee

+120%	152	4	4	38	198	31%
80-120%	75	2	8	33	119	19%
50-80%	79	0	11	25	116	18%
30-50%	28	0	0	54	82	13%
0-30%	19	2	0	106	126	20%
Total Units	353	7	23	257	640	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Dunes City

+120%	21	0	1	5	27	31%
80-120%	10	0	1	5	16	19%
50-80%	11	0	2	3	16	18%
30-50%	4	0	0	7	11	13%
0-30%	3	0	0	15	17	20%
Total Units	48	1	3	35	88	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Eugene

+120%	5,711	134	138	1,446	7,428	31%
80-120%	2,823	80	293	1,258	4,454	19%
50-80%	2,966	0	425	954	4,344	18%
30-50%	1,059	0	0	2,021	3,080	13%
0-30%	696	63	0	3,974	4,733	20%
Total Units	13,254	277	856	9,651	24,039	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Falls City

+120%	20	0	0	5	26	31%
80-120%	10	0	1	4	15	19%
50-80%	10	0	1	3	15	18%
30-50%	4	0	0	7	11	13%
0-30%	2	0	0	14	16	20%
Total Units	46	1	3	33	83	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Florence

+120%	260	6	6	66	338	31%
80-120%	129	4	13	57	203	19%
50-80%	135	0	19	43	198	18%
30-50%	48	0	0	92	140	13%
0-30%	32	3	0	181	215	20%
Total Units	603	13	39	439	1,094	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Gaston

+120%	4	0	0	1	5	31%
80-120%	2	0	0	1	3	19%
50-80%	2	0	0	1	3	18%
30-50%	1	0	0	1	2	13%
0-30%	0	0	0	3	3	20%
Total Units	9	0	1	7	17	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Gates

+120%	6	0	0	2	8	31%
80-120%	3	0	0	1	5	19%
50-80%	3	0	0	1	5	18%
30-50%	1	0	0	2	3	13%
0-30%	1	0	0	5	5	20%
Total Units	15	0	1	11	27	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Gervais

+120%	83	2	2	21	108	31%
80-120%	41	1	4	18	65	19%
50-80%	43	0	6	14	63	18%
30-50%	15	0	0	29	45	13%
0-30%	10	1	0	58	69	20%
Total Units	192	4	12	140	349	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Halsey

+120%	30	1	1	8	39	31%
80-120%	15	0	2	7	24	19%
50-80%	16	0	2	5	23	18%
30-50%	6	0	0	11	16	13%
0-30%	4	0	0	21	25	20%
Total Units	70	1	5	51	127	100%
% of Units	55%	1%	4%	40%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Harrisburg

+120%	92	2	2	23	120	31%
80-120%	46	1	5	20	72	19%
50-80%	48	0	7	15	70	18%
30-50%	17	0	0	33	50	13%
0-30%	11	1	0	64	76	20%
Total Units	214	4	14	156	388	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Hubbard

+120%	106	2	3	27	138	31%
80-120%	53	1	5	23	83	19%
50-80%	55	0	8	18	81	18%
30-50%	20	0	0	38	57	13%
0-30%	13	1	0	74	88	20%
Total Units	247	5	16	180	447	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Idanha

+120%	2	0	0	0	2	31%
80-120%	1	0	0	0	1	19%
50-80%	1	0	0	0	1	18%
30-50%	0	0	0	1	1	13%
0-30%	0	0	0	1	1	20%
Total Units	4	0	0	3	7	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Independence

+120%	501	12	12	127	652	31%
80-120%	248	7	26	110	391	19%
50-80%	260	0	37	84	381	18%
30-50%	93	0	0	177	270	13%
0-30%	61	6	0	349	415	20%
Total Units	1,163	24	75	847	2,110	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Jefferson

+120%	97	2	2	25	126	31%
80-120%	48	1	5	21	76	19%
50-80%	50	0	7	16	74	18%
30-50%	18	0	0	34	52	13%
0-30%	12	1	0	68	80	20%
Total Units	225	5	15	164	408	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Junction City

+120%	238	6	6	60	309	31%
80-120%	118	3	12	52	186	19%
50-80%	124	0	18	40	181	18%
30-50%	44	0	0	84	128	13%
0-30%	29	3	0	166	197	20%
Total Units	552	12	36	402	1,001	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Lafayette

+120%	155	4	4	39	202	31%
80-120%	77	2	8	34	121	19%
50-80%	81	0	12	26	118	18%
30-50%	29	0	0	55	84	13%
0-30%	19	2	0	108	129	20%
Total Units	361	8	23	263	654	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Lebanon

+120%	728	17	18	184	947	31%
80-120%	360	10	37	160	568	19%
50-80%	378	0	54	122	554	18%
30-50%	135	0	0	258	393	13%
0-30%	89	8	0	506	603	20%
Total Units	1,689	35	109	1,230	3,064	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Lowell

+120%	28	1	1	7	36	31%
80-120%	14	0	1	6	22	19%
50-80%	14	0	2	5	21	18%
30-50%	5	0	0	10	15	13%
0-30%	3	0	0	19	23	20%
Total Units	65	1	4	47	117	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Lyons

+120%	30	1	1	7	38	31%
80-120%	15	0	2	7	23	19%
50-80%	15	0	2	5	22	18%
30-50%	5	0	0	10	16	13%
0-30%	4	0	0	21	24	20%
Total Units	69	1	4	50	124	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: McMinnville

+120%	1,419	33	34	359	1,846	31%
80-120%	701	20	73	313	1,107	19%
50-80%	737	0	106	237	1,079	18%
30-50%	263	0	0	502	765	13%
0-30%	173	16	0	987	1,176	20%
Total Units	3,293	69	213	2,398	5,973	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Mill City

+120%	55	1	1	14	72	31%
80-120%	27	1	3	12	43	19%
50-80%	29	0	4	9	42	18%
30-50%	10	0	0	20	30	13%
0-30%	7	1	0	38	46	20%
Total Units	128	3	8	93	232	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Millersburg

+120%	157	4	4	40	205	31%
80-120%	78	2	8	35	123	19%
50-80%	82	0	12	26	120	18%
30-50%	29	0	0	56	85	13%
0-30%	19	2	0	109	130	20%
Total Units	365	8	24	266	662	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Monmouth

+120%	383	9	9	97	498	31%
80-120%	189	5	20	84	298	19%
50-80%	199	0	28	64	291	18%
30-50%	71	0	0	135	206	13%
0-30%	47	4	0	266	317	20%
Total Units	888	19	57	647	1,611	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Monroe

+120%	10	0	0	3	13	31%
80-120%	5	0	1	2	8	19%
50-80%	5	0	1	2	8	18%
30-50%	2	0	0	4	6	13%
0-30%	1	0	0	7	9	20%
Total Units	24	1	2	17	44	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Mount Angel

+120%	77	2	2	20	100	31%
80-120%	38	1	4	17	60	19%
50-80%	40	0	6	13	59	18%
30-50%	14	0	0	27	42	13%
0-30%	9	1	0	54	64	20%
Total Units	179	4	12	130	325	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Newberg

+120%	1,200	28	29	304	1,560	31%
80-120%	593	17	62	264	936	19%
50-80%	623	0	89	200	913	18%
30-50%	222	0	0	424	647	13%
0-30%	146	13	0	835	994	20%
Total Units	2,784	58	180	2,027	5,050	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Oakridge

+120%	38	1	1	10	50	31%
80-120%	19	1	2	8	30	19%
50-80%	20	0	3	6	29	18%
30-50%	7	0	0	14	21	13%
0-30%	5	0	0	27	32	20%
Total Units	89	2	6	65	161	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Philomath

+120%	227	5	6	58	296	31%
80-120%	112	3	12	50	177	19%
50-80%	118	0	17	38	173	18%
30-50%	42	0	0	80	123	13%
0-30%	28	3	0	158	188	20%
Total Units	528	11	34	384	957	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Salem/Keizer

+120%	9,012	211	218	2,281	11,722	31%
80-120%	4,454	127	463	1,985	7,029	19%
50-80%	4,680	0	670	1,505	6,855	18%
30-50%	1,671	0	0	3,189	4,860	13%
0-30%	1,099	99	0	6,271	7,469	20%
Total Units	20,916	437	1,352	15,231	37,935	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Scio

+120%	25	1	1	6	32	31%
80-120%	12	0	1	5	19	19%
50-80%	13	0	2	4	19	18%
30-50%	5	0	0	9	13	13%
0-30%	3	0	0	17	21	20%
Total Units	58	1	4	42	104	100%
% of Units	55%	1%	4%	40%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Scotts Mills

+120%	9	0	0	2	12	31%
80-120%	5	0	0	2	7	19%
50-80%	5	0	1	2	7	18%
30-50%	2	0	0	3	5	13%
0-30%	1	0	0	6	8	20%
Total Units	21	0	1	15	39	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Sheridan

+120%	107	3	3	27	139	31%
80-120%	53	2	6	24	84	19%
50-80%	56	0	8	18	82	18%
30-50%	20	0	0	38	58	13%
0-30%	13	1	0	75	89	20%
Total Units	249	5	16	181	451	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Silverton

+120%	390	9	9	99	507	31%
80-120%	193	5	20	86	304	19%
50-80%	202	0	29	65	296	18%
30-50%	72	0	0	138	210	13%
0-30%	48	4	0	271	323	20%
Total Units	904	19	58	659	1,640	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Sodaville

+120%	6	0	0	2	8	31%
80-120%	3	0	0	1	5	19%
50-80%	3	0	0	1	5	18%
30-50%	1	0	0	2	3	13%
0-30%	1	0	0	4	5	20%
Total Units	14	0	1	11	26	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Springfield

+120%	1,459	34	35	369	1,898	31%
80-120%	721	21	75	321	1,138	19%
50-80%	758	0	109	244	1,110	18%
30-50%	271	0	0	516	787	13%
0-30%	178	16	0	1,015	1,209	20%
Total Units	3,386	71	219	2,466	6,142	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: St. Paul

+120%	10	0	0	3	13	31%
80-120%	5	0	1	2	8	19%
50-80%	5	0	1	2	8	18%
30-50%	2	0	0	3	5	13%
0-30%	1	0	0	7	8	20%
Total Units	23	0	1	17	42	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Stayton

+120%	243	6	6	62	316	31%
80-120%	120	3	12	54	190	19%
50-80%	126	0	18	41	185	18%
30-50%	45	0	0	86	131	13%
0-30%	30	3	0	169	202	20%
Total Units	564	12	36	411	1,024	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Sublimity

+120%	71	2	2	18	93	31%
80-120%	35	1	4	16	56	19%
50-80%	37	0	5	12	54	18%
30-50%	13	0	0	25	38	13%
0-30%	9	1	0	50	59	20%
Total Units	165	3	11	120	300	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Sweet Home

+120%	231	5	6	58	301	31%
80-120%	114	3	12	51	180	19%
50-80%	120	0	17	39	176	18%
30-50%	43	0	0	82	125	13%
0-30%	28	3	0	161	192	20%
Total Units	536	11	35	391	973	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Tangent

+120%	47	1	1	12	61	31%
80-120%	23	1	2	10	36	19%
50-80%	24	0	3	8	35	18%
30-50%	9	0	0	16	25	13%
0-30%	6	1	0	32	39	20%
Total Units	108	2	7	79	196	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Turner

+120%	129	3	3	33	168	31%
80-120%	64	2	7	28	101	19%
50-80%	67	0	10	22	98	18%
30-50%	24	0	0	46	70	13%
0-30%	16	1	0	90	107	20%
Total Units	299	6	19	218	543	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Veneta

+120%	169	4	4	43	220	31%
80-120%	84	2	9	37	132	19%
50-80%	88	0	13	28	129	18%
30-50%	31	0	0	60	91	13%
0-30%	21	2	0	118	140	20%
Total Units	393	8	25	286	712	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Waterloo

+120%	4	0	0	1	5	31%
80-120%	2	0	0	1	3	19%
50-80%	2	0	0	1	3	18%
30-50%	1	0	0	1	2	13%
0-30%	1	0	0	3	3	20%
Total Units	10	0	1	7	17	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Westfir

+120%	3	0	0	1	4	31%
80-120%	2	0	0	1	2	19%
50-80%	2	0	0	1	2	18%
30-50%	1	0	0	1	2	13%
0-30%	0	0	0	2	3	20%
Total Units	7	0	0	5	13	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Willamina

+120%	38	1	1	10	49	31%
80-120%	19	1	2	8	29	19%
50-80%	20	0	3	6	29	18%
30-50%	7	0	0	13	20	13%
0-30%	5	0	0	26	31	20%
Total Units	87	2	6	64	159	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Woodburn

+120%	1,092	26	26	276	1,420	31%
80-120%	540	15	56	240	852	19%
50-80%	567	0	81	182	831	18%
30-50%	202	0	0	386	589	13%
0-30%	133	12	0	760	905	20%
Total Units	2,534	53	164	1,845	4,596	100%
% of Units	55%	1%	4%	40%	100%	

#### UGB: Yamhill

+120%	38	1	1	10	49	31%
80-120%	19	1	2	8	29	19%
50-80%	20	0	3	6	29	18%
30-50%	7	0	0	13	20	13%
0-30%	5	0	0	26	31	20%
Total Units	87	2	6	64	158	100%
% of Units	55%	1%	4%	40%	100%	

#### Benton County Outside of any UGB

+120%	180	4	4	46	234	31%
80-120%	89	3	9	40	141	19%
50-80%	94	0	13	30	137	18%
30-50%	33	0	0	64	97	13%
0-30%	22	2	0	125	149	20%
Total Units	418	9	27	305	758	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### Lane County Outside of any UGB

+120%	710	17	17	180	924	31%
80-120%	351	10	36	156	554	19%
50-80%	369	0	53	119	540	18%
30-50%	132	0	0	251	383	13%
0-30%	87	8	0	494	588	20%
Total Units	1,648	34	106	1,200	2,989	100%
% of Units	55%	1%	4%	40%	100%	

#### Linn County Outside of any UGB

+120%	482	11	12	122	627	31%
80-120%	238	7	25	106	376	19%
50-80%	250	0	36	81	367	18%
30-50%	89	0	0	171	260	13%
0-30%	59	5	0	336	400	20%
Total Units	1,119	23	72	815	2,030	100%
% of Units	55%	1%	4%	40%	100%	

#### Marion County Outside of any UGB

+120%	695	16	17	176	904	31%
80-120%	343	10	36	153	542	19%
50-80%	361	0	52	116	528	18%
30-50%	129	0	0	246	375	13%
0-30%	85	8	0	483	576	20%
Total Units	1,612	34	104	1,174	2,924	100%
% of Units	55%	1%	4%	40%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
Polk County Outside of any UGB						
+120%	295	7	7	75	384	31%
80-120%	146	4	15	65	230	19%
50-80%	153	0	22	49	225	18%
30-50%	55	0	0	104	159	13%
0-30%	36	3	0	205	245	20%
Total Units	685	14	44	499	1,243	100%
% of Units	55%	1%	4%	40%	100%	
Yamhill County Outside of any UGB						
+120%	597	14	14	151	777	31%
80-120%	295	8	31	132	466	19%
50-80%	310	0	44	100	454	18%
30-50%	111	0	0	211	322	13%
0-30%	73	7	0	415	495	20%
Total Units	1,386	29	90	1,009	2,513	100%
% of Units	55%	1%	4%	40%	100%	



## Cities in the Southwest region

### Exhibit 148. RHNA Beta Version Results for Cities in the Southwest Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
UGB: Ashland						
+120%	492	78	35	21	626	36%
80-120%	182	11	10	118	322	19%
50-80%	121	34	62	66	283	16%
30-50%	51	0	0	153	204	12%
0-30%	42	0	12	247	301	17%
Total Units	888	123	119	605	1,735	100%
% of Units	51%	7%	7%	35%	100%	
UGB: Bandon						
+120%	92	15	7	4	117	36%
80-120%	34	2	2	22	60	19%
50-80%	23	6	11	12	53	16%
30-50%	10	0	0	28	38	12%
0-30%	8	0	2	46	56	17%
Total Units	166	23	22	113	324	100%
% of Units	51%	7%	7%	35%	100%	
UGB: Brookings						
+120%	242	39	17	10	309	36%
80-120%	90	5	5	58	159	19%
50-80%	60	17	30	32	139	16%
30-50%	25	0	0	75	100	12%
0-30%	20	0	6	122	148	17%
Total Units	438	61	59	298	855	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Butte Falls

+120%	7	1	0	0	9	36%
80-120%	3	0	0	2	4	19%
50-80%	2	0	1	1	4	16%
30-50%	1	0	0	2	3	12%
0-30%	1	0	0	3	4	17%
Total Units	12	2	2	8	24	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Canyonville

+120%	74	12	5	3	94	36%
80-120%	27	2	2	18	48	19%
50-80%	18	5	9	10	42	16%
30-50%	8	0	0	23	30	12%
0-30%	6	0	2	37	45	17%
Total Units	133	18	18	91	260	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Cave Junction

+120%	49	8	3	2	62	36%
80-120%	18	1	1	12	32	19%
50-80%	12	3	6	7	28	16%
30-50%	5	0	0	15	20	12%
0-30%	4	0	1	24	30	17%
Total Units	88	12	12	60	171	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Central Point

+120%	879	140	63	37	1,119	36%
80-120%	326	19	18	212	575	19%
50-80%	217	60	110	118	505	16%
30-50%	91	0	0	273	364	12%
0-30%	74	0	22	441	538	17%
Total Units	1,587	220	213	1,081	3,101	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Coos Bay

+120%	401	64	29	17	510	36%
80-120%	149	9	8	97	262	19%
50-80%	99	27	50	54	230	16%
30-50%	42	0	0	124	166	12%
0-30%	34	0	10	201	245	17%
Total Units	724	100	97	493	1,414	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Coquille

+120%	60	10	4	3	76	36%
80-120%	22	1	1	14	39	19%
50-80%	15	4	7	8	34	16%
30-50%	6	0	0	19	25	12%
0-30%	5	0	1	30	37	17%
Total Units	108	15	14	73	211	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Drain

+120%	25	4	2	1	32	36%
80-120%	9	1	1	6	16	19%
50-80%	6	2	3	3	14	16%
30-50%	3	0	0	8	10	12%
0-30%	2	0	1	13	15	17%
Total Units	45	6	6	31	88	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Eagle Point

+120%	461	74	33	19	587	36%
80-120%	171	10	9	111	302	19%
50-80%	114	32	58	62	265	16%
30-50%	48	0	0	143	191	12%
0-30%	39	0	12	232	282	17%
Total Units	833	115	112	567	1,627	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Elkton

+120%	7	1	1	0	9	36%
80-120%	3	0	0	2	5	19%
50-80%	2	0	1	1	4	16%
30-50%	1	0	0	2	3	12%
0-30%	1	0	0	4	4	17%
Total Units	13	2	2	9	25	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Glendale

+120%	14	2	1	1	18	36%
80-120%	5	0	0	3	9	19%
50-80%	4	1	2	2	8	16%
30-50%	1	0	0	4	6	12%
0-30%	1	0	0	7	9	17%
Total Units	26	4	3	17	50	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Gold Beach

+120%	91	14	7	4	115	36%
80-120%	34	2	2	22	59	19%
50-80%	22	6	11	12	52	16%
30-50%	9	0	0	28	38	12%
0-30%	8	0	2	46	55	17%
Total Units	164	23	22	111	320	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Gold Hill

+120%	24	4	2	1	31	36%
80-120%	9	1	0	6	16	19%
50-80%	6	2	3	3	14	16%
30-50%	3	0	0	8	10	12%
0-30%	2	0	1	12	15	17%
Total Units	44	6	6	30	86	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Grants Pass

+120%	1,539	246	110	65	1,960	36%
80-120%	571	34	31	371	1,006	19%
50-80%	380	106	193	206	885	16%
30-50%	160	0	0	477	637	12%
0-30%	130	0	39	773	941	17%
Total Units	2,779	385	373	1,892	5,429	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Jacksonville

+120%	131	21	9	6	167	36%
80-120%	49	3	3	32	86	19%
50-80%	32	9	16	18	76	16%
30-50%	14	0	0	41	54	12%
0-30%	11	0	3	66	80	17%
Total Units	237	33	32	162	464	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Lakeside

+120%	65	10	5	3	82	36%
80-120%	24	1	1	16	42	19%
50-80%	16	4	8	9	37	16%
30-50%	7	0	0	20	27	12%
0-30%	5	0	2	32	40	17%
Total Units	117	16	16	79	228	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Medford

+120%	3,420	546	246	144	4,356	36%
80-120%	1,268	75	70	824	2,237	19%
50-80%	845	235	429	459	1,966	16%
30-50%	355	0	0	1,061	1,416	12%
0-30%	289	0	86	1,717	2,092	17%
Total Units	6,176	855	830	4,204	12,066	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Myrtle Creek

+120%	207	33	15	9	263	36%
80-120%	77	5	4	50	135	19%
50-80%	51	14	26	28	119	16%
30-50%	21	0	0	64	86	12%
0-30%	17	0	5	104	126	17%
Total Units	373	52	50	254	730	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Myrtle Point

+120%	40	6	3	2	51	36%
80-120%	15	1	1	10	26	19%
50-80%	10	3	5	5	23	16%
30-50%	4	0	0	13	17	12%
0-30%	3	0	1	20	25	17%
Total Units	73	10	10	50	142	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: North Bend

+120%	154	25	11	6	196	36%
80-120%	57	3	3	37	100	19%
50-80%	38	11	19	21	88	16%
30-50%	16	0	0	48	64	12%
0-30%	13	0	4	77	94	17%
Total Units	277	38	37	189	542	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Oakland

+120%	22	3	2	1	28	36%
80-120%	8	0	0	5	14	19%
50-80%	5	1	3	3	12	16%
30-50%	2	0	0	7	9	12%
0-30%	2	0	1	11	13	17%
Total Units	39	5	5	27	77	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Phoenix

+120%	140	22	10	6	178	36%
80-120%	52	3	3	34	91	19%
50-80%	35	10	18	19	80	16%
30-50%	15	0	0	43	58	12%
0-30%	12	0	4	70	86	17%
Total Units	253	35	34	172	493	100%
% of Units	51%	7%	7%	35%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Port Orford

+120%	39	6	3	2	49	36%
80-120%	14	1	1	9	25	19%
50-80%	10	3	5	5	22	16%
30-50%	4	0	0	12	16	12%
0-30%	3	0	1	19	24	17%
Total Units	70	10	9	48	137	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Powers

+120%	8	1	1	0	10	36%
80-120%	3	0	0	2	5	19%
50-80%	2	1	1	1	5	16%
30-50%	1	0	0	3	3	12%
0-30%	1	0	0	4	5	17%
Total Units	15	2	2	10	29	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Reedsport

+120%	48	8	3	2	62	36%
80-120%	18	1	1	12	32	19%
50-80%	12	3	6	6	28	16%
30-50%	5	0	0	15	20	12%
0-30%	4	0	1	24	30	17%
Total Units	88	12	12	60	171	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Riddle

+120%	18	3	1	1	23	36%
80-120%	7	0	0	4	12	19%
50-80%	4	1	2	2	10	16%
30-50%	2	0	0	6	7	12%
0-30%	2	0	0	9	11	17%
Total Units	32	4	4	22	63	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Rogue River

+120%	81	13	6	3	103	36%
80-120%	30	2	2	20	53	19%
50-80%	20	6	10	11	47	16%
30-50%	8	0	0	25	34	12%
0-30%	7	0	2	41	50	17%
Total Units	147	20	20	100	286	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Roseburg

+120%	1,079	172	77	45	1,374	36%
80-120%	400	24	22	260	706	19%
50-80%	266	74	135	145	620	16%
30-50%	112	0	0	335	447	12%
0-30%	91	0	27	542	660	17%
Total Units	1,948	270	262	1,326	3,806	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Shady Cove

+120%	111	18	8	5	142	36%
80-120%	41	2	2	27	73	19%
50-80%	28	8	14	15	64	16%
30-50%	12	0	0	35	46	12%
0-30%	9	0	3	56	68	17%
Total Units	201	28	27	137	393	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Sutherlin

+120%	235	38	17	10	300	36%
80-120%	87	5	5	57	154	19%
50-80%	58	16	29	32	135	16%
30-50%	24	0	0	73	97	12%
0-30%	20	0	6	118	144	17%
Total Units	425	59	57	289	830	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Talent

+120%	218	35	16	9	278	36%
80-120%	81	5	4	52	143	19%
50-80%	54	15	27	29	125	16%
30-50%	23	0	0	68	90	12%
0-30%	18	0	5	109	133	17%
Total Units	394	54	53	268	769	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Winston

+120%	251	40	18	11	320	36%
80-120%	93	6	5	61	164	19%
50-80%	62	17	32	34	144	16%
30-50%	26	0	0	78	104	12%
0-30%	21	0	6	126	154	17%
Total Units	454	63	61	309	887	100%
% of Units	51%	7%	7%	35%	100%	

#### UGB: Yoncalla

+120%	16	3	1	1	21	36%
80-120%	6	0	0	4	11	19%
50-80%	4	1	2	2	9	16%
30-50%	2	0	0	5	7	12%
0-30%	1	0	0	8	10	17%
Total Units	29	4	4	20	57	100%
% of Units	51%	7%	7%	35%	100%	

#### Coos County Outside of any UBG

+120%	234	37	17	10	298	36%
80-120%	87	5	5	56	153	19%
50-80%	58	16	29	31	135	16%
30-50%	24	0	0	73	97	12%
0-30%	20	0	6	118	143	17%
Total Units	423	59	57	288	826	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### Curry County Outside of any UBG

+120%	53	8	4	2	68	36%
80-120%	20	1	1	13	35	19%
50-80%	13	4	7	7	30	16%
30-50%	6	0	0	16	22	12%
0-30%	4	0	1	27	32	17%
Total Units	96	13	13	65	187	100%
% of Units	50%	7%	7%	34%	100%	

#### Douglas County Outside of any UBG

+120%	466	74	33	20	594	36%
80-120%	173	10	10	112	305	19%
50-80%	115	32	58	63	268	16%
30-50%	48	0	0	145	193	12%
0-30%	39	0	12	234	285	17%
Total Units	842	117	113	573	1,646	100%
% of Units	51%	7%	7%	35%	100%	

#### Jackson County Outside of any UBG

+120%	1,046	167	75	44	1,331	36%
80-120%	388	23	21	252	684	19%
50-80%	258	72	131	140	601	16%
30-50%	108	0	0	324	433	12%
0-30%	88	0	26	525	639	17%
Total Units	1,888	261	254	1,285	3,688	100%
% of Units	51%	7%	7%	35%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

**Josephine County Outside of any UBG**

+120%	372	59	27	16	474	36%
80-120%	138	8	8	90	243	19%
50-80%	92	26	47	50	214	16%
30-50%	39	0	0	115	154	12%
0-30%	31	0	9	187	228	17%
Total Units	672	93	90	457	1,313	100%
% of Units	51%	7%	7%	35%	100%	

## Cities in the North Central region

### Exhibit 149. RHNA Beta Version Results for Cities in the North Central Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
UGB: Antelope						
+120%	4	0	0	0	5	36%
80-120%	2	0	0	0	3	21%
50-80%	2	0	0	0	2	17%
30-50%	2	0	0	0	2	11%
0-30%	0	0	0	2	2	15%
Total Units	11	1	0	2	13	100%
% of Units	79%	5%	3%	14%	100%	
UGB: Arlington						
+120%	25	1	1	0	27	36%
80-120%	14	1	0	1	16	21%
50-80%	12	0	1	0	13	17%
30-50%	9	0	0	0	9	11%
0-30%	0	2	0	9	11	15%
Total Units	60	4	2	10	76	100%
% of Units	79%	5%	3%	14%	100%	
UGB: Bend						
+120%	9,716	419	444	0	10,579	36%
80-120%	5,307	364	38	415	6,123	21%
50-80%	4,675	0	239	0	4,914	17%
30-50%	3,306	0	0	0	3,306	11%
0-30%	0	609	120	3,538	4,268	15%
Total Units	23,003	1,393	842	3,953	29,190	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Boardman

+120%	281	12	13	0	306	36%
80-120%	153	11	1	12	177	21%
50-80%	135	0	7	0	142	17%
30-50%	96	0	0	0	96	11%
0-30%	0	18	3	102	123	15%
Total Units	665	40	24	114	844	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Canyon City

+120%	24	1	1	0	27	36%
80-120%	13	1	0	1	15	21%
50-80%	12	0	1	0	12	17%
30-50%	8	0	0	0	8	11%
0-30%	0	2	0	9	11	15%
Total Units	58	4	2	10	73	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Cascade Locks

+120%	58	3	3	0	63	36%
80-120%	32	2	0	2	37	21%
50-80%	28	0	1	0	29	17%
30-50%	20	0	0	0	20	11%
0-30%	0	4	1	21	26	15%
Total Units	138	8	5	24	175	100%
% of Units	79%	5%	3%	14%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Condon

+120%	19	1	1	0	21	36%
80-120%	10	1	0	1	12	21%
50-80%	9	0	0	0	10	17%
30-50%	6	0	0	0	6	11%
0-30%	0	1	0	7	8	15%
Total Units	45	3	2	8	57	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Culver

+120%	72	3	3	0	78	36%
80-120%	39	3	0	3	45	21%
50-80%	35	0	2	0	36	17%
30-50%	25	0	0	0	25	11%
0-30%	0	5	1	26	32	15%
Total Units	171	10	6	29	217	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Dayville

+120%	3	0	0	0	4	36%
80-120%	2	0	0	0	2	21%
50-80%	2	0	0	0	2	17%
30-50%	1	0	0	0	1	11%
0-30%	0	0	0	1	1	15%
Total Units	8	0	0	1	10	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Dufur

+120%	19	1	1	0	20	36%
80-120%	10	1	0	1	12	21%
50-80%	9	0	0	0	9	17%
30-50%	6	0	0	0	6	11%
0-30%	0	1	0	7	8	15%
Total Units	44	3	2	8	56	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Fossil

+120%	16	1	1	0	18	36%
80-120%	9	1	0	1	10	21%
50-80%	8	0	0	0	8	17%
30-50%	5	0	0	0	5	11%
0-30%	0	1	0	6	7	15%
Total Units	38	2	1	7	48	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Granite

+120%	1	0	0	0	1	36%
80-120%	0	0	0	0	1	21%
50-80%	0	0	0	0	0	17%
30-50%	0	0	0	0	0	11%
0-30%	0	0	0	0	0	15%
Total Units	2	0	0	0	3	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Grass Valley

+120%	3	0	0	0	3	36%
80-120%	2	0	0	0	2	21%
50-80%	1	0	0	0	2	17%
30-50%	1	0	0	0	1	11%
0-30%	0	0	0	1	1	15%
Total Units	7	0	0	1	9	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Heppner

+120%	54	2	2	0	58	36%
80-120%	29	2	0	2	34	21%
50-80%	26	0	1	0	27	17%
30-50%	18	0	0	0	18	11%
0-30%	0	3	1	19	24	15%
Total Units	127	8	5	22	161	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Hood River

+120%	809	35	37	0	881	36%
80-120%	442	30	3	35	510	21%
50-80%	389	0	20	0	409	17%
30-50%	275	0	0	0	275	11%
0-30%	0	51	10	294	355	15%
Total Units	1,915	116	70	329	2,429	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Ione

+120%	11	0	1	0	12	36%
80-120%	6	0	0	0	7	21%
50-80%	5	0	0	0	6	17%
30-50%	4	0	0	0	4	11%
0-30%	0	1	0	4	5	15%
Total Units	26	2	1	4	33	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Irrigon

+120%	113	5	5	0	123	36%
80-120%	62	4	0	5	71	21%
50-80%	54	0	3	0	57	17%
30-50%	38	0	0	0	38	11%
0-30%	0	7	1	41	49	15%
Total Units	267	16	10	46	338	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: John Day

+120%	95	4	4	0	103	36%
80-120%	52	4	0	4	60	21%
50-80%	46	0	2	0	48	17%
30-50%	32	0	0	0	32	11%
0-30%	0	6	1	34	42	15%
Total Units	224	14	8	38	284	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: La Pine

+120%	225	10	10	0	245	36%
80-120%	123	8	1	10	142	21%
50-80%	108	0	6	0	114	17%
30-50%	77	0	0	0	77	11%
0-30%	0	14	3	82	99	15%
Total Units	533	32	20	92	677	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Lexington

+120%	5	0	0	0	5	36%
80-120%	3	0	0	0	3	21%
50-80%	2	0	0	0	2	17%
30-50%	2	0	0	0	2	11%
0-30%	0	0	0	2	2	15%
Total Units	11	1	0	2	14	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Lonerock

+120%	4	0	0	0	4	36%
80-120%	2	0	0	0	3	21%
50-80%	2	0	0	0	2	17%
30-50%	1	0	0	0	1	11%
0-30%	0	0	0	1	2	15%
Total Units	10	1	0	2	12	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Long Creek

+120%	6	0	0	0	6	36%
80-120%	3	0	0	0	4	21%
50-80%	3	0	0	0	3	17%
30-50%	2	0	0	0	2	11%
0-30%	0	0	0	2	2	15%
Total Units	13	1	0	2	17	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Madras

+120%	474	20	22	0	516	36%
80-120%	259	18	2	20	299	21%
50-80%	228	0	12	0	240	17%
30-50%	161	0	0	0	161	11%
0-30%	0	30	6	173	208	15%
Total Units	1,122	68	41	193	1,423	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Maupin

+120%	19	1	1	0	21	36%
80-120%	11	1	0	1	12	21%
50-80%	9	0	0	0	10	17%
30-50%	7	0	0	0	7	11%
0-30%	0	1	0	7	8	15%
Total Units	46	3	2	8	58	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Metolius

+120%	41	2	2	0	45	36%
80-120%	22	2	0	2	26	21%
50-80%	20	0	1	0	21	17%
30-50%	14	0	0	0	14	11%
0-30%	0	3	1	15	18	15%
Total Units	97	6	4	17	123	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Mitchell

+120%	4	0	0	0	4	36%
80-120%	2	0	0	0	2	21%
50-80%	2	0	0	0	2	17%
30-50%	1	0	0	0	1	11%
0-30%	0	0	0	1	2	15%
Total Units	8	1	0	1	11	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Monument

+120%	4	0	0	0	4	36%
80-120%	2	0	0	0	3	21%
50-80%	2	0	0	0	2	17%
30-50%	1	0	0	0	1	11%
0-30%	0	0	0	1	2	15%
Total Units	10	1	0	2	12	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Moro

+120%	16	1	1	0	18	36%
80-120%	9	1	0	1	10	21%
50-80%	8	0	0	0	8	17%
30-50%	6	0	0	0	6	11%
0-30%	0	1	0	6	7	15%
Total Units	38	2	1	7	49	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Mosier

+120%	21	1	1	0	23	36%
80-120%	12	1	0	1	13	21%
50-80%	10	0	1	0	11	17%
30-50%	7	0	0	0	7	11%
0-30%	0	1	0	8	9	15%
Total Units	50	3	2	9	63	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Mt Vernon

+120%	11	0	0	0	12	36%
80-120%	6	0	0	0	7	21%
50-80%	5	0	0	0	5	17%
30-50%	4	0	0	0	4	11%
0-30%	0	1	0	4	5	15%
Total Units	25	2	1	4	32	100%
% of Units	79%	5%	3%	14%	100%	



Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Prairie City

+120%	20	1	1	0	22	36%
80-120%	11	1	0	1	12	21%
50-80%	10	0	0	0	10	17%
30-50%	7	0	0	0	7	11%
0-30%	0	1	0	7	9	15%
Total Units	47	3	2	8	60	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Prineville

+120%	821	35	38	0	894	36%
80-120%	449	31	3	35	518	21%
50-80%	395	0	20	0	415	17%
30-50%	279	0	0	0	279	11%
0-30%	0	52	10	299	361	15%
Total Units	1,944	118	71	334	2,467	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Redmond

+120%	2,899	125	133	0	3,157	36%
80-120%	1,584	109	11	124	1,827	21%
50-80%	1,395	0	71	0	1,466	17%
30-50%	987	0	0	0	987	11%
0-30%	0	182	36	1,056	1,274	15%
Total Units	6,864	416	251	1,180	8,711	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Rufus

+120%	6	0	0	0	7	36%
80-120%	4	0	0	0	4	21%
50-80%	3	0	0	0	3	17%
30-50%	2	0	0	0	2	11%
0-30%	0	0	0	2	3	15%
Total Units	15	1	1	3	19	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Seneca

+120%	4	0	0	0	5	36%
80-120%	2	0	0	0	3	21%
50-80%	2	0	0	0	2	17%
30-50%	1	0	0	0	1	11%
0-30%	0	0	0	2	2	15%
Total Units	10	1	0	2	13	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Shaniko

+120%	1	0	0	0	1	36%
80-120%	0	0	0	0	0	21%
50-80%	0	0	0	0	0	17%
30-50%	0	0	0	0	0	11%
0-30%	0	0	0	0	0	15%
Total Units	2	0	0	0	2	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Sisters

+120%	325	14	15	0	354	36%
80-120%	178	12	1	14	205	21%
50-80%	156	0	8	0	164	17%
30-50%	111	0	0	0	111	11%
0-30%	0	20	4	118	143	15%
Total Units	770	47	28	132	977	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: Spray

+120%	4	0	0	0	5	36%
80-120%	2	0	0	0	3	21%
50-80%	2	0	0	0	2	17%
30-50%	1	0	0	0	1	11%
0-30%	0	0	0	2	2	15%
Total Units	10	1	0	2	13	100%
% of Units	79%	5%	3%	14%	100%	

#### UGB: The Dalles

+120%	1,042	45	48	0	1,134	36%
80-120%	569	39	4	44	657	21%
50-80%	501	0	26	0	527	17%
30-50%	355	0	0	0	355	11%
0-30%	0	65	13	379	458	15%
Total Units	2,467	149	90	424	3,130	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Wasco

+120%	14	1	1	0	15	36%
80-120%	8	1	0	1	9	21%
50-80%	7	0	0	0	7	17%
30-50%	5	0	0	0	5	11%
0-30%	0	1	0	5	6	15%
Total Units	33	2	1	6	42	100%
% of Units	79%	5%	3%	14%	100%	

#### Crook County Outside of any UGB

+120%	447	19	20	0	487	36%
80-120%	244	17	2	19	282	21%
50-80%	215	0	11	0	226	17%
30-50%	152	0	0	0	152	11%
0-30%	0	28	6	163	197	15%
Total Units	1,059	64	39	182	1,344	100%
% of Units	79%	5%	3%	13%	100%	

#### Deschutes County Outside of any UGB

+120%	2,819	122	129	0	3,069	36%
80-120%	1,540	106	11	120	1,777	21%
50-80%	1,356	0	69	0	1,426	17%
30-50%	959	0	0	0	959	11%
0-30%	0	177	35	1,026	1,238	15%
Total Units	6,674	404	244	1,147	8,469	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### **Gilliam County Outside of any UGB**

+120%	24	1	1	0	26	36%
80-120%	13	1	0	1	15	21%
50-80%	12	0	1	0	12	17%
30-50%	8	0	0	0	8	11%
0-30%	0	2	0	9	11	15%
Total Units	57	3	2	10	72	100%
% of Units	74%	4%	3%	13%	100%	

#### **Grant County Outside of any UGB**

+120%	52	2	2	0	56	36%
80-120%	28	2	0	2	33	21%
50-80%	25	0	1	0	26	17%
30-50%	18	0	0	0	18	11%
0-30%	0	3	1	19	23	15%
Total Units	123	7	4	21	156	100%
% of Units	76%	5%	3%	13%	100%	

#### **Hood River County Outside of any UGB**

+120%	766	33	35	0	834	36%
80-120%	419	29	3	33	483	21%
50-80%	369	0	19	0	388	17%
30-50%	261	0	0	0	261	11%
0-30%	0	48	9	279	337	15%
Total Units	1,814	110	66	312	2,302	100%
% of Units	79%	5%	3%	14%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### Jefferson County Outside of any UGB

+120%	520	22	24	0	566	36%
80-120%	284	20	2	22	328	21%
50-80%	250	0	13	0	263	17%
30-50%	177	0	0	0	177	11%
0-30%	0	33	6	189	229	15%
Total Units	1,232	75	45	212	1,563	100%
% of Units	79%	5%	3%	13%	100%	

#### Morrow County Outside of any UGB

+120%	136	6	6	0	148	36%
80-120%	74	5	1	6	86	21%
50-80%	66	0	3	0	69	17%
30-50%	46	0	0	0	46	11%
0-30%	0	9	2	50	60	15%
Total Units	323	20	12	55	409	100%
% of Units	78%	5%	3%	13%	100%	

#### Sherman County Outside of any UGB

+120%	24	1	1	0	26	36%
80-120%	13	1	0	1	15	21%
50-80%	11	0	1	0	12	17%
30-50%	8	0	0	0	8	11%
0-30%	0	1	0	9	10	15%
Total Units	56	3	2	10	71	100%
% of Units	74%	4%	3%	13%	100%	

Median Family Income	New units for each of the following ...				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### Wasco County Outside of any UGB

+120%	287	12	13	0	313	36%
80-120%	157	11	1	12	181	21%
50-80%	138	0	7	0	145	17%
30-50%	98	0	0	0	98	11%
0-30%	0	18	4	105	126	15%
Total Units	681	41	25	117	864	100%
% of Units	78%	5%	3%	13%	100%	

#### Wheeler County Outside of any UGB

+120%	15	1	1	0	17	36%
80-120%	8	1	0	1	10	21%
50-80%	7	0	0	0	8	17%
30-50%	5	0	0	0	5	11%
0-30%	0	1	0	6	7	15%
Total Units	36	2	1	6	46	100%
% of Units	71%	4%	3%	12%	100%	

## Cities in the East/Southeastern region

### Exhibit 150. RHNA Beta Version Results for Cities in the East/Southeastern Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
UGB: Adams						
+120%	2	0	1	0	3	38%
80-120%	1	0	0	1	1	14%
50-80%	1	0	0	0	1	14%
30-50%	1	0	0	0	1	12%
0-30%	1	0	0	1	2	21%
Total Units	5	0	1	1	8	100%
% of Units	66%	0%	17%	17%	100%	
UGB: Adrian						
+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	0	0	3	100%
% of Units	66%	0%	17%	17%	100%	
UGB: Athena						
+120%	4	0	1	0	6	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	1	0	2	14%
30-50%	1	0	0	0	2	12%
0-30%	2	0	0	1	3	21%
Total Units	10	0	3	3	15	100%
% of Units	66%	0%	17%	17%	100%	



Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Baker City

+120%	34	0	10	0	45	38%
80-120%	9	0	1	8	17	14%
50-80%	8	0	5	3	17	14%
30-50%	11	0	4	0	15	12%
0-30%	16	0	0	10	25	21%
Total Units	78	0	20	21	119	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Bonanza

+120%	3	0	1	0	4	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	1	0	2	14%
30-50%	1	0	0	0	1	12%
0-30%	2	0	0	1	2	21%
Total Units	8	0	2	2	12	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Burns

+120%	10	0	3	0	13	38%
80-120%	3	0	0	2	5	14%
50-80%	3	0	2	1	5	14%
30-50%	3	0	1	0	4	12%
0-30%	5	0	0	3	8	21%
Total Units	23	0	6	6	36	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Chiloquin

+120%	3	0	1	0	5	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	1	0	2	14%
30-50%	1	0	0	0	1	12%
0-30%	2	0	0	1	3	21%
Total Units	8	0	2	2	12	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Cove

+120%	1	0	0	0	2	38%
80-120%	0	0	0	0	1	14%
50-80%	0	0	0	0	1	14%
30-50%	0	0	0	0	1	12%
0-30%	1	0	0	0	1	21%
Total Units	3	0	1	1	5	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Echo

+120%	4	0	1	0	5	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	1	0	2	14%
30-50%	1	0	0	0	2	12%
0-30%	2	0	0	1	3	21%
Total Units	8	0	2	2	12	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Elgin

+120%	13	0	4	0	17	38%
80-120%	3	0	0	3	7	14%
50-80%	3	0	2	1	7	14%
30-50%	4	0	1	0	6	12%
0-30%	6	0	0	4	10	21%
Total Units	30	0	8	8	46	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Enterprise

+120%	12	0	3	0	15	38%
80-120%	3	0	0	3	6	14%
50-80%	3	0	2	1	6	14%
30-50%	4	0	1	0	5	12%
0-30%	5	0	0	3	9	21%
Total Units	26	0	7	7	40	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Greenhorn

+120%	0	0	0	0	0	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	0	21%
Total Units	0	0	0	0	0	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Haines

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	1	1	3	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Halfway

+120%	1	0	0	0	2	38%
80-120%	0	0	0	0	1	14%
50-80%	0	0	0	0	1	14%
30-50%	0	0	0	0	1	12%
0-30%	1	0	0	0	1	21%
Total Units	3	0	1	1	4	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Helix

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	0	0	2	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Hermiston

+120%	351	0	106	0	457	38%
80-120%	91	0	7	77	175	14%
50-80%	86	0	55	33	174	14%
30-50%	112	0	37	0	149	12%
0-30%	158	0	0	100	259	21%
Total Units	798	0	205	210	1,213	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Hines

+120%	6	0	2	0	8	38%
80-120%	2	0	0	1	3	14%
50-80%	1	0	1	1	3	14%
30-50%	2	0	1	0	3	12%
0-30%	3	0	0	2	4	21%
Total Units	14	0	4	4	21	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Huntington

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	0	0	3	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Imbler

+120%	3	0	1	0	4	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	1	0	2	14%
30-50%	1	0	0	0	1	12%
0-30%	1	0	0	1	2	21%
Total Units	7	0	2	2	11	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Island City

+120%	13	0	4	0	17	38%
80-120%	3	0	0	3	7	14%
50-80%	3	0	2	1	6	14%
30-50%	4	0	1	0	6	12%
0-30%	6	0	0	4	10	21%
Total Units	30	0	8	8	45	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Jordan Valley

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	0	21%
Total Units	1	0	0	0	2	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Joseph

+120%	5	0	2	0	7	38%
80-120%	1	0	0	1	3	14%
50-80%	1	0	1	0	3	14%
30-50%	2	0	1	0	2	12%
0-30%	2	0	0	1	4	21%
Total Units	12	0	3	3	18	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Klamath Falls

+120%	215	0	65	0	280	38%
80-120%	56	0	4	47	107	14%
50-80%	52	0	34	20	106	14%
30-50%	69	0	22	0	91	12%
0-30%	97	0	0	61	158	21%
Total Units	488	0	125	129	742	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: La Grande

+120%	82	0	25	0	106	38%
80-120%	21	0	2	18	41	14%
50-80%	20	0	13	8	40	14%
30-50%	26	0	9	0	35	12%
0-30%	37	0	0	23	60	21%
Total Units	186	0	48	49	282	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Lakeview

+120%	11	0	3	0	14	38%
80-120%	3	0	0	2	5	14%
50-80%	3	0	2	1	5	14%
30-50%	3	0	1	0	5	12%
0-30%	5	0	0	3	8	21%
Total Units	25	0	6	6	38	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Lostine

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	0	21%
Total Units	2	0	0	0	2	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Malin

+120%	4	0	1	0	5	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	1	0	2	14%
30-50%	1	0	0	0	2	12%
0-30%	2	0	0	1	3	21%
Total Units	8	0	2	2	13	100%
% of Units	66%	0%	17%	17%	100%	



Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Merrill

+120%	3	0	1	0	4	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	0	0	2	14%
30-50%	1	0	0	0	1	12%
0-30%	1	0	0	1	2	21%
Total Units	7	0	2	2	11	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Milton-Freewater

+120%	67	0	20	0	87	38%
80-120%	17	0	1	15	33	14%
50-80%	16	0	10	6	33	14%
30-50%	21	0	7	0	28	12%
0-30%	30	0	0	19	49	21%
Total Units	152	0	39	40	231	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: North Powder

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	1	14%
50-80%	0	0	0	0	1	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	1	1	4	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Nyssa

+120%	14	0	4	0	18	38%
80-120%	4	0	0	3	7	14%
50-80%	3	0	2	1	7	14%
30-50%	5	0	1	0	6	12%
0-30%	6	0	0	4	10	21%
Total Units	32	0	8	8	49	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Ontario

+120%	62	0	19	0	81	38%
80-120%	16	0	1	14	31	14%
50-80%	15	0	10	6	31	14%
30-50%	20	0	6	0	26	12%
0-30%	28	0	0	18	46	21%
Total Units	141	0	36	37	215	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Paisley

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	1	1	3	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Pendleton

+120%	154	0	47	0	200	38%
80-120%	40	0	3	34	77	14%
50-80%	38	0	24	15	76	14%
30-50%	49	0	16	0	65	12%
0-30%	70	0	0	44	114	21%
Total Units	350	0	90	92	532	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Pilot Rock

+120%	3	0	1	0	4	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	0	0	2	14%
30-50%	1	0	0	0	1	12%
0-30%	1	0	0	1	2	21%
Total Units	7	0	2	2	11	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Richland

+120%	1	0	0	0	2	38%
80-120%	0	0	0	0	1	14%
50-80%	0	0	0	0	1	14%
30-50%	0	0	0	0	1	12%
0-30%	1	0	0	0	1	21%
Total Units	3	0	1	1	5	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Stanfield

+120%	23	0	7	0	30	38%
80-120%	6	0	0	5	12	14%
50-80%	6	0	4	2	12	14%
30-50%	7	0	2	0	10	12%
0-30%	11	0	0	7	17	21%
Total Units	53	0	14	14	81	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Summerville

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	0	21%
Total Units	1	0	0	0	2	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Sumpter

+120%	1	0	0	0	1	38%
80-120%	0	0	0	0	1	14%
50-80%	0	0	0	0	1	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	1	21%
Total Units	2	0	1	1	4	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Ukiah

+120%	2	0	0	0	2	38%
80-120%	0	0	0	0	1	14%
50-80%	0	0	0	0	1	14%
30-50%	1	0	0	0	1	12%
0-30%	1	0	0	0	1	21%
Total Units	4	0	1	1	5	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Umatilla

+120%	153	0	46	0	199	38%
80-120%	40	0	3	33	76	14%
50-80%	37	0	24	14	76	14%
30-50%	49	0	16	0	65	12%
0-30%	69	0	0	44	113	21%
Total Units	348	0	89	92	529	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Union

+120%	14	0	4	0	19	38%
80-120%	4	0	0	3	7	14%
50-80%	4	0	2	1	7	14%
30-50%	5	0	2	0	6	12%
0-30%	7	0	0	4	11	21%
Total Units	33	0	8	9	50	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Unity

+120%	0	0	0	0	0	38%
80-120%	0	0	0	0	0	14%
50-80%	0	0	0	0	0	14%
30-50%	0	0	0	0	0	12%
0-30%	0	0	0	0	0	21%
Total Units	0	0	0	0	0	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Vale

+120%	9	0	3	0	12	38%
80-120%	2	0	0	2	5	14%
50-80%	2	0	1	1	5	14%
30-50%	3	0	1	0	4	12%
0-30%	4	0	0	3	7	21%
Total Units	21	0	5	5	32	100%
% of Units	66%	0%	17%	17%	100%	

#### UGB: Wallowa

+120%	2	0	1	0	3	38%
80-120%	1	0	0	0	1	14%
50-80%	0	0	0	0	1	14%
30-50%	1	0	0	0	1	12%
0-30%	1	0	0	1	1	21%
Total Units	4	0	1	1	7	100%
% of Units	66%	0%	17%	17%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### UGB: Weston

+120%	4	0	1	0	6	38%
80-120%	1	0	0	1	2	14%
50-80%	1	0	1	0	2	14%
30-50%	1	0	0	0	2	12%
0-30%	2	0	0	1	3	21%
Total Units	10	0	3	3	15	100%
% of Units	66%	0%	17%	17%	100%	

#### Baker County Outside of any UBG

+120%	9	0	3	0	12	38%
80-120%	2	0	0	2	4	14%
50-80%	2	0	1	1	4	14%
30-50%	3	0	1	0	4	12%
0-30%	4	0	0	3	7	21%
Total Units	20	0	5	5	31	100%
% of Units	57%	0%	15%	15%	100%	

#### Harney County Outside of any UBG

+120%	6	0	2	0	8	38%
80-120%	2	0	0	1	3	14%
50-80%	1	0	1	1	3	14%
30-50%	2	0	1	0	3	12%
0-30%	3	0	0	2	4	21%
Total Units	14	0	3	4	21	100%
% of Units	53%	0%	14%	14%	100%	

Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		

#### Klamath County Outside of any UBG

+120%	49	0	15	0	64	38%
80-120%	13	0	1	11	25	14%
50-80%	12	0	8	5	24	14%
30-50%	16	0	5	0	21	12%
0-30%	22	0	0	14	36	21%
Total Units	112	0	29	30	171	100%
% of Units	64%	0%	16%	17%	100%	

#### Lake County Outside of any UBG

+120%	29	0	9	0	38	38%
80-120%	8	0	1	6	15	14%
50-80%	7	0	5	3	14	14%
30-50%	9	0	3	0	12	12%
0-30%	13	0	0	8	22	21%
Total Units	66	0	17	17	101	100%
% of Units	63%	0%	16%	17%	100%	

#### Malheur County Outside of any UBG

+120%	32	0	10	0	42	38%
80-120%	8	0	1	7	16	14%
50-80%	8	0	5	3	16	14%
30-50%	10	0	3	0	14	12%
0-30%	14	0	0	9	24	21%
Total Units	73	0	19	19	111	100%
% of Units	63%	0%	16%	17%	100%	



Median Family Income	New units for each of the following				Total Units	% of Units
	Single-Family Detached	Single-Family Attached	Manufactured and Other	Multifamily		
Umatilla County Outside of any UBG						
+120%	64	0	19	0	83	38%
80-120%	17	0	1	14	32	14%
50-80%	16	0	10	6	32	14%
30-50%	20	0	7	0	27	12%
0-30%	29	0	0	18	47	21%
Total Units	145	0	37	38	220	100%
% of Units	64%	0%	17%	17%	100%	
Union County Outside of any UBG						
+120%	22	0	7	0	29	38%
80-120%	6	0	0	5	11	14%
50-80%	5	0	4	2	11	14%
30-50%	7	0	2	0	9	12%
0-30%	10	0	0	6	16	21%
Total Units	51	0	13	13	77	100%
% of Units	62%	0%	16%	16%	100%	
Wallowa County Outside of any UBG						
+120%	6	0	2	0	8	38%
80-120%	2	0	0	1	3	14%
50-80%	1	0	1	1	3	14%
30-50%	2	0	1	0	3	12%
0-30%	3	0	0	2	5	21%
Total Units	14	0	4	4	21	100%
% of Units	53%	0%	14%	14%	100%	

## Appendix D. Recommended RHNA Results

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This appendix presents the result of the RHNA, using the Recommended RHNA methodology. It starts with a summary of the number of units needed by region and then presents the results of units needed within each regions' cities. The units needed are segmented into projected need, underproduction, and housing for the homelessness, which are defined as below. Chapter 3 and Appendix B provide more information about each of these components of housing need.

- **Projected Need** is the number of units needed to accommodate future population growth over 20 years. Statewide, this sums to 443,000 units, or 76% of the total needed units. To project need, we used the regional population forecasts from Portland State University's Population Research Center, and transformed the population forecast to a number of households using PUMS data for the current average number of people per household in each region. Household growth is then projected over a 20-year period and multiplied by the national ratio of housing units per households (1.14) as the target ratio, as described in Appendix B.

Projected need accounts for the majority of new development in all regions and in many of the cities. Cities with the largest number of new units from projected need are those which are both forecast to grow fastest and employment centers, such as Portland, Bend, Salem/Keizer, Eugene, Hillsboro, or Medford. Cities with little or no projected need are cities where little or no growth is forecast and where this is little employment, such as Lakeview, Burns, Rivergrove, Johnson City, or Shaniko.

- **Underproduction** is the number of units that have not been produced to date in the region, but are needed to accommodate current population. Regional need sums to 110,000 units, or 19% of the total needed units in the state. We estimated underproduction relative to the ratio of households to units nationally, adjusted in some regions to account for second homes. Regions that have produced fewer units than the national ratio are likely to have produced fewer housing units than are needed to accommodate the region's current population.

Underproduction varies significantly by region. The Northeast and Southeast regions show no underproduction and the North Coast only has a small amount of underproduction (2% of new housing or 295 new units). These small amounts of underproduction do not imply a lack of need for housing affordable to low-income households in the future. These areas have small (or no) underproduction because growth in housing has kept pace with growth of new households. The RHNA shows substantial need for new housing that is affordable to extremely-low and very-low income households, accounting for nearly 30% of new housing need in the North Coast region, 48% in the Southeast region, and 22% in the Northeast region.

Cities in these regions also show no or small amounts of housing allocated based on underproduction. For example, Madras, The Dalles, and Prineville are in the Northeast

region and, as a result, show no allocation of housing from underproduction. Each of these cities shows that 22% or 23% of their new housing needs to be affordable to households with incomes at or below 50% of MFI.

- **Housing for the Homeless** is the number of units needed to house those who are currently experiencing homelessness and are otherwise unaccounted for in the data. These households need units right now, and without this component, would be captured in neither the projected need nor the underproduction components. Statewide, this sums to 29,000 units, or 5% of the total needed units.

Housing need for the homeless also varies significantly by region. Statewide, housing for the homeless accounts for 5% of new housing need. In some regions, housing for the homeless accounts for a much larger share of new housing, in large part because the population forecast for the region shows slow (or in some cases declining) population growth. For example, in the Southeast region, housing for the homeless accounts for 36% of new housing because this region is only forecast to grow by 1,503 new units over the 20-year period. About 965 of those units are the result of projected need (forecast of new population growth) and 538 units are responses to existing homelessness. Cities in the Southeast region show a substantial amount of their future need for people experiencing homelessness. For example, Klamath Falls shows growth of 306 new units (36% of their forecast) for people experiencing homelessness and the remainder (572 units or 63% of their forecast) for projected need.

## Results by Region

Exhibit 144 presents a summary of the results of the RHNA for the entire state and by region.

### Exhibit 151. Recommended RHNA Region Summaries, 2020-2040

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; HUD, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
Oregon					
+120%	201,656	7,725	0	209,381	36%
80-120%	82,796	18,326	0	101,121	17%
50-80%	70,013	30,574	875	101,462	17%
30-50%	44,400	26,119	2,334	72,852	12%
0-30%	44,701	28,076	25,965	98,742	17%
Total Units	443,566	110,819	29,174	583,559	100%
% of Units	76%	19%	5%	100%	
Region: Portland Metro					
+120% (\$97,680+)	106,223	4,035	0	110,257	37%
80-120% (\$65,120 to \$97,680)	40,084	9,778	0	49,862	17%
50-80% (\$40,700 to \$65,120)	34,266	17,173	320	51,759	18%
30-50% (\$24,420 to \$40,700)	21,715	14,096	855	36,666	12%
0-30% (\$0 to \$24,420)	22,395	14,406	9,508	46,309	16%
Total Units	224,683	59,488	10,683	294,853	100%
% of Units	76%	20%	4%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

### Region: North Coast

+120% (\$77,130+)	6,421	23	0	6,444	37%
80-120% (\$51,420 to \$77,130)	2,777	51	0	2,828	16%
50-80% (\$32,140 to \$51,420)	2,890	94	69	3,054	18%
30-50% (\$19,280 to \$32,140)	1,494	64	185	1,743	10%
0-30% (\$0 to \$19,280)	1,148	62	2,055	3,265	19%
Total Units	14,731	295	2,309	17,335	100%
% of Units	85%	2%	13%	100%	

### Region: Willamette Valley

+120% (\$81,820+)	40,855	1,890	0	42,745	29%
80-120% (\$54,540 to \$81,820)	20,315	5,683	0	25,998	18%
50-80% (\$34,090 to \$54,540)	17,271	9,251	269	26,791	18%
30-50% (\$20,450 to \$34,090)	11,092	8,748	718	20,558	14%
0-30% (\$0 to \$20,450)	12,171	10,342	7,985	30,498	21%
Total Units	101,704	35,913	8,972	146,589	100%
% of Units	69%	24%	6%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

### Region: Southwest

+120% (\$66,170+)	16,772	1,327	0	18,098	36%
80-120% (\$44,120 to \$66,170)	5,996	1,607	0	7,602	15%
50-80% (\$27,570 to \$44,120)	5,960	2,976	137	9,073	18%
30-50% (\$16,540 to \$27,570)	3,401	2,176	366	5,944	12%
0-30% (\$0 to \$16,540)	2,767	2,202	4,075	9,044	18%
Total Units	34,896	10,287	4,579	49,761	100%
% of Units	70%	21%	9%	100%	

### Region: Deschutes

+120% (\$83,520+)	23,011	450	0	23,462	42%
80-120% (\$55,680 to \$83,520)	10,205	1,207	0	11,412	20%
50-80% (\$34,800 to \$55,680)	7,026	1,081	36	8,143	15%
30-50% (\$20,880 to \$34,800)	4,864	1,035	96	5,994	11%
0-30% (\$0 to \$20,880)	4,751	1,064	1,063	6,877	12%
Total Units	49,856	4,837	1,194	55,887	100%
% of Units	89%	9%	2%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

### Region: Northeast

+120% (\$67,120+)	7,972	0	0	7,972	45%
80-120% (\$44,750 to \$67,120)	3,210	0	0	3,210	18%
50-80% (\$27,970 to \$44,750)	2,450	0	27	2,477	14%
30-50% (\$16,780 to \$27,970)	1,724	0	72	1,796	10%
0-30% (\$0 to \$16,780)	1,375	0	800	2,175	12%
Total Units	16,731	0	899	17,630	100%
% of Units	95%	0%	5%	100%	

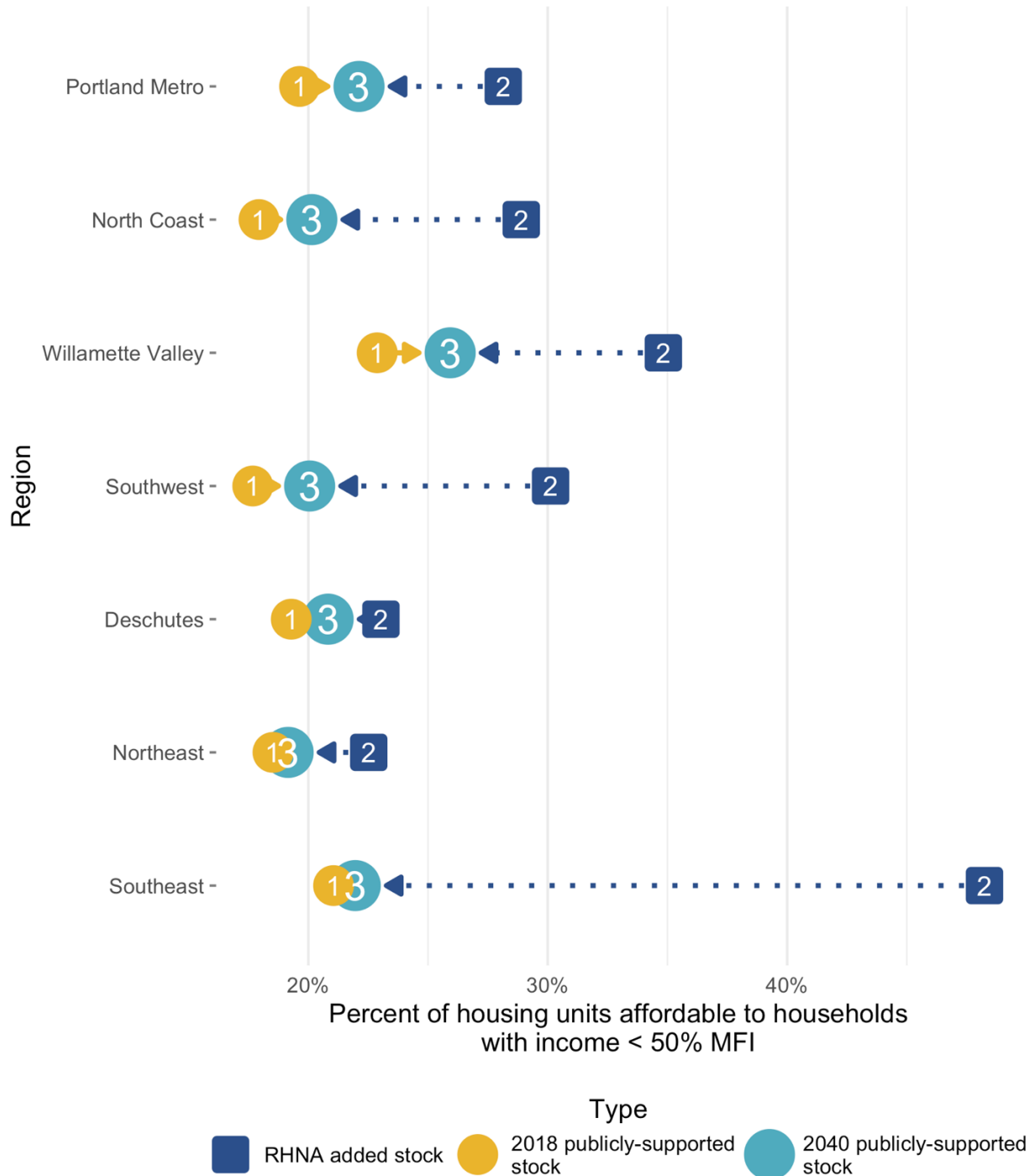
### Region: Southeast

+120% (\$61,450+)	403	0	0	403	27%
80-120% (\$40,970 to \$61,450)	209	0	0	209	14%
50-80% (\$25,600 to \$40,970)	150	0	16	166	11%
30-50% (\$15,360 to \$25,600)	109	0	43	152	10%
0-30% (\$0 to \$15,360)	94	0	479	573	38%
Total Units	965	0	538	1,503	100%
% of Units	64%	0%	36%	100%	

Exhibit 23 shows that, in all regions, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. Chapter 4 provides more information about interpreting these results.

**Exhibit 152. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI by Region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing





## Results by City

This section presents the results of the Recommended RHNA for each region and the cities within the regions. Throughout the report, we present results for each city by urban growth boundary (UGB). The exception is for cities within the Portland Metro UGB, which share one large UGB. For cities within the Portland Metro UGB, we present the results for the city limits of each individual city.

The geographies used in the Portland Metro Region in Exhibit 153 below are:

- **Cities outside of the Metro UGB** are labeled as “UGB” and include the city’s entire UGB, both the city limits and unincorporated areas within the city’s UGB.
- **Cities within the Metro UGB** are labeled as “city” and they only include the area within the city limits
- **Urban unincorporated areas** are labeled as “urban unincorporated County Name inside the Metro UGB.” They only include the unincorporated areas within the Portland Metro UGB for Clackamas, Washington, and Multnomah Counties.
- **Rural Unincorporated** areas are labeled as “rural unincorporated County Name outside of any UGB.” They only include the unincorporated areas outside of any UGB in Clackamas, Washington, and Multnomah Counties.

### Cities in the Portland Metro Region

Exhibit 153. Recommended RHNA Results for Cities in the Portland Metro Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; HUD, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
Region: Portland Metro					
UGB: Banks					
+120%	139	3	0	142	41%
80-120%	52	8	0	60	17%
50-80%	45	14	0	59	17%
30-50%	28	11	1	40	12%
0-30%	29	12	8	48	14%
Total Units	294	48	9	350	100%
% of Units	84%	14%	2%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Barlow

+120%	2	0	0	2	30%
80-120%	1	0	0	1	16%
50-80%	1	1	0	2	19%
30-50%	0	1	0	1	15%
0-30%	0	1	0	2	20%
Total Units	5	3	1	8	100%
% of Units	57%	36%	6%	100%	

#### City: Beaverton<sup>65</sup>

+120%	5,084	247	0	5,331	35%
80-120%	1,919	598	0	2,516	17%
50-80%	1,640	1,050	20	2,709	18%
30-50%	1,039	862	52	1,953	13%
0-30%	1,072	881	581	2,533	17%
Total Units	10,754	3,636	653	15,043	100%
% of Units	71%	24%	4%	100%	

#### UGB: Canby

+120%	1,096	34	0	1,130	39%
80-120%	414	82	0	495	17%
50-80%	354	144	3	500	17%
30-50%	224	118	7	349	12%
0-30%	231	120	80	431	15%
Total Units	2,319	497	89	2,906	100%
% of Units	80%	17%	3%	100%	

<sup>65</sup> Cities within the Portland Metro UGB share one UGB and we present the results for these cities by the city limits of each individual city.

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**City: Cornelius**

+120%	670	21	0	690	39%
80-120%	253	51	0	303	17%
50-80%	216	89	2	307	17%
30-50%	137	73	4	214	12%
0-30%	141	75	49	265	15%
Total Units	1,416	308	55	1,779	100%
% of Units	80%	17%	3%	100%	

**City: Damascus (based on the area within 2015 Damascus city boundary)<sup>66</sup>**

+120%	2,073	16	0	2,089	45%
80-120%	782	39	0	821	18%
50-80%	669	69	1	739	16%
30-50%	424	57	3	484	10%
0-30%	437	58	38	533	11%
Total Units	4,384	239	43	4,666	100%
% of Units	94%	5%	1%	100%	

**City: Durham**

+120%	96	6	0	102	34%
80-120%	36	14	0	50	17%
50-80%	31	24	0	55	18%
30-50%	20	20	1	40	13%
0-30%	20	20	13	53	18%
Total Units	203	83	15	300	100%
% of Units	68%	27%	5%	100%	

<sup>66</sup> Damascus is a city within the Metro UGB that was disincorporated in 2016, with the disincorporation challenged in court in 2019. The status of Damascus is currently uncertain but parts of Damascus are being annexed into Happy Valley. Some of the growth shown for Damascus will likely be allocated to Happy Valley when Metro next completes its population forecast, to account for areas that have been annexed or are in the process of being annexed into Happy Valley.

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Estacada

+120%	228	7	0	235	38%
80-120%	86	18	0	104	17%
50-80%	74	32	1	106	17%
30-50%	47	26	2	74	12%
0-30%	48	27	18	92	15%
Total Units	482	110	20	612	100%
% of Units	79%	18%	3%	100%	

#### City: Fairview

+120%	244	18	0	262	32%
80-120%	92	43	0	135	16%
50-80%	79	75	1	156	19%
30-50%	50	62	4	116	14%
0-30%	51	63	42	156	19%
Total Units	516	261	47	824	100%
% of Units	63%	32%	6%	100%	

#### City: Forest Grove

+120%	1,466	43	0	1,509	39%
80-120%	553	105	0	658	17%
50-80%	473	184	3	660	17%
30-50%	300	151	9	460	12%
0-30%	309	154	102	565	15%
Total Units	3,100	638	115	3,853	100%
% of Units	80%	17%	3%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Gaston

+120%	12	1	0	13	30%
80-120%	5	2	0	7	16%
50-80%	4	4	0	8	19%
30-50%	2	4	0	6	14%
0-30%	3	4	2	8	20%
Total Units	25	15	3	43	100%
% of Units	59%	35%	6%	100%	

#### City: Gladstone

+120%	213	20	0	234	29%
80-120%	81	49	0	130	16%
50-80%	69	87	2	157	20%
30-50%	44	71	4	119	15%
0-30%	45	73	48	166	21%
Total Units	452	301	54	806	100%
% of Units	56%	37%	7%	100%	

#### City: Gresham

+120%	3,587	213	0	3,800	34%
80-120%	1,354	517	0	1,871	17%
50-80%	1,157	908	17	2,082	18%
30-50%	733	746	45	1,524	13%
0-30%	756	762	503	2,021	18%
Total Units	7,587	3,146	565	11,299	100%
% of Units	67%	28%	5%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**City: Happy Valley**

+120%	1,533	28	0	1,561	42%
80-120%	579	68	0	647	17%
50-80%	495	120	2	617	17%
30-50%	313	99	6	418	11%
0-30%	323	101	66	490	13%
Total Units	3,243	416	75	3,733	100%
% of Units	87%	11%	2%	100%	

**City: Hillsboro**

+120%	7,308	290	0	7,598	37%
80-120%	2,758	703	0	3,461	17%
50-80%	2,358	1,235	23	3,615	18%
30-50%	1,494	1,013	61	2,569	13%
0-30%	1,541	1,036	684	3,260	16%
Total Units	15,459	4,277	768	20,503	100%
% of Units	75%	21%	4%	100%	

**City: Johnson City**

+120%	0	1	0	1	9%
80-120%	0	2	0	2	14%
50-80%	0	3	0	3	24%
30-50%	0	3	0	3	20%
0-30%	0	3	2	4	32%
Total Units	1	11	2	14	100%
% of Units	7%	78%	14%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**City: King City**

+120%	216	6	0	222	40%
80-120%	81	14	0	96	17%
50-80%	70	25	0	95	17%
30-50%	44	20	1	66	12%
0-30%	45	21	14	80	14%
Total Units	456	86	16	558	100%
% of Units	82%	15%	3%	100%	

**City: Lake Oswego**

+120%	1,428	90	0	1,518	33%
80-120%	539	219	0	758	17%
50-80%	461	384	7	852	19%
30-50%	292	316	19	627	14%
0-30%	301	323	213	836	18%
Total Units	3,020	1,332	239	4,591	100%
% of Units	66%	29%	5%	100%	

**City: Maywood Park**

+120%	3	1	0	4	17%
80-120%	1	2	0	3	15%
50-80%	1	4	0	5	22%
30-50%	1	3	0	4	18%
0-30%	1	3	2	6	28%
Total Units	6	14	3	23	100%
% of Units	27%	62%	11%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**City: Milwaukie**

+120%	1,001	54	0	1,056	34%
80-120%	378	132	0	510	17%
50-80%	323	232	4	559	18%
30-50%	205	190	12	406	13%
0-30%	211	194	128	534	17%
Total Units	2,117	803	144	3,065	100%
% of Units	69%	26%	5%	100%	

**UGB: Molalla**

+120%	745	17	0	762	41%
80-120%	281	42	0	322	17%
50-80%	240	73	1	314	17%
30-50%	152	60	4	216	12%
0-30%	157	61	40	259	14%
Total Units	1,575	253	45	1,873	100%
% of Units	84%	13%	2%	100%	

**UGB: North Plains**

+120%	402	5	0	407	43%
80-120%	152	12	0	164	17%
50-80%	130	21	0	151	16%
30-50%	82	17	1	101	11%
0-30%	85	18	12	114	12%
Total Units	850	74	13	937	100%
% of Units	91%	8%	1%	100%	



Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**City: Oregon City**

+120%	1,566	74	0	1,640	36%
80-120%	591	180	0	771	17%
50-80%	505	316	6	827	18%
30-50%	320	259	16	595	13%
0-30%	330	265	175	770	17%
Total Units	3,312	1,093	196	4,602	100%
% of Units	72%	24%	4%	100%	

**City: Portland**

+120%	48,840	1,749	0	50,589	38%
80-120%	18,430	4,240	0	22,670	17%
50-80%	15,755	7,446	139	23,340	17%
30-50%	9,985	6,112	371	16,467	12%
0-30%	10,297	6,246	4,122	20,666	15%
Total Units	103,307	25,793	4,632	133,732	100%
% of Units	77%	19%	3%	100%	

**City: Rivergrove**

+120%	2	1	0	3	19%
80-120%	1	2	0	2	15%
50-80%	1	3	0	4	22%
30-50%	0	2	0	3	18%
0-30%	1	2	1	4	27%
Total Units	5	9	2	16	100%
% of Units	31%	58%	10%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Sandy

+120%	1,103	21	0	1,124	42%
80-120%	416	50	0	466	17%
50-80%	356	88	2	445	17%
30-50%	225	72	4	302	11%
0-30%	233	73	48	354	13%
Total Units	2,333	303	54	2,691	100%
% of Units	87%	11%	2%	100%	

#### City: Sherwood

+120%	471	36	0	507	31%
80-120%	178	87	0	265	16%
50-80%	152	154	3	308	19%
30-50%	96	126	8	230	14%
0-30%	99	129	85	313	19%
Total Units	996	532	96	1,624	100%
% of Units	61%	33%	6%	100%	

#### City: Tigard

+120%	4,521	166	0	4,687	38%
80-120%	1,706	402	0	2,108	17%
50-80%	1,458	706	13	2,178	17%
30-50%	924	579	35	1,539	12%
0-30%	953	592	391	1,936	16%
Total Units	9,563	2,445	439	12,448	100%
% of Units	77%	20%	4%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**City: Troutdale**

+120%	640	38	0	678	34%
80-120%	242	92	0	333	17%
50-80%	206	161	3	370	18%
30-50%	131	132	8	271	13%
0-30%	135	135	89	359	18%
Total Units	1,354	558	100	2,012	100%
% of Units	67%	28%	5%	100%	

**City: Tualatin**

+120%	1,695	95	0	1,790	34%
80-120%	640	231	0	870	17%
50-80%	547	405	8	959	18%
30-50%	346	332	20	699	13%
0-30%	357	340	224	921	18%
Total Units	3,585	1,403	252	5,240	100%
% of Units	68%	27%	5%	100%	

**City: West Linn**

+120%	477	42	0	519	30%
80-120%	180	102	0	282	16%
50-80%	154	179	3	336	19%
30-50%	98	147	9	253	15%
0-30%	101	150	99	350	20%
Total Units	1,010	620	111	1,741	100%
% of Units	58%	36%	6%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**City: Wilsonville**

+120%	1,482	70	0	1,553	36%
80-120%	559	171	0	730	17%
50-80%	478	300	6	784	18%
30-50%	303	246	15	564	13%
0-30%	313	251	166	730	17%
Total Units	3,135	1,038	186	4,360	100%
% of Units	72%	24%	4%	100%	

**City: Wood Village**

+120%	168	10	0	178	34%
80-120%	63	24	0	87	17%
50-80%	54	42	1	97	18%
30-50%	34	35	2	71	13%
0-30%	35	35	23	94	18%
Total Units	355	146	26	528	100%
% of Units	67%	28%	5%	100%	

**Urban Unincorporated Clackamas County Inside the Metro UGB<sup>67</sup>**

+120%	4,796	220	0	5,016	36%
80-120%	1,810	533	0	2,343	17%
50-80%	1,547	936	17	2,500	18%
30-50%	980	768	47	1,795	13%
0-30%	1,011	785	518	2,314	17%
Total Units	10,145	3,241	582	13,968	100%
% of Units	73%	23%	4%	100%	

<sup>67</sup> This and the urban unincorporated areas in Multnomah and Washington counties are unique areas within the State. They are areas within the Portland Metro UGB that are expected to develop at urban densities but are not within a city limit. Cities outside of the Metro UGB have unincorporated areas within the UGB but when these areas develop at urban densities, they are often annexed into the city limits. The urban unincorporated areas of Clackamas, Multnomah, and Washington counties may develop at densities similar to those in cities within the Metro UGB (i.e., with multifamily or mixed-use development) but remain unincorporated.

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### Urban Unincorporated Multnomah County Inside the Metro UGB

+120%	1,838	23	0	1,861	43%
80-120%	693	56	0	750	17%
50-80%	593	99	2	693	16%
30-50%	376	81	5	462	11%
0-30%	387	83	55	525	12%
Total Units	3,887	342	61	4,290	100%
% of Units	91%	8%	1%	100%	

#### Urban Unincorporated Washington County Inside the Metro UGB

+120%	10,113	367	0	10,481	38%
80-120%	3,816	890	0	4,706	17%
50-80%	3,262	1,563	29	4,854	17%
30-50%	2,068	1,283	78	3,428	12%
0-30%	2,132	1,311	865	4,308	16%
Total Units	21,392	5,413	972	27,777	100%
% of Units	77%	19%	3%	100%	

#### Rural Unincorporated Clackamas County Outside of Any UGB<sup>68</sup>

+120%	964	0	0	964	47%
80-120%	364	0	0	364	18%
50-80%	311	0	0	311	15%
30-50%	197	0	0	197	10%
0-30%	203	0	0	203	10%
Total Units	2,038	0	0	2,038	100%
% of Units	100%	0%	0%	100%	

<sup>68</sup> Rural Unincorporated Clackamas County Outside of Any UGB has housing allocated to it because the official population forecasts (from Portland State University's Oregon Population Forecast Program) shows growth in rural unincorporated Clackamas County. In contrast, population is forecast to decline in the official population forecasts for Rural Unincorporated Multnomah County Outside of Any UGB and Rural Unincorporated Washington County Outside of Any UGB. The reasons for these declines should be documented in the Oregon Population Forecast Program reports for these counties.

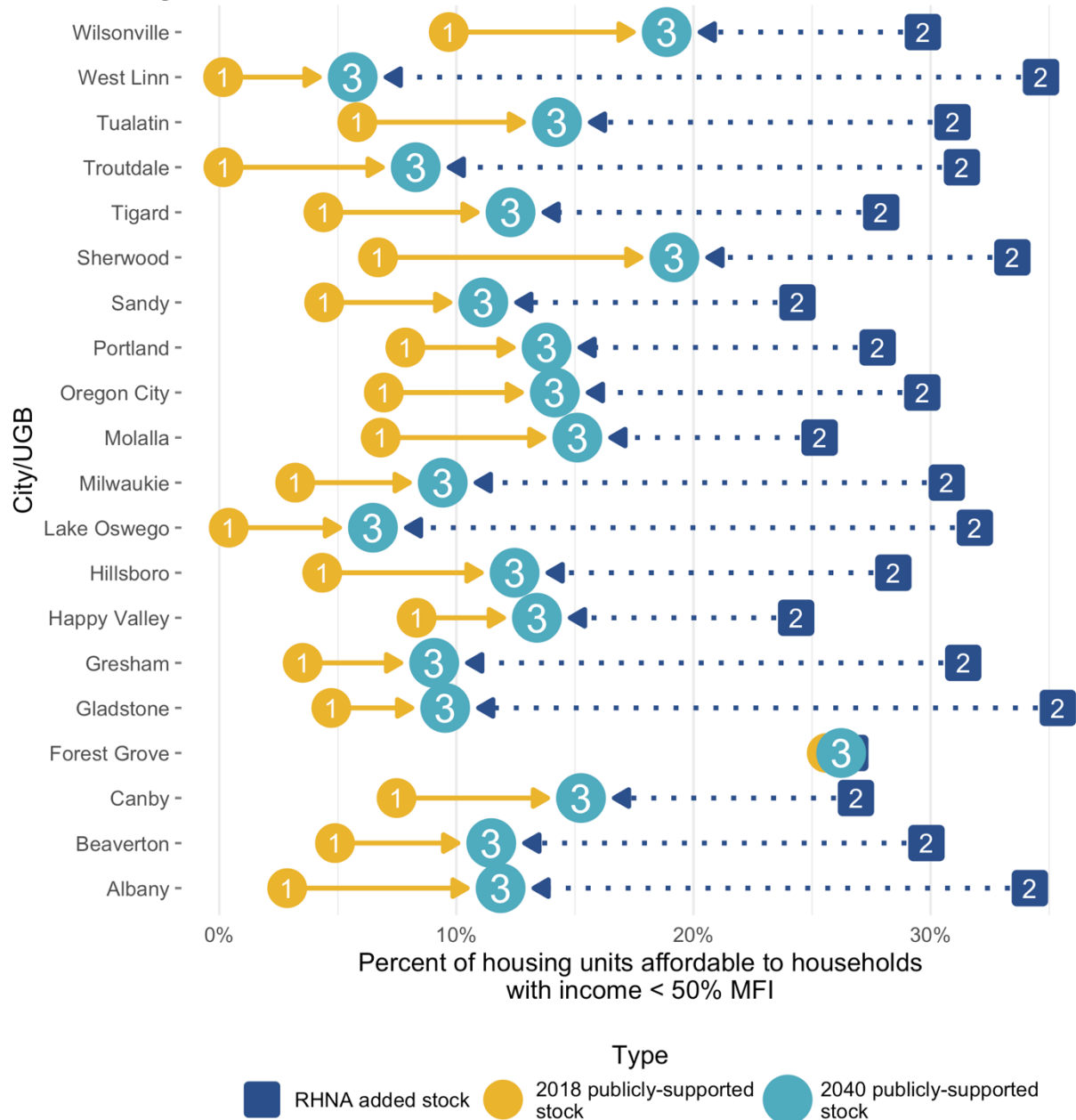
Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
Rural Unincorporated Multnomah County Outside of Any UGB <sup>69</sup>					
+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	
Rural Unincorporated Washington County Outside of Any UGB					
+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	

<sup>69</sup> The official population forecast from the Oregon Population Forecast Program forecasts a decrease in population in unincorporated areas within Multnomah County and Washington County over the 2020 to 2040 period. In some cases, this change may reflect the expectation that urban growth boundaries will expand, moving people into cities and out of rural areas. In other cases, this may reflect expectations that population in rural areas may decline.

Exhibit 154 shows that, in all the cities shown below, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. This exhibit only shows results for cities where information about rent-restricted and publicly supported housing is available from OHCS. Chapter 4 provides more information about interpreting these results.

**Exhibit 154. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI for Selected Cities within the Portland Metro region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



Source: OHCS, US Census

## Cities in the North Coast Region

The geographies used for the North Coast region in Exhibit 155 are:

- **Incorporated cities** are labeled as “UGB” and include the city’s entire UGB, both the city limits and unincorporated areas within the city’s UGB.
- **Unincorporated areas** are labeled as “rural unincorporated County Name outside of any UGB.” They only include the unincorporated areas outside of any UGB county within this region.

### Exhibit 155. Recommended RHNA Results for Cities in the North Coast Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; HUD, SY 2018-2019 McKinney Vento data

us Bureau, 2018 ACS 1-year PUMS estimates, HUD, 2019 FH count, HUD, SF 2018-2019 McKinney-Vento data

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
Region: North Coast					
UGB: Astoria					
+120%	468	3	0	470	34%
80-120%	202	6	0	208	15%
50-80%	211	11	8	230	17%
30-50%	109	8	22	138	10%
0-30%	84	7	244	335	24%
Total Units	1,073	35	274	1,382	100%
% of Units	78%	3%	20%	100%	
UGB: Bay City					
+120%	85	0	0	86	37%
80-120%	37	1	0	38	16%
50-80%	38	1	1	40	18%
30-50%	20	1	2	23	10%
0-30%	15	1	26	42	18%
Total Units	196	4	29	229	100%
% of Units	86%	2%	13%	100%	



Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Cannon Beach

+120%	115	1	0	116	35%
80-120%	50	1	0	51	16%
50-80%	52	2	2	56	17%
30-50%	27	2	4	33	10%
0-30%	21	2	49	72	22%
Total Units	264	7	56	327	100%
% of Units	81%	2%	17%	100%	

#### UGB: Clatskanie

+120%	75	0	0	75	34%
80-120%	32	1	0	33	15%
50-80%	34	2	1	37	17%
30-50%	17	1	3	22	10%
0-30%	13	1	37	51	24%
Total Units	171	5	41	218	100%
% of Units	79%	2%	19%	100%	

#### UGB: Columbia City

+120%	35	0	0	35	32%
80-120%	15	1	0	16	14%
50-80%	16	1	1	17	16%
30-50%	8	1	2	11	10%
0-30%	6	1	24	30	28%
Total Units	79	3	26	109	100%
% of Units	73%	3%	24%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Depoe Bay

+120%	82	0	0	82	38%
80-120%	35	1	0	36	17%
50-80%	37	1	1	39	18%
30-50%	19	1	2	22	10%
0-30%	15	1	23	38	18%
Total Units	187	3	26	216	100%
% of Units	87%	2%	12%	100%	

#### UGB: Garibaldi

+120%	38	0	0	39	35%
80-120%	17	0	0	17	15%
50-80%	17	1	1	19	17%
30-50%	9	1	2	11	10%
0-30%	7	1	17	25	23%
Total Units	88	3	20	110	100%
% of Units	80%	2%	18%	100%	

#### UGB: Gearhart

+120%	59	0	0	59	35%
80-120%	26	1	0	26	15%
50-80%	27	1	1	29	17%
30-50%	14	1	2	17	10%
0-30%	11	1	27	39	23%
Total Units	136	4	31	171	100%
% of Units	80%	2%	18%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Lincoln City

+120%	501	2	0	504	35%
80-120%	217	5	0	222	16%
50-80%	226	10	7	243	17%
30-50%	117	7	20	143	10%
0-30%	90	7	219	315	22%
Total Units	1,150	31	246	1,426	100%
% of Units	81%	2%	17%	100%	

#### UGB: Manzanita

+120%	69	0	0	70	38%
80-120%	30	0	0	30	17%
50-80%	31	1	1	33	18%
30-50%	16	1	2	18	10%
0-30%	12	1	18	31	17%
Total Units	159	3	20	182	100%
% of Units	87%	1%	11%	100%	

#### UGB: Nehalem

+120%	72	0	0	72	38%
80-120%	31	0	0	32	17%
50-80%	32	1	1	34	18%
30-50%	17	1	2	19	10%
0-30%	13	1	18	31	17%
Total Units	165	3	20	188	100%
% of Units	88%	1%	11%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Newport

+120%	800	3	0	803	37%
80-120%	346	7	0	353	16%
50-80%	360	13	9	383	17%
30-50%	186	9	25	220	10%
0-30%	143	8	280	431	20%
Total Units	1,836	40	314	2,191	100%
% of Units	84%	2%	14%	100%	

#### UGB: Prescott

+120%	1	0	0	1	32%
80-120%	0	0	0	0	14%
50-80%	0	0	0	0	16%
30-50%	0	0	0	0	10%
0-30%	0	0	1	1	27%
Total Units	2	0	1	3	100%
% of Units	73%	3%	24%	100%	

#### UGB: Rainier

+120%	125	1	0	126	36%
80-120%	54	1	0	55	16%
50-80%	56	2	2	60	17%
30-50%	29	1	4	35	10%
0-30%	22	1	46	70	20%
Total Units	288	7	52	346	100%
% of Units	83%	2%	15%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Rockaway Beach

+120%	62	0	0	62	36%
80-120%	27	1	0	27	16%
50-80%	28	1	1	30	17%
30-50%	14	1	2	17	10%
0-30%	11	1	24	36	21%
Total Units	142	3	27	173	100%
% of Units	82%	2%	16%	100%	

#### UGB: Scappoose

+120%	632	1	0	633	39%
80-120%	273	3	0	276	17%
50-80%	284	6	4	295	18%
30-50%	147	4	12	163	10%
0-30%	113	4	128	245	15%
Total Units	1,449	18	144	1,612	100%
% of Units	90%	1%	9%	100%	

#### UGB: Seaside

+120%	385	2	0	386	36%
80-120%	166	4	0	170	16%
50-80%	173	7	5	185	17%
30-50%	89	5	14	108	10%
0-30%	69	5	153	227	21%
Total Units	882	22	172	1,077	100%
% of Units	82%	2%	16%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Siletz**

+120%	37	0	0	37	35%
80-120%	16	0	0	16	16%
50-80%	17	1	1	18	17%
30-50%	9	0	1	11	10%
0-30%	7	0	16	23	22%
Total Units	85	2	18	105	100%
% of Units	81%	2%	17%	100%	

**UGB: St. Helens**

+120%	873	3	0	876	37%
80-120%	377	7	0	384	16%
50-80%	393	13	9	415	18%
30-50%	203	8	25	236	10%
0-30%	156	8	273	437	19%
Total Units	2,002	39	307	2,348	100%
% of Units	85%	2%	13%	100%	

**UGB: Tillamook**

+120%	399	2	0	401	36%
80-120%	173	4	0	176	16%
50-80%	180	7	5	192	17%
30-50%	93	5	14	111	10%
0-30%	71	5	152	228	21%
Total Units	916	22	171	1,108	100%
% of Units	83%	2%	15%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Toledo

+120%	133	1	0	134	34%
80-120%	58	2	0	59	15%
50-80%	60	3	2	65	17%
30-50%	31	2	6	39	10%
0-30%	24	2	68	93	24%
Total Units	305	10	76	391	100%
% of Units	78%	2%	19%	100%	

#### UGB: Vernonia

+120%	48	0	0	48	33%
80-120%	21	1	0	21	14%
50-80%	21	1	1	24	16%
30-50%	11	1	3	15	10%
0-30%	9	1	30	40	27%
Total Units	109	4	34	148	100%
% of Units	74%	3%	23%	100%	

#### UGB: Waldport

+120%	99	0	0	100	37%
80-120%	43	1	0	44	16%
50-80%	45	2	1	47	17%
30-50%	23	1	3	27	10%
0-30%	18	1	34	53	20%
Total Units	228	5	38	271	100%
% of Units	84%	2%	14%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Warrenton

+120%	516	1	0	517	39%
80-120%	223	3	0	226	17%
50-80%	232	6	4	242	18%
30-50%	120	4	11	135	10%
0-30%	92	4	122	218	16%
Total Units	1,183	18	137	1,338	100%
% of Units	88%	1%	10%	100%	

#### UGB: Wheeler

+120%	21	0	0	21	36%
80-120%	9	0	0	9	16%
50-80%	10	0	0	10	17%
30-50%	5	0	1	6	10%
0-30%	4	0	8	12	20%
Total Units	49	1	9	59	100%
% of Units	83%	2%	15%	100%	

#### UGB: Yachats

+120%	69	0	0	69	38%
80-120%	30	0	0	30	17%
50-80%	31	1	1	33	18%
30-50%	16	1	2	18	10%
0-30%	12	1	18	31	17%
Total Units	158	3	21	182	100%
% of Units	87%	1%	11%	100%	



Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### Clatsop County Outside of any UGB<sup>70</sup>

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### Columbia County Outside of any UGB

+120%	452	0	0	452	44%
80-120%	196	0	0	196	19%
50-80%	204	0	0	204	20%
30-50%	105	0	0	105	10%
0-30%	81	0	0	81	8%
Total Units	1,038	0	0	1,038	100%
% of Units	100%	0%	0%	100%	

#### Lincoln County Outside of any UGB

+120%	28	0	0	28	44%
80-120%	12	0	0	12	19%
50-80%	13	0	0	13	20%
30-50%	7	0	0	7	10%
0-30%	5	0	0	5	8%
Total Units	65	0	0	65	100%
% of Units	93%	0%	0%	100%	

<sup>70</sup> The official population forecast from the Oregon Population Forecast Program forecasts a decrease in population in unincorporated areas within Clatsop County over the 2020 to 2040 period. In some cases, this change may reflect the expectation that urban growth boundaries will expand, moving people into cities and out of rural areas. In other cases, this may reflect expectations that population in rural areas may decline.

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

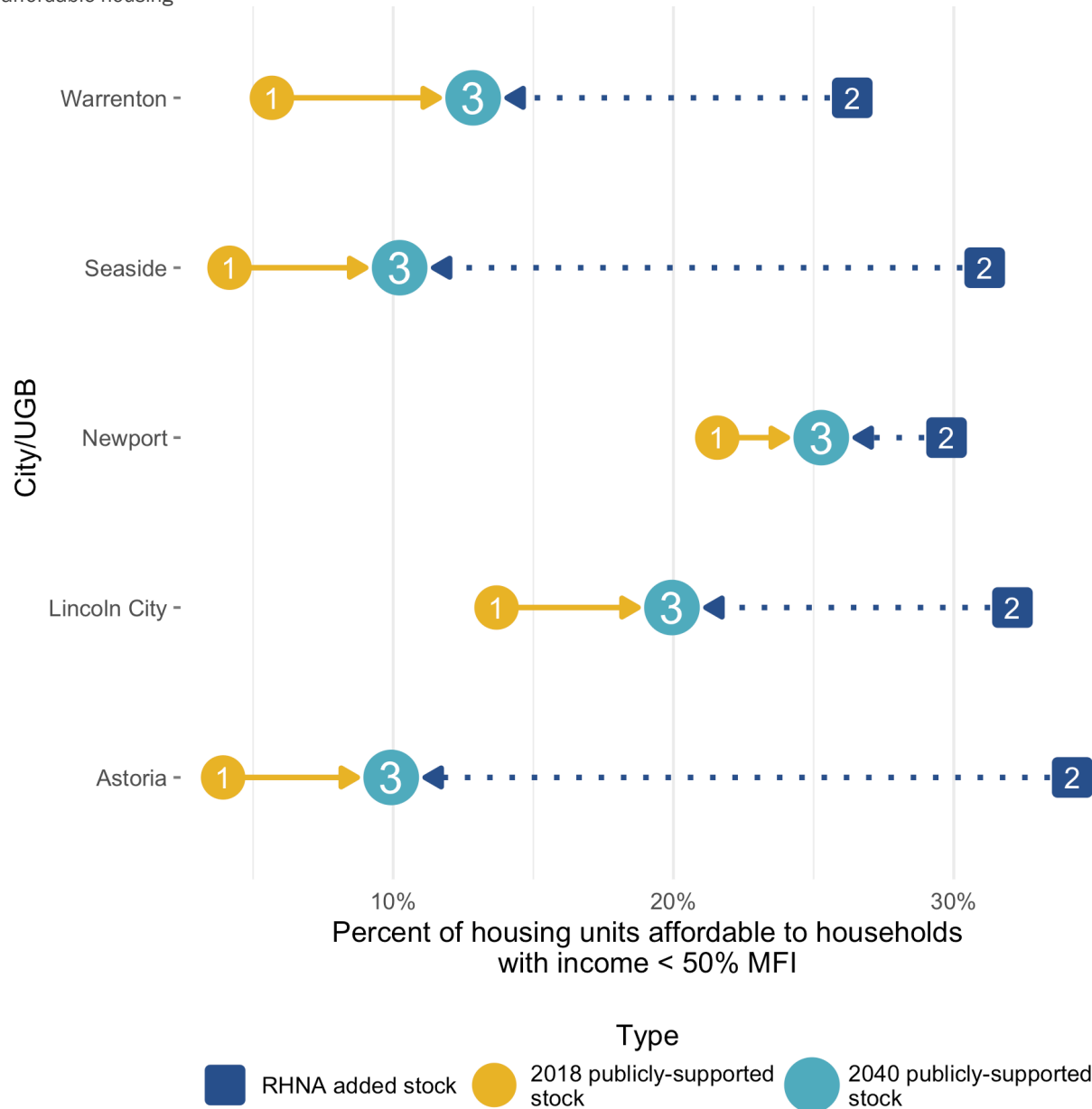
**Tillamook County Outside of any UGB**

+120%	142	0	0	142	44%
80-120%	61	0	0	61	19%
50-80%	64	0	0	64	20%
30-50%	33	0	0	33	10%
0-30%	25	0	0	25	8%
Total Units	325	0	0	325	100%
% of Units	98%	0%	0%	100%	

Exhibit 156 shows that, in all the cities shown below, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. This exhibit only shows results for cities where information about rent-restricted and publicly supported housing is available from OHCS. Chapter 4 provides more information about interpreting these results.

**Exhibit 156. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI for Selected Cities within the North Coast region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



Source: OHCS, US Census

## Cities in the Willamette Valley Region

The geographies used for the Willamette Valley region in Exhibit 157 are:

- **Incorporated cities** are labeled as “UGB” and include the city’s entire UGB, both the city limits and unincorporated areas within the city’s UGB.
- **Unincorporated areas** are labeled as “rural unincorporated County Name outside of any UGB.” They only include the unincorporated areas outside of any UGB county within this region.

### Exhibit 157. Recommended RHNA Results for Cities in the Willamette Valley Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; HUD, SY 2018-2019 McKinney Vento data

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### Region: Willamette Valley

##### UGB: Adair Village

+120%	96	1	0	98	36%
80-120%	48	4	0	52	19%
50-80%	41	7	0	48	18%
30-50%	26	7	1	34	12%
0-30%	29	8	6	43	16%
Total Units	240	28	7	275	100%
% of Units	87%	10%	3%	100%	

##### UGB: Albany

+120%	2,548	109	0	2,657	30%
80-120%	1,267	328	0	1,595	18%
50-80%	1,077	533	16	1,626	18%
30-50%	692	504	41	1,238	14%
0-30%	759	596	460	1,816	20%
Total Units	6,343	2,071	517	8,931	100%
% of Units	71%	23%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Amity

+120%	43	2	0	45	27%
80-120%	21	7	0	29	17%
50-80%	18	12	0	30	18%
30-50%	12	11	1	24	15%
0-30%	13	13	10	37	22%
Total Units	106	47	12	165	100%
% of Units	64%	28%	7%	100%	

#### UGB: Aumsville

+120%	192	6	0	198	32%
80-120%	95	18	0	114	18%
50-80%	81	30	1	112	18%
30-50%	52	28	2	83	13%
0-30%	57	33	26	116	19%
Total Units	477	116	29	622	100%
% of Units	77%	19%	5%	100%	

#### UGB: Aurora

+120%	50	2	0	52	30%
80-120%	25	6	0	31	18%
50-80%	21	10	0	31	18%
30-50%	13	10	1	24	14%
0-30%	15	11	9	35	20%
Total Units	123	39	10	173	100%
% of Units	71%	23%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Brownsville

+120%	46	3	0	49	28%
80-120%	23	8	0	31	17%
50-80%	19	12	0	32	18%
30-50%	13	12	1	25	14%
0-30%	14	14	11	38	22%
Total Units	115	48	12	175	100%
% of Units	65%	28%	7%	100%	

#### UGB: Carlton

+120%	97	3	0	101	32%
80-120%	48	9	0	58	18%
50-80%	41	15	0	57	18%
30-50%	26	15	1	42	13%
0-30%	29	17	13	59	19%
Total Units	242	60	15	317	100%
% of Units	76%	19%	5%	100%	

#### UGB: Coburg

+120%	106	6	0	112	28%
80-120%	53	17	0	70	18%
50-80%	45	27	1	73	18%
30-50%	29	26	2	57	14%
0-30%	32	30	23	86	22%
Total Units	265	106	26	397	100%
% of Units	67%	27%	7%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Corvallis

+120%	2,757	145	0	2,901	28%
80-120%	1,371	435	0	1,806	18%
50-80%	1,165	708	21	1,894	18%
30-50%	748	669	55	1,473	14%
0-30%	821	791	611	2,224	22%
Total Units	6,863	2,748	687	10,297	100%
% of Units	67%	27%	7%	100%	

#### UGB: Cottage Grove

+120%	284	19	0	302	26%
80-120%	141	56	0	197	17%
50-80%	120	91	3	214	19%
30-50%	77	87	7	171	15%
0-30%	85	102	79	266	23%
Total Units	706	355	89	1,150	100%
% of Units	61%	31%	8%	100%	

#### UGB: Creswell

+120%	208	9	0	217	30%
80-120%	104	26	0	129	18%
50-80%	88	42	1	131	18%
30-50%	57	40	3	100	14%
0-30%	62	47	36	145	20%
Total Units	519	163	41	723	100%
% of Units	72%	23%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Dallas

+120%	864	28	0	893	32%
80-120%	430	85	0	515	18%
50-80%	365	139	4	509	18%
30-50%	235	132	11	377	13%
0-30%	258	155	120	533	19%
Total Units	2,152	540	135	2,827	100%
% of Units	76%	19%	5%	100%	

#### UGB: Dayton

+120%	52	4	0	56	26%
80-120%	26	11	0	37	17%
50-80%	22	18	1	41	19%
30-50%	14	17	1	33	15%
0-30%	16	20	16	52	24%
Total Units	130	71	18	218	100%
% of Units	59%	33%	8%	100%	

#### UGB: Detroit

+120%	5	0	0	6	25%
80-120%	3	1	0	4	17%
50-80%	2	2	0	4	19%
30-50%	1	2	0	4	15%
0-30%	2	2	2	6	24%
Total Units	13	8	2	23	100%
% of Units	57%	35%	9%	100%	



Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Donald

+120%	94	2	0	96	33%
80-120%	47	7	0	54	19%
50-80%	40	12	0	52	18%
30-50%	25	11	1	37	13%
0-30%	28	13	10	51	18%
Total Units	234	45	11	290	100%
% of Units	80%	16%	4%	100%	

#### UGB: Dundee

+120%	167	5	0	172	33%
80-120%	83	14	0	97	18%
50-80%	71	22	1	94	18%
30-50%	45	21	2	68	13%
0-30%	50	25	19	94	18%
Total Units	416	87	22	525	100%
% of Units	79%	17%	4%	100%	

#### UGB: Dunes City

+120%	15	1	0	16	23%
80-120%	7	4	0	12	17%
50-80%	6	7	0	13	19%
30-50%	4	6	1	11	16%
0-30%	4	8	6	18	26%
Total Units	37	27	7	70	100%
% of Units	53%	38%	9%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Eugene

+120%	7,928	433	0	8,361	28%
80-120%	3,942	1,302	0	5,244	17%
50-80%	3,352	2,119	62	5,533	18%
30-50%	2,152	2,004	164	4,321	14%
0-30%	2,362	2,369	1,829	6,561	22%
Total Units	19,736	8,228	2,056	30,020	100%
% of Units	66%	27%	7%	100%	

#### UGB: Falls City

+120%	17	1	0	19	26%
80-120%	9	4	0	12	17%
50-80%	7	6	0	14	19%
30-50%	5	6	0	11	15%
0-30%	5	7	5	17	24%
Total Units	43	24	6	73	100%
% of Units	59%	32%	8%	100%	

#### UGB: Florence

+120%	308	18	0	326	27%
80-120%	153	55	0	208	17%
50-80%	130	89	3	222	19%
30-50%	84	84	7	175	15%
0-30%	92	100	77	269	22%
Total Units	767	347	87	1,200	100%
% of Units	64%	29%	7%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Gaston

+120%	8	1	0	8	26%
80-120%	4	2	0	5	17%
50-80%	3	3	0	6	19%
30-50%	2	2	0	5	15%
0-30%	2	3	2	7	23%
Total Units	19	10	2	31	100%
% of Units	61%	31%	8%	100%	

#### UGB: Gates

+120%	5	1	0	5	21%
80-120%	2	2	0	4	16%
50-80%	2	3	0	5	19%
30-50%	1	3	0	4	16%
0-30%	1	3	2	7	28%
Total Units	11	11	3	25	100%
% of Units	46%	44%	11%	100%	

#### UGB: Gervais

+120%	87	4	0	90	30%
80-120%	43	11	0	54	18%
50-80%	37	18	1	55	18%
30-50%	24	17	1	42	14%
0-30%	26	21	16	62	20%
Total Units	216	71	18	305	100%
% of Units	71%	23%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Halsey

+120%	35	2	0	36	30%
80-120%	17	5	0	22	18%
50-80%	15	7	0	22	18%
30-50%	9	7	1	17	14%
0-30%	10	8	6	25	20%
Total Units	86	29	7	122	100%
% of Units	71%	23%	6%	100%	

#### UGB: Harrisburg

+120%	102	6	0	108	27%
80-120%	51	18	0	69	17%
50-80%	43	30	1	74	19%
30-50%	28	28	2	58	15%
0-30%	31	33	26	89	22%
Total Units	255	115	29	399	100%
% of Units	64%	29%	7%	100%	

#### UGB: Hubbard

+120%	133	7	0	139	29%
80-120%	66	20	0	86	18%
50-80%	56	32	1	89	18%
30-50%	36	31	3	69	14%
0-30%	40	36	28	104	21%
Total Units	331	126	31	488	100%
% of Units	68%	26%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Idanha

+120%	1	0	0	1	19%
80-120%	1	0	0	1	16%
50-80%	0	1	0	1	19%
30-50%	0	1	0	1	17%
0-30%	0	1	1	2	29%
Total Units	3	3	1	6	100%
% of Units	41%	47%	12%	100%	

#### UGB: Independence

+120%	585	16	0	601	33%
80-120%	291	48	0	339	18%
50-80%	247	78	2	328	18%
30-50%	159	74	6	239	13%
0-30%	174	87	68	329	18%
Total Units	1,456	304	76	1,836	100%
% of Units	79%	17%	4%	100%	

#### UGB: Jefferson

+120%	98	4	0	102	29%
80-120%	49	13	0	62	18%
50-80%	41	22	1	63	18%
30-50%	26	20	2	49	14%
0-30%	29	24	19	72	21%
Total Units	243	84	21	348	100%
% of Units	70%	24%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Junction City

+120%	298	13	0	311	29%
80-120%	148	40	0	188	18%
50-80%	126	66	2	193	18%
30-50%	81	62	5	148	14%
0-30%	89	74	57	219	21%
Total Units	741	255	64	1,060	100%
% of Units	70%	24%	6%	100%	

#### UGB: Lafayette

+120%	155	5	0	160	32%
80-120%	77	15	0	92	18%
50-80%	66	25	1	91	18%
30-50%	42	23	2	67	13%
0-30%	46	27	21	95	19%
Total Units	386	95	24	505	100%
% of Units	76%	19%	5%	100%	

#### UGB: Lebanon

+120%	911	39	0	950	30%
80-120%	453	116	0	569	18%
50-80%	385	189	5	579	18%
30-50%	247	178	15	440	14%
0-30%	271	211	163	645	20%
Total Units	2,268	732	183	3,183	100%
% of Units	71%	23%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Lowell

+120%	30	2	0	32	28%
80-120%	15	5	0	20	17%
50-80%	13	8	0	21	18%
30-50%	8	8	1	17	14%
0-30%	9	9	7	25	22%
Total Units	75	32	8	115	100%
% of Units	65%	28%	7%	100%	

#### UGB: Lyons

+120%	38	3	0	41	26%
80-120%	19	8	0	27	17%
50-80%	16	13	0	29	19%
30-50%	10	12	1	23	15%
0-30%	11	14	11	36	23%
Total Units	95	49	12	156	100%
% of Units	61%	31%	8%	100%	

#### UGB: McMinnville

+120%	1,826	73	0	1,899	30%
80-120%	908	218	0	1,126	18%
50-80%	772	356	10	1,138	18%
30-50%	496	336	28	860	14%
0-30%	544	397	307	1,248	20%
Total Units	4,546	1,380	345	6,270	100%
% of Units	72%	22%	5%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Mill City

+120%	59	3	0	62	28%
80-120%	29	9	0	39	18%
50-80%	25	15	0	41	18%
30-50%	16	14	1	31	14%
0-30%	18	17	13	47	22%
Total Units	148	58	15	220	100%
% of Units	67%	26%	7%	100%	

#### UGB: Millersburg

+120%	232	7	0	239	32%
80-120%	116	21	0	137	18%
50-80%	98	35	1	134	18%
30-50%	63	33	3	99	13%
0-30%	69	39	30	138	18%
Total Units	578	134	34	746	100%
% of Units	77%	18%	5%	100%	

#### UGB: Monmouth

+120%	451	17	0	469	31%
80-120%	225	52	0	277	18%
50-80%	191	85	2	278	18%
30-50%	123	80	7	210	14%
0-30%	135	95	73	303	20%
Total Units	1,124	330	83	1,537	100%
% of Units	73%	21%	5%	100%	



Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Monroe

+120%	11	1	0	12	23%
80-120%	6	3	0	9	17%
50-80%	5	5	0	10	19%
30-50%	3	5	0	8	16%
0-30%	3	6	4	14	25%
Total Units	28	20	5	53	100%
% of Units	53%	37%	9%	100%	

#### UGB: Mount Angel

+120%	95	6	0	102	26%
80-120%	47	20	0	67	17%
50-80%	40	32	1	73	19%
30-50%	26	30	2	58	15%
0-30%	28	36	27	91	23%
Total Units	237	123	31	392	100%
% of Units	61%	32%	8%	100%	

#### UGB: Newberg

+120%	1,479	48	0	1,528	32%
80-120%	736	145	0	881	18%
50-80%	625	236	7	868	18%
30-50%	402	223	18	643	13%
0-30%	441	264	204	908	19%
Total Units	3,683	916	229	4,827	100%
% of Units	76%	19%	5%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Oakridge

+120%	33	5	0	38	19%
80-120%	16	14	0	30	16%
50-80%	14	23	1	37	19%
30-50%	9	22	2	32	17%
0-30%	10	26	20	55	29%
Total Units	82	89	22	193	100%
% of Units	42%	46%	12%	100%	

#### UGB: Philomath

+120%	265	9	0	273	32%
80-120%	132	26	0	158	18%
50-80%	112	42	1	155	18%
30-50%	72	40	3	115	13%
0-30%	79	47	36	162	19%
Total Units	659	164	41	864	100%
% of Units	76%	19%	5%	100%	

#### UGB: Salem/Keizer

+120%	11,900	539	0	12,438	29%
80-120%	5,917	1,619	0	7,536	18%
50-80%	5,030	2,636	77	7,743	18%
30-50%	3,231	2,493	205	5,928	14%
0-30%	3,545	2,947	2,275	8,767	21%
Total Units	29,623	10,233	2,557	42,413	100%
% of Units	70%	24%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Scio

+120%	36	2	0	38	27%
80-120%	18	6	0	24	17%
50-80%	15	11	0	26	19%
30-50%	10	10	1	20	15%
0-30%	11	12	9	31	23%
Total Units	89	41	10	140	100%
% of Units	63%	29%	7%	100%	

#### UGB: Scotts Mills

+120%	8	0	0	8	28%
80-120%	4	1	0	5	17%
50-80%	3	2	0	5	18%
30-50%	2	2	0	4	14%
0-30%	2	2	2	6	22%
Total Units	19	8	2	30	100%
% of Units	66%	28%	7%	100%	

#### UGB: Sheridan

+120%	91	8	0	100	24%
80-120%	45	24	0	70	17%
50-80%	39	39	1	79	19%
30-50%	25	37	3	65	16%
0-30%	27	44	34	105	25%
Total Units	228	153	38	419	100%
% of Units	54%	37%	9%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Silverton

+120%	487	20	0	508	30%
80-120%	242	61	0	303	18%
50-80%	206	99	3	308	18%
30-50%	132	94	8	234	14%
0-30%	145	111	86	342	20%
Total Units	1,213	386	96	1,695	100%
% of Units	72%	23%	6%	100%	

#### UGB: Sodaville

+120%	6	1	0	7	25%
80-120%	3	2	0	5	17%
50-80%	3	3	0	5	19%
30-50%	2	2	0	4	15%
0-30%	2	3	2	7	25%
Total Units	16	10	2	28	100%
% of Units	56%	35%	9%	100%	

#### UGB: Springfield

+120%	1,961	142	0	2,103	25%
80-120%	975	427	0	1,403	17%
50-80%	829	696	20	1,545	19%
30-50%	532	658	54	1,244	15%
0-30%	584	778	601	1,963	24%
Total Units	4,882	2,701	675	8,258	100%
% of Units	59%	33%	8%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: St. Paul

+120%	14	1	0	14	27%
80-120%	7	3	0	9	17%
50-80%	6	4	0	10	19%
30-50%	4	4	0	8	15%
0-30%	4	5	4	12	23%
Total Units	34	16	4	54	100%
% of Units	62%	30%	8%	100%	

#### UGB: Stayton

+120%	322	17	0	339	28%
80-120%	160	52	0	211	18%
50-80%	136	84	2	222	18%
30-50%	87	79	7	173	14%
0-30%	96	94	72	262	22%
Total Units	801	326	81	1,208	100%
% of Units	66%	27%	7%	100%	

#### UGB: Sublimity

+120%	76	4	0	81	27%
80-120%	38	13	0	51	17%
50-80%	32	21	1	54	18%
30-50%	21	20	2	43	14%
0-30%	23	24	18	65	22%
Total Units	190	83	21	294	100%
% of Units	65%	28%	7%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Sweet Home

+120%	248	14	0	262	28%
80-120%	123	42	0	165	17%
50-80%	105	69	2	176	18%
30-50%	67	65	5	138	14%
0-30%	74	77	59	210	22%
Total Units	617	267	67	951	100%
% of Units	65%	28%	7%	100%	

#### UGB: Tangent

+120%	78	4	0	82	28%
80-120%	39	13	0	51	17%
50-80%	33	21	1	54	18%
30-50%	21	19	2	42	14%
0-30%	23	23	18	64	22%
Total Units	194	80	20	294	100%
% of Units	66%	27%	7%	100%	

#### UGB: Turner

+120%	152	4	0	156	33%
80-120%	75	11	0	87	19%
50-80%	64	19	1	83	18%
30-50%	41	18	1	60	13%
0-30%	45	21	16	82	18%
Total Units	378	72	18	468	100%
% of Units	81%	15%	4%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Veneta

+120%	189	7	0	196	31%
80-120%	94	22	0	116	18%
50-80%	80	35	1	116	18%
30-50%	51	33	3	88	14%
0-30%	56	40	31	126	20%
Total Units	471	137	34	643	100%
% of Units	73%	21%	5%	100%	

#### UGB: Waterloo

+120%	3	0	0	4	24%
80-120%	2	1	0	2	17%
50-80%	1	1	0	3	19%
30-50%	1	1	0	2	15%
0-30%	1	2	1	4	25%
Total Units	8	5	1	15	100%
% of Units	56%	35%	9%	100%	

#### UGB: Westfir

+120%	2	0	0	2	19%
80-120%	1	1	0	2	16%
50-80%	1	1	0	2	20%
30-50%	0	1	0	2	17%
0-30%	1	1	1	3	29%
Total Units	4	5	1	11	100%
% of Units	40%	48%	12%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Willamina

+120%	34	3	0	37	24%
80-120%	17	9	0	25	17%
50-80%	14	14	0	29	19%
30-50%	9	13	1	23	15%
0-30%	10	16	12	38	25%
Total Units	85	54	13	152	100%
% of Units	56%	35%	9%	100%	

#### UGB: Woodburn

+120%	1,376	53	0	1,430	30%
80-120%	684	160	0	845	18%
50-80%	582	261	8	850	18%
30-50%	374	247	20	640	14%
0-30%	410	291	225	926	20%
Total Units	3,426	1,012	253	4,691	100%
% of Units	73%	22%	5%	100%	

#### UGB: Yamhill

+120%	44	2	0	46	30%
80-120%	22	6	0	28	18%
50-80%	19	9	0	28	18%
30-50%	12	9	1	21	14%
0-30%	13	10	8	31	20%
Total Units	111	35	9	154	100%
% of Units	72%	23%	6%	100%	



Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### **Benton County Outside of any UGB**

+120%	25	0	0	25	40%
80-120%	12	0	0	12	20%
50-80%	11	0	0	11	17%
30-50%	7	0	0	7	11%
0-30%	7	0	0	7	12%
Total Units	62	0	0	62	100%
% of Units	93%	0%	0%	100%	

#### **Lane County Outside of any UGB<sup>71</sup>**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	

#### **Linn County Outside of any UGB**

+120%	109	0	0	109	40%
80-120%	54	0	0	54	20%
50-80%	46	0	0	46	17%
30-50%	30	0	0	30	11%
0-30%	32	0	0	32	12%
Total Units	271	0	0	271	100%
% of Units	98%	0%	0%	100%	

<sup>71</sup> The official population forecast from the Oregon Population Forecast Program forecasts a decrease in population in unincorporated areas within Lane County and Marion County over the 2020 to 2040 period. In some cases, this change may reflect the expectation that urban growth boundaries will expand, moving people into cities and out of rural areas. In other cases, this may reflect expectations that population in rural areas may decline.

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### Marion County Outside of any UGB

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### Polk County Outside of any UGB

+120%	208	0	0	208	40%
80-120%	103	0	0	103	20%
50-80%	88	0	0	88	17%
30-50%	56	0	0	56	11%
0-30%	62	0	0	62	12%
Total Units	518	0	0	518	100%
% of Units	99%	0%	0%	100%	

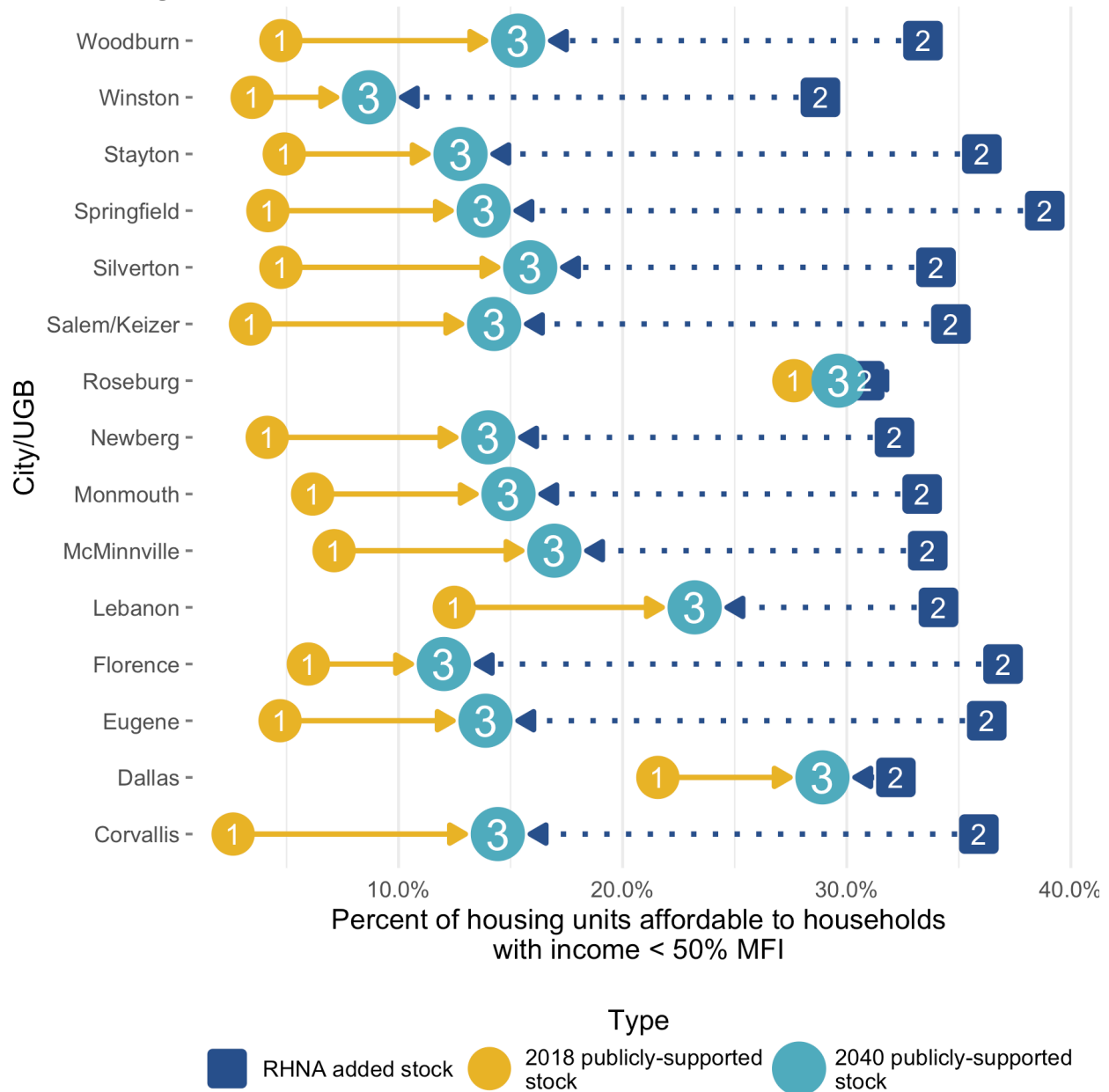
#### Yamhill County Outside of any UGB

+120%	670	0	0	670	40%
80-120%	333	0	0	333	20%
50-80%	283	0	0	283	17%
30-50%	182	0	0	182	11%
0-30%	200	0	0	200	12%
Total Units	1,668	0	0	1,668	100%
% of Units	100%	0%	0%	100%	

Exhibit 158 shows that, in all the cities shown below, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. This exhibit only shows results for cities where information about rent-restricted and publicly supported housing is available from OHCS. Chapter 4 provides more information about interpreting these results.

**Exhibit 158. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI for Selected Cities within the Willamette Valley region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



Source: OHCS, US Census

## Cities in the Southwest Region

The geographies used for the Southwest region in Exhibit 159 are:

- **Incorporated cities** are labeled as “UGB” and include the city’s entire UGB, both the city limits and unincorporated areas within the city’s UGB.
- **Unincorporated areas** are labeled as “rural unincorporated County Name outside of any UGB.” They only include the unincorporated areas outside of any UGB county within this region.

### Exhibit 159. Recommended RHNA Results for Cities in the Southwest Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; HUD, SY 2018-2019 McKinney Vento data

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### Region: Southwest

##### UGB: Ashland

+120%	769	90	0	858	33%
80-120%	275	109	0	384	15%
50-80%	273	202	9	484	19%
30-50%	156	147	25	328	13%
0-30%	127	149	276	552	21%
Total Units	1,599	697	310	2,606	100%
% of Units	61%	27%	12%	100%	

##### UGB: Bandon

+120%	140	14	0	154	34%
80-120%	50	17	0	67	15%
50-80%	50	32	1	83	18%
30-50%	28	23	4	56	12%
0-30%	23	24	44	90	20%
Total Units	290	110	49	450	100%
% of Units	65%	25%	11%	100%	

##### UGB: Brookings

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
+120%	343	42	0	385	33%
80-120%	123	50	0	173	15%
50-80%	122	93	4	219	19%
30-50%	70	68	11	149	13%
0-30%	57	69	128	253	21%
Total Units	714	322	143	1,180	100%
% of Units	61%	27%	12%	100%	

#### UGB: Butte Falls

+120%	8	1	0	10	31%
80-120%	3	2	0	5	14%
50-80%	3	3	0	6	19%
30-50%	2	2	0	4	13%
0-30%	1	2	4	7	23%
Total Units	17	10	4	31	100%
% of Units	55%	31%	14%	100%	

#### UGB: Canyonville

+120%	115	9	0	125	36%
80-120%	41	11	0	53	15%
50-80%	41	21	1	63	18%
30-50%	23	16	3	41	12%
0-30%	19	16	29	64	18%
Total Units	239	73	33	346	100%
% of Units	69%	21%	9%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Cave Junction

+120%	67	8	0	75	33%
80-120%	24	9	0	33	15%
50-80%	24	18	1	42	19%
30-50%	14	13	2	29	13%
0-30%	11	13	24	48	21%
Total Units	139	61	27	227	100%
% of Units	61%	27%	12%	100%	

#### UGB: Central Point

+120%	1,126	62	0	1,188	39%
80-120%	403	75	0	477	16%
50-80%	400	139	6	545	18%
30-50%	228	101	17	347	11%
0-30%	186	103	190	478	16%
Total Units	2,343	479	213	3,036	100%
% of Units	77%	16%	7%	100%	

#### UGB: Coos Bay

+120%	682	79	0	761	33%
80-120%	244	96	0	340	15%
50-80%	242	177	8	428	19%
30-50%	138	130	22	290	13%
0-30%	112	131	243	487	21%
Total Units	1,418	614	273	2,305	100%
% of Units	62%	27%	12%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Coquille

+120%	90	15	0	105	30%
80-120%	32	18	0	50	14%
50-80%	32	33	2	66	19%
30-50%	18	24	4	46	13%
0-30%	15	24	45	84	24%
Total Units	187	113	50	351	100%
% of Units	53%	32%	14%	100%	

#### UGB: Drain

+120%	32	4	0	36	32%
80-120%	11	5	0	16	14%
50-80%	11	10	0	21	19%
30-50%	6	7	1	15	13%
0-30%	5	7	13	25	22%
Total Units	66	33	15	114	100%
% of Units	58%	29%	13%	100%	

#### UGB: Eagle Point

+120%	564	26	0	590	40%
80-120%	202	31	0	233	16%
50-80%	200	58	3	261	18%
30-50%	114	42	7	164	11%
0-30%	93	43	79	215	15%
Total Units	1,173	200	89	1,461	100%
% of Units	80%	14%	6%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Elkton

+120%	10	1	0	11	36%
80-120%	4	1	0	5	15%
50-80%	4	2	0	6	18%
30-50%	2	1	0	4	12%
0-30%	2	1	3	6	19%
Total Units	22	7	3	32	100%
% of Units	69%	22%	10%	100%	

#### UGB: Glendale

+120%	17	3	0	20	29%
80-120%	6	4	0	10	14%
50-80%	6	7	0	13	19%
30-50%	3	5	1	9	13%
0-30%	3	5	9	17	25%
Total Units	35	23	10	69	100%
% of Units	51%	34%	15%	100%	

#### UGB: Gold Beach

+120%	130	12	0	142	35%
80-120%	46	15	0	61	15%
50-80%	46	27	1	75	18%
30-50%	26	20	3	50	12%
0-30%	21	20	37	79	19%
Total Units	270	94	42	407	100%
% of Units	67%	23%	10%	100%	



Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Gold Hill

+120%	29	4	0	33	32%
80-120%	10	4	0	15	15%
50-80%	10	8	0	19	19%
30-50%	6	6	1	13	13%
0-30%	5	6	11	22	22%
Total Units	61	28	13	102	100%
% of Units	60%	28%	12%	100%	

#### UGB: Grants Pass

+120%	2,305	181	0	2,485	36%
80-120%	824	219	0	1,043	15%
50-80%	819	405	19	1,242	18%
30-50%	467	296	50	813	12%
0-30%	380	300	554	1,234	18%
Total Units	4,795	1,399	623	6,818	100%
% of Units	70%	21%	9%	100%	

#### UGB: Jacksonville

+120%	176	11	0	187	38%
80-120%	63	13	0	76	16%
50-80%	63	24	1	88	18%
30-50%	36	18	3	56	12%
0-30%	29	18	33	80	16%
Total Units	366	83	37	486	100%
% of Units	75%	17%	8%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Lakeside

+120%	73	4	0	77	39%
80-120%	26	5	0	31	16%
50-80%	26	9	0	35	18%
30-50%	15	7	1	23	11%
0-30%	12	7	12	31	16%
Total Units	152	31	14	197	100%
% of Units	77%	16%	7%	100%	

#### UGB: Medford

+120%	5,374	413	0	5,787	37%
80-120%	1,921	500	0	2,421	15%
50-80%	1,909	926	43	2,879	18%
30-50%	1,090	678	114	1,881	12%
0-30%	887	686	1,269	2,841	18%
Total Units	11,180	3,203	1,426	15,809	100%
% of Units	71%	20%	9%	100%	

#### UGB: Myrtle Creek

+120%	237	21	0	258	35%
80-120%	85	26	0	111	15%
50-80%	84	48	2	135	18%
30-50%	48	35	6	89	12%
0-30%	39	36	66	141	19%
Total Units	493	167	74	734	100%
% of Units	67%	23%	10%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Myrtle Point

+120%	50	8	0	57	30%
80-120%	18	10	0	27	14%
50-80%	18	18	1	36	19%
30-50%	10	13	2	25	13%
0-30%	8	13	24	46	24%
Total Units	103	62	27	192	100%
% of Units	54%	32%	14%	100%	

#### UGB: North Bend

+120%	250	40	0	290	30%
80-120%	89	48	0	138	14%
50-80%	89	90	4	183	19%
30-50%	51	65	11	127	13%
0-30%	41	66	123	230	24%
Total Units	521	309	138	968	100%
% of Units	54%	32%	14%	100%	

#### UGB: Oakland

+120%	23	3	0	26	32%
80-120%	8	4	0	12	15%
50-80%	8	7	0	15	19%
30-50%	5	5	1	10	13%
0-30%	4	5	9	18	22%
Total Units	48	23	10	82	100%
% of Units	59%	28%	13%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Phoenix

+120%	176	15	0	191	36%
80-120%	63	18	0	81	15%
50-80%	63	34	2	98	18%
30-50%	36	25	4	65	12%
0-30%	29	25	46	100	19%
Total Units	366	117	52	535	100%
% of Units	68%	22%	10%	100%	

#### UGB: Port Orford

+120%	44	5	0	49	33%
80-120%	16	6	0	22	15%
50-80%	16	12	1	28	19%
30-50%	9	8	1	19	13%
0-30%	7	9	16	32	21%
Total Units	92	40	18	150	100%
% of Units	61%	27%	12%	100%	

#### UGB: Powers

+120%	7	2	0	8	25%
80-120%	2	2	0	4	13%
50-80%	2	4	0	6	19%
30-50%	1	3	0	5	14%
0-30%	1	3	5	9	28%
Total Units	14	13	6	33	100%
% of Units	42%	40%	18%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Reedsport

+120%	61	13	0	74	27%
80-120%	22	16	0	38	14%
50-80%	22	30	1	53	19%
30-50%	12	22	4	38	14%
0-30%	10	22	41	73	26%
Total Units	127	103	46	275	100%
% of Units	46%	37%	17%	100%	

#### UGB: Riddle

+120%	21	4	0	24	29%
80-120%	7	4	0	12	14%
50-80%	7	8	0	16	19%
30-50%	4	6	1	11	13%
0-30%	3	6	11	20	24%
Total Units	43	27	12	83	100%
% of Units	52%	33%	15%	100%	

#### UGB: Rogue River

+120%	108	10	0	118	35%
80-120%	39	12	0	51	15%
50-80%	38	22	1	61	18%
30-50%	22	16	3	41	12%
0-30%	18	16	30	64	19%
Total Units	225	76	34	335	100%
% of Units	67%	23%	10%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Roseburg

+120%	1,740	149	0	1,888	36%
80-120%	622	180	0	802	15%
50-80%	618	333	15	967	18%
30-50%	353	244	41	638	12%
0-30%	287	247	456	990	19%
Total Units	3,619	1,152	513	5,285	100%
% of Units	68%	22%	10%	100%	

#### UGB: Shady Cove

+120%	129	8	0	137	38%
80-120%	46	10	0	56	16%
50-80%	46	19	1	66	18%
30-50%	26	14	2	42	12%
0-30%	21	14	26	61	17%
Total Units	268	66	29	363	100%
% of Units	74%	18%	8%	100%	

#### UGB: Sutherlin

+120%	293	26	0	319	35%
80-120%	105	31	0	136	15%
50-80%	104	58	3	165	18%
30-50%	59	43	7	109	12%
0-30%	48	43	80	171	19%
Total Units	609	201	89	900	100%
% of Units	68%	22%	10%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Talent

+120%	262	18	0	280	37%
80-120%	94	22	0	116	15%
50-80%	93	40	2	135	18%
30-50%	53	30	5	88	12%
0-30%	43	30	55	128	17%
Total Units	545	140	62	747	100%
% of Units	73%	19%	8%	100%	

#### UGB: Winston

+120%	358	24	0	382	38%
80-120%	128	29	0	157	15%
50-80%	127	54	3	184	18%
30-50%	73	40	7	119	12%
0-30%	59	40	75	174	17%
Total Units	745	188	84	1,017	100%
% of Units	73%	19%	8%	100%	

#### UGB: Yoncalla

+120%	16	3	0	18	29%
80-120%	6	3	0	9	14%
50-80%	6	6	0	12	19%
30-50%	3	5	1	9	13%
0-30%	3	5	9	16	25%
Total Units	32	22	10	64	100%
% of Units	51%	34%	15%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### **Coos County Outside of any UGB<sup>72</sup>**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### **Curry County Outside of any UGB**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### **Douglas County Outside of any UGB**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

<sup>72</sup> The official population forecast from the Oregon Population Forecast Program forecasts a decrease in population in unincorporated areas within Coos County, Curry County, Douglas County, and Josephine County over the 2020 to 2040 period. In some cases, this change may reflect the expectation that urban growth boundaries will expand, moving people into cities and out of rural areas. In other cases, this may reflect expectations that population in rural areas may decline.

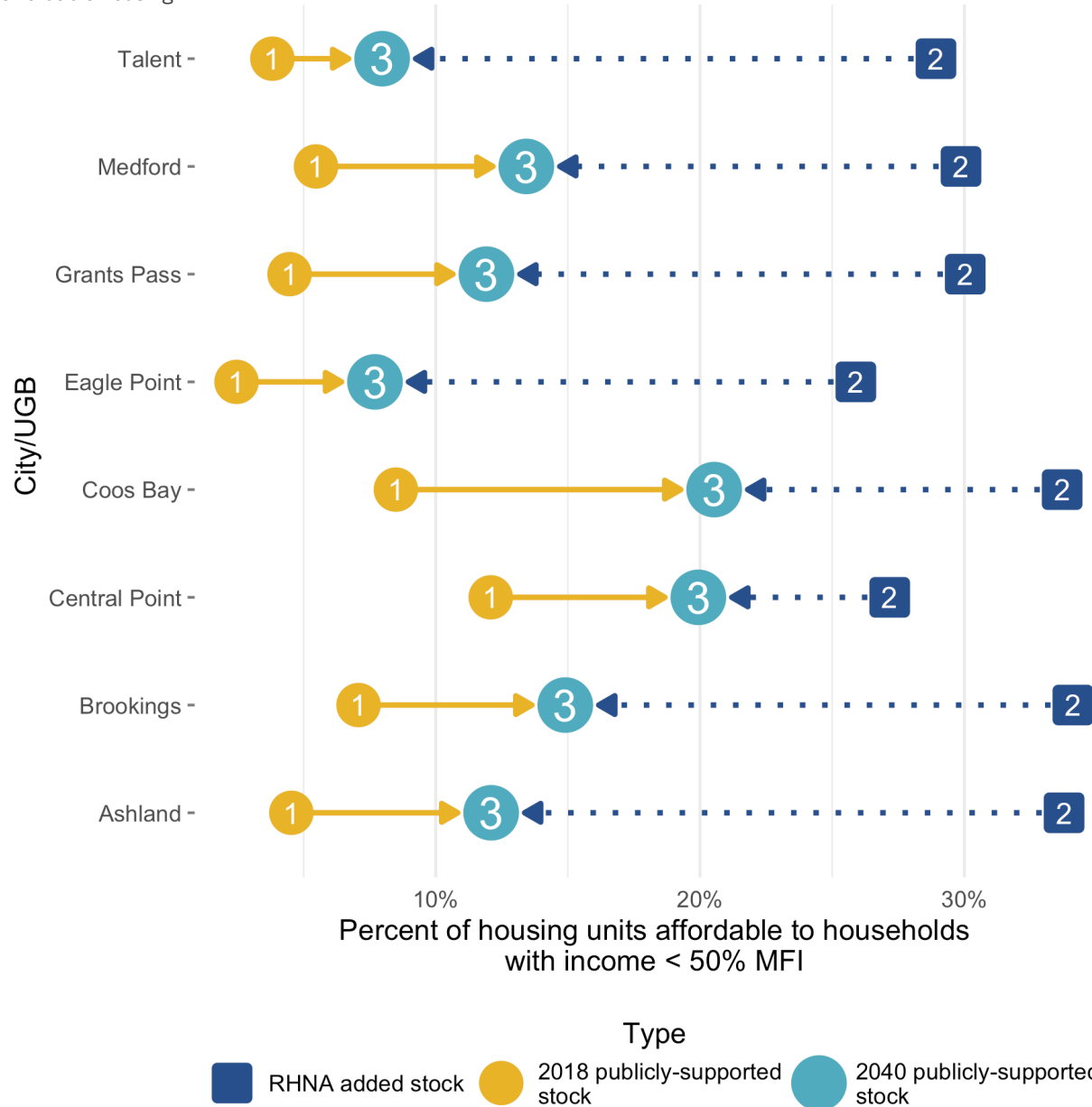


Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
Jackson County Outside of any UGB					
+120%	949	0	0	949	48%
80-120%	339	0	0	339	17%
50-80%	337	0	0	337	17%
30-50%	192	0	0	192	10%
0-30%	157	0	0	157	8%
Total Units	1,975	0	0	1,975	100%
% of Units	100%	0%	0%	100%	
Josephine County Outside of any UGB					
+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	

Exhibit 160 shows that, in all the cities shown below, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. This exhibit only shows results for cities where information about rent-restricted and publicly supported housing is available from OHCS. Chapter 4 provides more information about interpreting these results.

**Exhibit 160. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI for Selected Cities within the Southwest region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



Source: OHCS, US Census

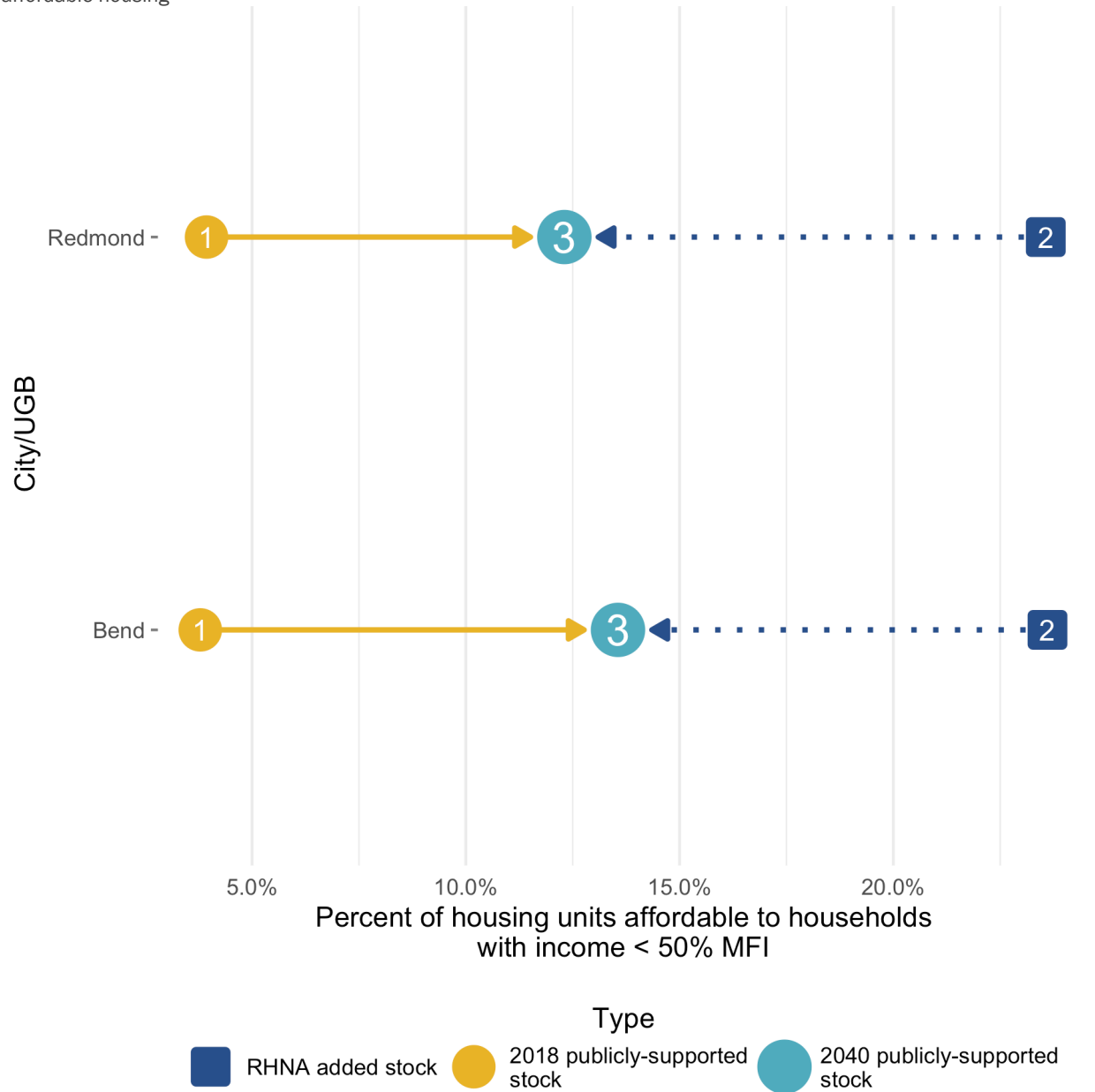


Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
UGB: Redmond					
+120%	4,098	93	0	4,191	41%
80-120%	1,817	250	0	2,067	20%
50-80%	1,251	224	7	1,482	15%
30-50%	866	214	20	1,100	11%
0-30%	846	220	220	1,286	13%
Total Units	8,878	1,001	247	10,127	100%
% of Units	88%	10%	2%	100%	
UGB: Sisters					
+120%	508	11	0	519	41%
80-120%	225	30	0	255	20%
50-80%	155	27	1	183	15%
30-50%	107	26	2	136	11%
0-30%	105	27	27	158	13%
Total Units	1,100	121	30	1,251	100%
% of Units	88%	10%	2%	100%	
Deschutes County Outside of any UGB					
+120%	3,351	0	0	3,351	46%
80-120%	1,486	0	0	1,486	20%
50-80%	1,023	0	0	1,023	14%
30-50%	708	0	0	708	10%
0-30%	692	0	0	692	10%
Total Units	7,261	0	0	7,261	100%
% of Units	100%	0%	0%	100%	

Exhibit 162 shows that, in all the cities shown below, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. This exhibit only shows results for cities where information about rent-restricted and publicly supported housing is available from OHCS. Chapter 4 provides more information about interpreting these results.

**Exhibit 162. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI for Selected Cities within the Deschutes region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



Source: OHCS, US Census

## Cities in the Northeast Region

The geographies used for the Northeast region in Exhibit 163 are:

- **Incorporated cities** are labeled as “UGB” and include the city’s entire UGB, both the city limits and unincorporated areas within the city’s UGB.
- **Unincorporated areas** are labeled as “rural unincorporated County Name outside of any UGB.” They only include the unincorporated areas outside of any UGB county within this region.

### Exhibit 163. Recommended RHNA Results for Cities in the Northeast Region

Source: ECONorthwest analysis; PSU, 2020-2070 Coordinated Population Forecasts; HUD, FY 2018 Income Limits; U.S. Census Bureau, 2018 ACS 1-year PUMS estimates; HUD, 2019 PIT count; HUD, SY 2018-2019 McKinney Vento data

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
Region: Northeast					
UGB: Adams					
+120%	4	0	0	4	43%
80-120%	2	0	0	2	17%
50-80%	1	0	0	1	13%
30-50%	1	0	0	1	10%
0-30%	1	0	1	2	17%
Total Units	9	0	1	10	100%
% of Units	90%	0%	10%	100%	
UGB: Antelope					
+120%	3	0	0	3	44%
80-120%	1	0	0	1	18%
50-80%	1	0	0	1	14%
30-50%	1	0	0	1	10%
0-30%	1	0	1	1	15%
Total Units	7	0	1	8	100%
% of Units	92%	0%	8%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Arlington

+120%	15	0	0	15	44%
80-120%	6	0	0	6	18%
50-80%	5	0	0	5	14%
30-50%	3	0	0	3	10%
0-30%	3	0	2	5	15%
Total Units	31	0	3	33	100%
% of Units	92%	0%	8%	100%	

#### UGB: Athena

+120%	10	0	0	10	40%
80-120%	4	0	0	4	16%
50-80%	3	0	0	3	13%
30-50%	2	0	0	3	10%
0-30%	2	0	4	5	21%
Total Units	22	0	4	26	100%
% of Units	84%	0%	16%	100%	

#### UGB: Baker City

+120%	202	0	0	202	42%
80-120%	81	0	0	81	17%
50-80%	62	0	2	64	13%
30-50%	44	0	5	48	10%
0-30%	35	0	50	85	18%
Total Units	423	0	56	480	100%
% of Units	88%	0%	12%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Boardman

+120%	217	0	0	217	45%
80-120%	88	0	0	88	18%
50-80%	67	0	1	68	14%
30-50%	47	0	2	49	10%
0-30%	37	0	23	60	13%
Total Units	456	0	26	482	100%
% of Units	95%	0%	5%	100%	

#### UGB: Canyon City

+120%	12	0	0	12	42%
80-120%	5	0	0	5	17%
50-80%	4	0	0	4	13%
30-50%	3	0	0	3	10%
0-30%	2	0	3	5	18%
Total Units	25	0	3	28	100%
% of Units	88%	0%	12%	100%	

#### UGB: Cascade Locks

+120%	40	0	0	40	45%
80-120%	16	0	0	16	18%
50-80%	12	0	0	12	14%
30-50%	9	0	0	9	10%
0-30%	7	0	5	12	13%
Total Units	84	0	5	89	100%
% of Units	94%	0%	6%	100%	



Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Condon

+120%	8	0	0	8	41%
80-120%	3	0	0	3	16%
50-80%	2	0	0	2	13%
30-50%	2	0	0	2	10%
0-30%	1	0	3	4	20%
Total Units	16	0	3	19	100%
% of Units	85%	0%	15%	100%	

#### UGB: Cove

+120%	4	0	0	4	38%
80-120%	2	0	0	2	15%
50-80%	1	0	0	1	12%
30-50%	1	0	0	1	10%
0-30%	1	0	2	2	24%
Total Units	8	0	2	10	100%
% of Units	80%	0%	20%	100%	

#### UGB: Culver

+120%	52	0	0	52	45%
80-120%	21	0	0	21	18%
50-80%	16	0	0	16	14%
30-50%	11	0	0	12	10%
0-30%	9	0	5	14	12%
Total Units	109	0	6	115	100%
% of Units	95%	0%	5%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Dayville

+120%	1	0	0	1	36%
80-120%	0	0	0	0	14%
50-80%	0	0	0	0	12%
30-50%	0	0	0	0	10%
0-30%	0	0	0	1	29%
Total Units	1	0	0	2	100%
% of Units	75%	0%	25%	100%	

#### UGB: Dufur

+120%	8	0	0	8	41%
80-120%	3	0	0	3	16%
50-80%	2	0	0	2	13%
30-50%	2	0	0	2	10%
0-30%	1	0	2	4	20%
Total Units	16	0	3	19	100%
% of Units	86%	0%	14%	100%	

#### UGB: Echo

+120%	8	0	0	8	41%
80-120%	3	0	0	3	17%
50-80%	2	0	0	3	13%
30-50%	2	0	0	2	10%
0-30%	1	0	2	4	19%
Total Units	17	0	3	19	100%
% of Units	87%	0%	13%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Elgin

+120%	45	0	0	45	44%
80-120%	18	0	0	18	18%
50-80%	14	0	0	14	14%
30-50%	10	0	1	11	10%
0-30%	8	0	8	16	15%
Total Units	95	0	9	104	100%
% of Units	91%	0%	9%	100%	

#### UGB: Enterprise

+120%	74	0	0	74	43%
80-120%	30	0	0	30	17%
50-80%	23	0	0	23	14%
30-50%	16	0	1	17	10%
0-30%	13	0	14	27	16%
Total Units	156	0	16	172	100%
% of Units	91%	0%	9%	100%	

#### UGB: Fossil

+120%	8	0	0	8	42%
80-120%	3	0	0	3	17%
50-80%	2	0	0	2	13%
30-50%	2	0	0	2	10%
0-30%	1	0	2	3	19%
Total Units	16	0	2	19	100%
% of Units	87%	0%	13%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Granite**

+120%	0	0	0	0	36%
80-120%	0	0	0	0	14%
50-80%	0	0	0	0	12%
30-50%	0	0	0	0	10%
0-30%	0	0	0	0	28%
Total Units	0	0	0	1	100%
% of Units	76%	0%	24%	100%	

**UGB: Grass Valley**

+120%	0	0	0	0	22%
80-120%	0	0	0	0	9%
50-80%	0	0	0	0	8%
30-50%	0	0	0	0	9%
0-30%	0	0	0	0	52%
Total Units	0	0	0	1	100%
% of Units	46%	0%	54%	100%	

**UGB: Greenhorn**

+120%	0	0	0	0	1%
80-120%	0	0	0	0	0%
50-80%	0	0	0	0	3%
30-50%	0	0	0	0	8%
0-30%	0	0	0	0	88%
Total Units	0	0	0	0	100%
% of Units	2%	0%	98%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Haines**

+120%	3	0	0	3	38%
80-120%	1	0	0	1	15%
50-80%	1	0	0	1	12%
30-50%	1	0	0	1	10%
0-30%	0	0	1	2	25%
Total Units	6	0	1	7	100%
% of Units	79%	0%	21%	100%	

**UGB: Halfway**

+120%	8	0	0	8	43%
80-120%	3	0	0	3	17%
50-80%	2	0	0	3	13%
30-50%	2	0	0	2	10%
0-30%	1	0	2	3	17%
Total Units	17	0	2	19	100%
% of Units	89%	0%	11%	100%	

**UGB: Helix**

+120%	2	0	0	2	41%
80-120%	1	0	0	1	16%
50-80%	1	0	0	1	13%
30-50%	0	0	0	1	10%
0-30%	0	0	1	1	20%
Total Units	4	0	1	5	100%
% of Units	85%	0%	15%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Heppner

+120%	29	0	0	29	42%
80-120%	12	0	0	12	17%
50-80%	9	0	0	9	13%
30-50%	6	0	1	7	10%
0-30%	5	0	7	12	17%
Total Units	62	0	8	70	100%
% of Units	89%	0%	11%	100%	

#### UGB: Hermiston

+120%	895	0	0	895	45%
80-120%	361	0	0	361	18%
50-80%	275	0	3	278	14%
30-50%	194	0	9	202	10%
0-30%	154	0	96	250	13%
Total Units	1,879	0	108	1,987	100%
% of Units	95%	0%	5%	100%	

#### UGB: Hood River

+120%	673	0	0	673	45%
80-120%	271	0	0	271	18%
50-80%	207	0	2	209	14%
30-50%	146	0	6	151	10%
0-30%	116	0	65	181	12%
Total Units	1,413	0	73	1,486	100%
% of Units	95%	0%	5%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Huntington**

+120%	2	0	0	2	37%
80-120%	1	0	0	1	15%
50-80%	1	0	0	1	12%
30-50%	1	0	0	1	10%
0-30%	0	0	1	2	26%
Total Units	5	0	1	6	100%
% of Units	78%	0%	22%	100%	

**UGB: Imbler**

+120%	9	0	0	9	44%
80-120%	4	0	0	4	18%
50-80%	3	0	0	3	14%
30-50%	2	0	0	2	10%
0-30%	2	0	1	3	14%
Total Units	19	0	2	21	100%
% of Units	92%	0%	8%	100%	

**UGB: Ione**

+120%	5	0	0	5	42%
80-120%	2	0	0	2	17%
50-80%	2	0	0	2	13%
30-50%	1	0	0	1	10%
0-30%	1	0	1	2	18%
Total Units	11	0	1	12	100%
% of Units	88%	0%	12%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Irrigon

+120%	84	0	0	84	46%
80-120%	34	0	0	34	18%
50-80%	26	0	0	26	14%
30-50%	18	0	1	19	10%
0-30%	15	0	7	22	12%
Total Units	177	0	8	185	100%
% of Units	96%	0%	4%	100%	

#### UGB: Island City

+120%	41	0	0	41	44%
80-120%	16	0	0	16	18%
50-80%	13	0	0	13	14%
30-50%	9	0	1	9	10%
0-30%	7	0	6	13	14%
Total Units	86	0	7	92	100%
% of Units	93%	0%	7%	100%	

#### UGB: John Day

+120%	57	0	0	57	43%
80-120%	23	0	0	23	17%
50-80%	18	0	0	18	13%
30-50%	12	0	1	13	10%
0-30%	10	0	12	22	17%
Total Units	120	0	14	133	100%
% of Units	90%	0%	10%	100%	



Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Joseph

+120%	20	0	0	20	42%
80-120%	8	0	0	8	17%
50-80%	6	0	0	6	13%
30-50%	4	0	0	5	10%
0-30%	3	0	5	8	17%
Total Units	42	0	5	47	100%
% of Units	89%	0%	11%	100%	

#### UGB: La Grande

+120%	372	0	0	372	43%
80-120%	150	0	0	150	17%
50-80%	114	0	3	117	14%
30-50%	80	0	7	87	10%
0-30%	64	0	75	139	16%
Total Units	781	0	84	865	100%
% of Units	90%	0%	10%	100%	

#### UGB: Lexington

+120%	0	0	0	0	21%
80-120%	0	0	0	0	9%
50-80%	0	0	0	0	8%
30-50%	0	0	0	0	9%
0-30%	0	0	1	1	53%
Total Units	1	0	1	1	100%
% of Units	45%	0%	55%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Lone Rock

+120%	3	0	0	3	44%
80-120%	1	0	0	1	18%
50-80%	1	0	0	1	14%
30-50%	1	0	0	1	10%
0-30%	1	0	1	1	14%
Total Units	7	0	1	8	100%
% of Units	93%	0%	7%	100%	

#### UGB: Long Creek

+120%	2	0	0	2	40%
80-120%	1	0	0	1	16%
50-80%	1	0	0	1	13%
30-50%	0	0	0	1	10%
0-30%	0	0	1	1	21%
Total Units	5	0	1	5	100%
% of Units	85%	0%	15%	100%	

#### UGB: Lostine

+120%	3	0	0	3	41%
80-120%	1	0	0	1	16%
50-80%	1	0	0	1	13%
30-50%	1	0	0	1	10%
0-30%	1	0	1	2	20%
Total Units	7	0	1	8	100%
% of Units	86%	0%	14%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Madras

+120%	372	0	0	372	45%
80-120%	150	0	0	150	18%
50-80%	114	0	1	116	14%
30-50%	80	0	4	84	10%
0-30%	64	0	39	103	13%
Total Units	781	0	44	825	100%
% of Units	95%	0%	5%	100%	

#### UGB: Maupin

+120%	12	0	0	12	44%
80-120%	5	0	0	5	18%
50-80%	4	0	0	4	14%
30-50%	3	0	0	3	10%
0-30%	2	0	2	4	15%
Total Units	25	0	2	27	100%
% of Units	91%	0%	9%	100%	

#### UGB: Metolius

+120%	24	0	0	24	44%
80-120%	10	0	0	10	18%
50-80%	7	0	0	8	14%
30-50%	5	0	0	6	10%
0-30%	4	0	3	7	14%
Total Units	51	0	4	54	100%
% of Units	93%	0%	7%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Milton-Freewater**

+120%	189	0	0	189	44%
80-120%	76	0	0	76	18%
50-80%	58	0	1	59	14%
30-50%	41	0	3	44	10%
0-30%	33	0	31	63	15%
Total Units	398	0	34	432	100%
% of Units	92%	0%	8%	100%	

**UGB: Mitchell**

+120%	1	0	0	1	40%
80-120%	1	0	0	1	16%
50-80%	0	0	0	0	13%
30-50%	0	0	0	0	10%
0-30%	0	0	0	1	21%
Total Units	3	0	1	3	100%
% of Units	84%	0%	16%	100%	

**UGB: Monument**

+120%	2	0	0	2	41%
80-120%	1	0	0	1	17%
50-80%	1	0	0	1	13%
30-50%	0	0	0	0	10%
0-30%	0	0	1	1	19%
Total Units	4	0	1	5	100%
% of Units	87%	0%	13%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Moro**

+120%	10	0	0	10	43%
80-120%	4	0	0	4	17%
50-80%	3	0	0	3	13%
30-50%	2	0	0	2	10%
0-30%	2	0	2	4	16%
Total Units	21	0	2	24	100%
% of Units	90%	0%	10%	100%	

**UGB: Mosier**

+120%	15	0	0	15	45%
80-120%	6	0	0	6	18%
50-80%	4	0	0	5	14%
30-50%	3	0	0	3	10%
0-30%	3	0	2	4	12%
Total Units	31	0	2	32	100%
% of Units	95%	0%	5%	100%	

**UGB: Mt Vernon**

+120%	2	0	0	2	34%
80-120%	1	0	0	1	14%
50-80%	1	0	0	1	11%
30-50%	0	0	0	1	10%
0-30%	0	0	1	2	32%
Total Units	4	0	2	6	100%
% of Units	71%	0%	29%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: North Powder

+120%	4	0	0	4	39%
80-120%	1	0	0	1	16%
50-80%	1	0	0	1	13%
30-50%	1	0	0	1	10%
0-30%	1	0	2	2	23%
Total Units	8	0	2	10	100%
% of Units	82%	0%	18%	100%	

#### UGB: Pendleton

+120%	556	0	0	556	44%
80-120%	224	0	0	224	18%
50-80%	171	0	3	174	14%
30-50%	120	0	8	128	10%
0-30%	96	0	91	187	15%
Total Units	1,166	0	102	1,269	100%
% of Units	92%	0%	8%	100%	

#### UGB: Pilot Rock

+120%	7	0	0	7	35%
80-120%	3	0	0	3	14%
50-80%	2	0	0	2	11%
30-50%	1	0	0	2	10%
0-30%	1	0	5	6	30%
Total Units	14	0	5	19	100%
% of Units	73%	0%	27%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Prairie City

+120%	5	0	0	5	37%
80-120%	2	0	0	2	15%
50-80%	1	0	0	2	12%
30-50%	1	0	0	1	10%
0-30%	1	0	3	4	27%
Total Units	10	0	3	13	100%
% of Units	77%	0%	23%	100%	

#### UGB: Prineville

+120%	672	0	0	672	46%
80-120%	271	0	0	271	18%
50-80%	207	0	2	209	14%
30-50%	145	0	5	150	10%
0-30%	116	0	57	173	12%
Total Units	1,411	0	64	1,475	100%
% of Units	96%	0%	4%	100%	

#### UGB: Richland

+120%	4	0	0	4	43%
80-120%	2	0	0	2	17%
50-80%	1	0	0	1	14%
30-50%	1	0	0	1	10%
0-30%	1	0	1	1	16%
Total Units	8	0	1	9	100%
% of Units	91%	0%	9%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Rufus**

+120%	2	0	0	2	39%
80-120%	1	0	0	1	16%
50-80%	1	0	0	1	13%
30-50%	0	0	0	1	10%
0-30%	0	0	1	1	23%
Total Units	4	0	1	5	100%
% of Units	82%	0%	18%	100%	

**UGB: Seneca**

+120%	1	0	0	1	35%
80-120%	0	0	0	0	14%
50-80%	0	0	0	0	12%
30-50%	0	0	0	0	10%
0-30%	0	0	1	1	30%
Total Units	2	0	1	2	100%
% of Units	73%	0%	27%	100%	

**UGB: Shaniko**

+120%	0	0	0	0	24%
80-120%	0	0	0	0	10%
50-80%	0	0	0	0	9%
30-50%	0	0	0	0	9%
0-30%	0	0	0	0	49%
Total Units	0	0	0	0	100%
% of Units	50%	0%	50%	100%	



Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Spray

+120%	2	0	0	2	40%
80-120%	1	0	0	1	16%
50-80%	0	0	0	0	13%
30-50%	0	0	0	0	10%
0-30%	0	0	1	1	22%
Total Units	3	0	1	4	100%
% of Units	83%	0%	17%	100%	

#### UGB: Stanfield

+120%	51	0	0	51	44%
80-120%	20	0	0	20	18%
50-80%	16	0	0	16	14%
30-50%	11	0	1	12	10%
0-30%	9	0	7	16	14%
Total Units	106	0	8	115	100%
% of Units	93%	0%	7%	100%	

#### UGB: Summerville

+120%	1	0	0	1	41%
80-120%	1	0	0	1	16%
50-80%	0	0	0	0	13%
30-50%	0	0	0	0	10%
0-30%	0	0	0	1	20%
Total Units	3	0	0	3	100%
% of Units	86%	0%	14%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### UGB: Sumpter

+120%	2	0	0	2	41%
80-120%	1	0	0	1	17%
50-80%	1	0	0	1	13%
30-50%	0	0	0	1	10%
0-30%	0	0	1	1	20%
Total Units	4	0	1	5	100%
% of Units	86%	0%	14%	100%	

#### UGB: The Dalles

+120%	787	0	0	787	45%
80-120%	317	0	0	317	18%
50-80%	242	0	3	245	14%
30-50%	170	0	8	178	10%
0-30%	136	0	90	226	13%
Total Units	1,652	0	101	1,754	100%
% of Units	94%	0%	6%	100%	

#### UGB: Ukiah

+120%	12	0	0	12	43%
80-120%	5	0	0	5	17%
50-80%	4	0	0	4	14%
30-50%	3	0	0	3	10%
0-30%	2	0	2	4	15%
Total Units	26	0	3	28	100%
% of Units	91%	0%	9%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Umatilla**

+120%	351	0	0	351	45%
80-120%	141	0	0	141	18%
50-80%	108	0	1	109	14%
30-50%	76	0	3	79	10%
0-30%	61	0	32	93	12%
Total Units	737	0	36	773	100%
% of Units	95%	0%	5%	100%	

**UGB: Union**

+120%	29	0	0	29	43%
80-120%	11	0	0	11	17%
50-80%	9	0	0	9	13%
30-50%	6	0	1	7	10%
0-30%	5	0	6	11	17%
Total Units	60	0	7	67	100%
% of Units	89%	0%	11%	100%	

**UGB: Unity**

+120%	0	0	0	0	0%
80-120%	0	0	0	0	0%
50-80%	0	0	0	0	3%
30-50%	0	0	0	0	8%
0-30%	0	0	0	0	89%
Total Units	0	0	0	0	100%
% of Units	0%	0%	100%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

**UGB: Wallowa**

+120%	6	0	0	6	38%
80-120%	2	0	0	2	15%
50-80%	2	0	0	2	12%
30-50%	1	0	0	2	10%
0-30%	1	0	3	4	25%
Total Units	12	0	3	16	100%
% of Units	79%	0%	21%	100%	

**UGB: Wasco**

+120%	7	0	0	7	43%
80-120%	3	0	0	3	17%
50-80%	2	0	0	2	14%
30-50%	2	0	0	2	10%
0-30%	1	0	1	3	16%
Total Units	15	0	2	17	100%
% of Units	90%	0%	10%	100%	

**UGB: Weston**

+120%	23	0	0	23	43%
80-120%	9	0	0	9	17%
50-80%	7	0	0	7	14%
30-50%	5	0	0	5	10%
0-30%	4	0	4	8	16%
Total Units	48	0	5	53	100%
% of Units	91%	0%	9%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### **Baker County Outside of any UGB<sup>73</sup>**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### **Crook County Outside of any UGB**

+120%	522	0	0	522	48%
80-120%	210	0	0	210	19%
50-80%	160	0	0	160	15%
30-50%	113	0	0	113	10%
0-30%	90	0	0	90	8%
Total Units	1,095	0	0	1,095	100%
% of Units	100%	0%	0%	100%	

#### **Gilliam County Outside of any UGB**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

<sup>73</sup> The official population forecast from the Oregon Population Forecast Program forecasts a decrease in population in unincorporated areas within Baker County, Gilliam County, Grant County, Morrow County, Sherman County, Umatilla County, Wallowa County, and Wheeler County over the 2020 to 2040 period. In some cases, this change may reflect the expectation that urban growth boundaries will expand, moving people into cities and out of rural areas. In other cases, this may reflect expectations that population in rural areas may decline.

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### Grant County Outside of any UGB

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### Hood River County Outside of any UGB

+120%	717	0	0	717	48%
80-120%	289	0	0	289	19%
50-80%	220	0	0	220	15%
30-50%	155	0	0	155	10%
0-30%	124	0	0	124	8%
Total Units	1,504	0	0	1,504	100%
% of Units	100%	0%	0%	100%	

#### Jefferson County Outside of any UGB

+120%	429	0	0	429	48%
80-120%	173	0	0	173	19%
50-80%	132	0	0	132	15%
30-50%	93	0	0	93	10%
0-30%	74	0	0	74	8%
Total Units	901	0	0	901	100%
% of Units	99%	0%	0%	100%	

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### **Morrow County Outside of any UGB**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### **Sherman County Outside of any UGB**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### **Umatilla County Outside of any UGB**

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		

#### Union County Outside of any UGB

+120%	22	0	0	22	48%
80-120%	9	0	0	9	19%
50-80%	7	0	0	7	15%
30-50%	5	0	0	5	10%
0-30%	4	0	0	4	8%
Total Units	45	0	0	45	100%
% of Units	90%	0%	0%	100%	

#### Wallowa County Outside of any UGB

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	

#### Wasco County Outside of any UGB

+120%	212	0	0	212	48%
80-120%	85	0	0	85	19%
50-80%	65	0	0	65	15%
30-50%	46	0	0	46	10%
0-30%	37	0	0	37	8%
Total Units	445	0	0	445	100%
% of Units	99%	-	-	100%	



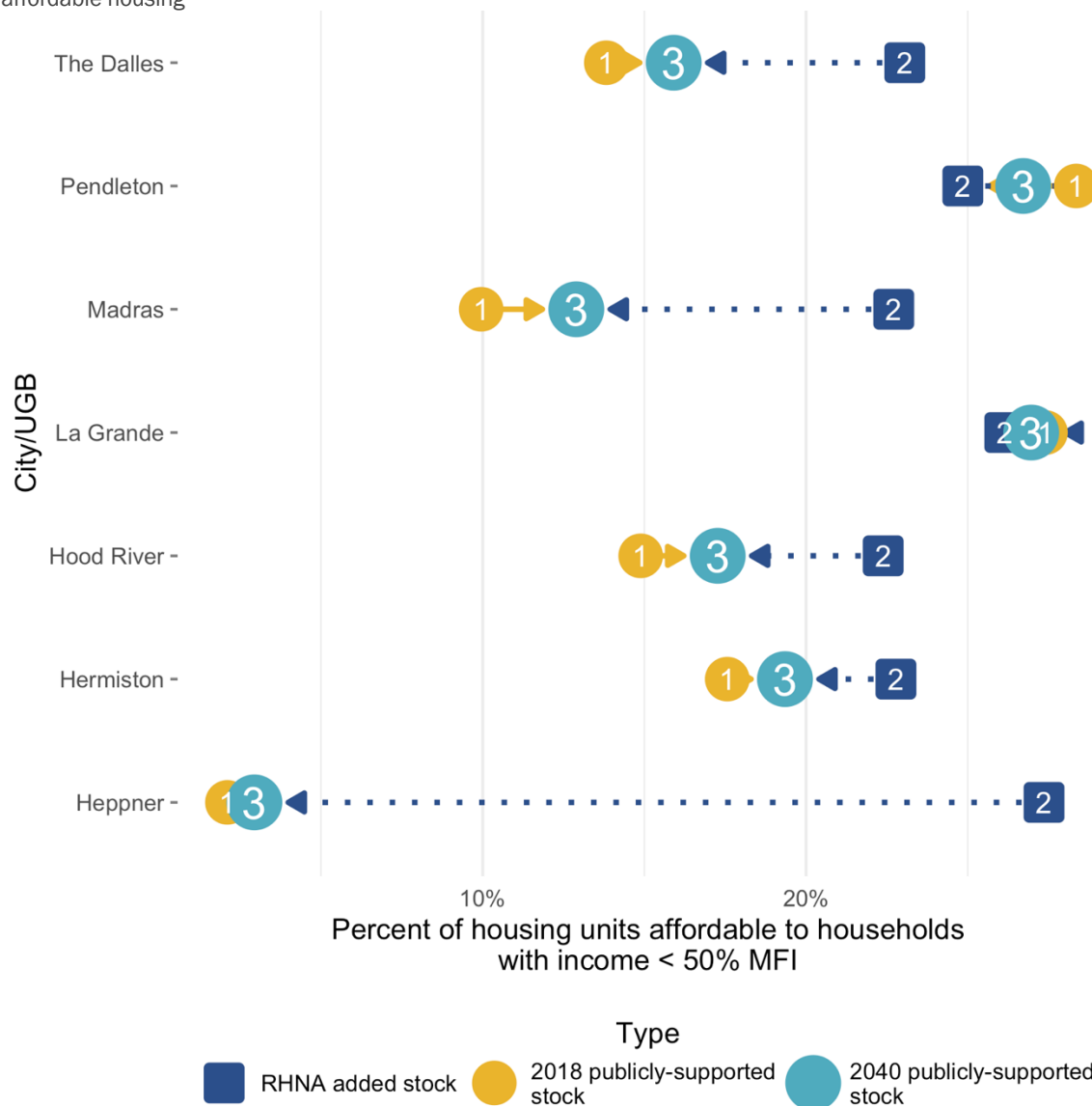
Median Family Income	New units for each of the following ...			Total Units	% of Units
	Projected Need	Under-production	Housing for the Homeless		
Wheeler County Outside of any UGB					
+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

Exhibit 164 shows that, in most the cities shown below, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. This exhibit only shows results for cities where information about rent-restricted and publicly supported housing is available from OHCS. Chapter 4 provides more information about interpreting these results.

The percentage of housing affordable to households with income below 50% of MFI decreases in Pendleton and La Grande because their share of housing affordable at this level is larger than the averages used in the Northeast region's allocation

**Exhibit 164. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI for Selected Cities within the Northeast region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



Source: OHCS, US Census



Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected need	Under-production	Housing for the Homeless		

#### UGB: Burns

+120%	7	0	0	7	18%
80-120%	3	0	0	3	9%
50-80%	2	0	1	3	8%
30-50%	2	0	2	4	9%
0-30%	2	0	19	21	55%
Total Units	16	0	22	38	100%
% of Units	42%	0%	58%	100%	

#### UGB: Chiloquin

+120%	4	0	0	4	28%
80-120%	2	0	0	2	15%
50-80%	1	0	0	2	12%
30-50%	1	0	0	1	10%
0-30%	1	0	4	5	35%
Total Units	9	0	4	13	100%
% of Units	68%	0%	32%	100%	

#### UGB: Hines

+120%	5	0	0	5	24%
80-120%	3	0	0	3	12%
50-80%	2	0	0	2	10%
30-50%	1	0	1	2	10%
0-30%	1	0	8	9	44%
Total Units	12	0	9	22	100%
% of Units	57%	0%	43%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected need	Under-production	Housing for the Homeless		

#### UGB: Jordan Valley

+120%	0	0	0	0	18%
80-120%	0	0	0	0	10%
50-80%	0	0	0	0	9%
30-50%	0	0	0	0	9%
0-30%	0	0	1	1	54%
Total Units	1	0	1	2	100%
% of Units	44%	0%	56%	100%	

#### UGB: Klamath Falls

+120%	220	0	0	220	26%
80-120%	114	0	0	114	14%
50-80%	82	0	9	91	11%
30-50%	59	0	24	84	10%
0-30%	52	0	272	324	39%
Total Units	527	0	306	833	100%
% of Units	63%	0%	37%	100%	

#### UGB: Lakeview

+120%	7	0	0	7	17%
80-120%	4	0	0	4	9%
50-80%	3	0	1	3	8%
30-50%	2	0	2	4	9%
0-30%	2	0	20	22	56%
Total Units	16	0	23	39	100%
% of Units	42%	0%	58%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected need	Under-production	Housing for the Homeless		

#### UGB: Malin

+120%	4	0	0	4	28%
80-120%	2	0	0	2	15%
50-80%	1	0	0	2	11%
30-50%	1	0	0	1	10%
0-30%	1	0	4	5	36%
Total Units	9	0	5	14	100%
% of Units	67%	0%	33%	100%	

#### UGB: Merrill

+120%	2	0	0	2	22%
80-120%	1	0	0	1	12%
50-80%	1	0	0	1	10%
30-50%	1	0	0	1	10%
0-30%	1	0	5	5	47%
Total Units	6	0	5	11	100%
% of Units	54%	0%	46%	100%	

#### UGB: Nyssa

+120%	13	0	0	13	25%
80-120%	7	0	0	7	13%
50-80%	5	0	1	6	11%
30-50%	4	0	2	5	10%
0-30%	3	0	18	22	41%
Total Units	32	0	21	53	100%
% of Units	61%	0%	39%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected need	Under-production	Housing for the Homeless		

#### UGB: Ontario

+120%	53	0	0	53	21%
80-120%	27	0	0	27	11%
50-80%	20	0	4	23	9%
30-50%	14	0	10	24	10%
0-30%	12	0	109	121	49%
Total Units	126	0	122	248	100%
% of Units	51%	0%	49%	100%	

#### UGB: Paisley

+120%	1	0	0	1	24%
80-120%	0	0	0	0	12%
50-80%	0	0	0	0	10%
30-50%	0	0	0	0	10%
0-30%	0	0	1	1	44%
Total Units	2	0	1	3	100%
% of Units	57%	0%	43%	100%	

#### UGB: Vale

+120%	8	0	0	8	24%
80-120%	4	0	0	4	12%
50-80%	3	0	0	4	10%
30-50%	2	0	1	3	10%
0-30%	2	0	13	15	44%
Total Units	20	0	15	35	100%
% of Units	57%	0%	43%	100%	

Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected need	Under-production	Housing for the Homeless		

#### Harney County Outside of any UGB<sup>74</sup>

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### Klamath County Outside of any UGB

+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

#### Lake County Outside of any UGB

+120%	73	0	0	73	42%
80-120%	38	0	0	38	22%
50-80%	27	0	0	27	16%
30-50%	20	0	0	20	11%
0-30%	17	0	0	17	10%
Total Units	175	0	0	175	100%
% of Units	97%	0%	0%	100%	

<sup>74</sup> The official population forecast from the Oregon Population Forecast Program forecasts a decrease in population in unincorporated areas within Harney County, Klamath County, and Malheur County over the 2020 to 2040 period. In some cases, this change may reflect the expectation that urban growth boundaries will expand, moving people into cities and out of rural areas. In other cases, this may reflect expectations that the population in rural areas may decline.

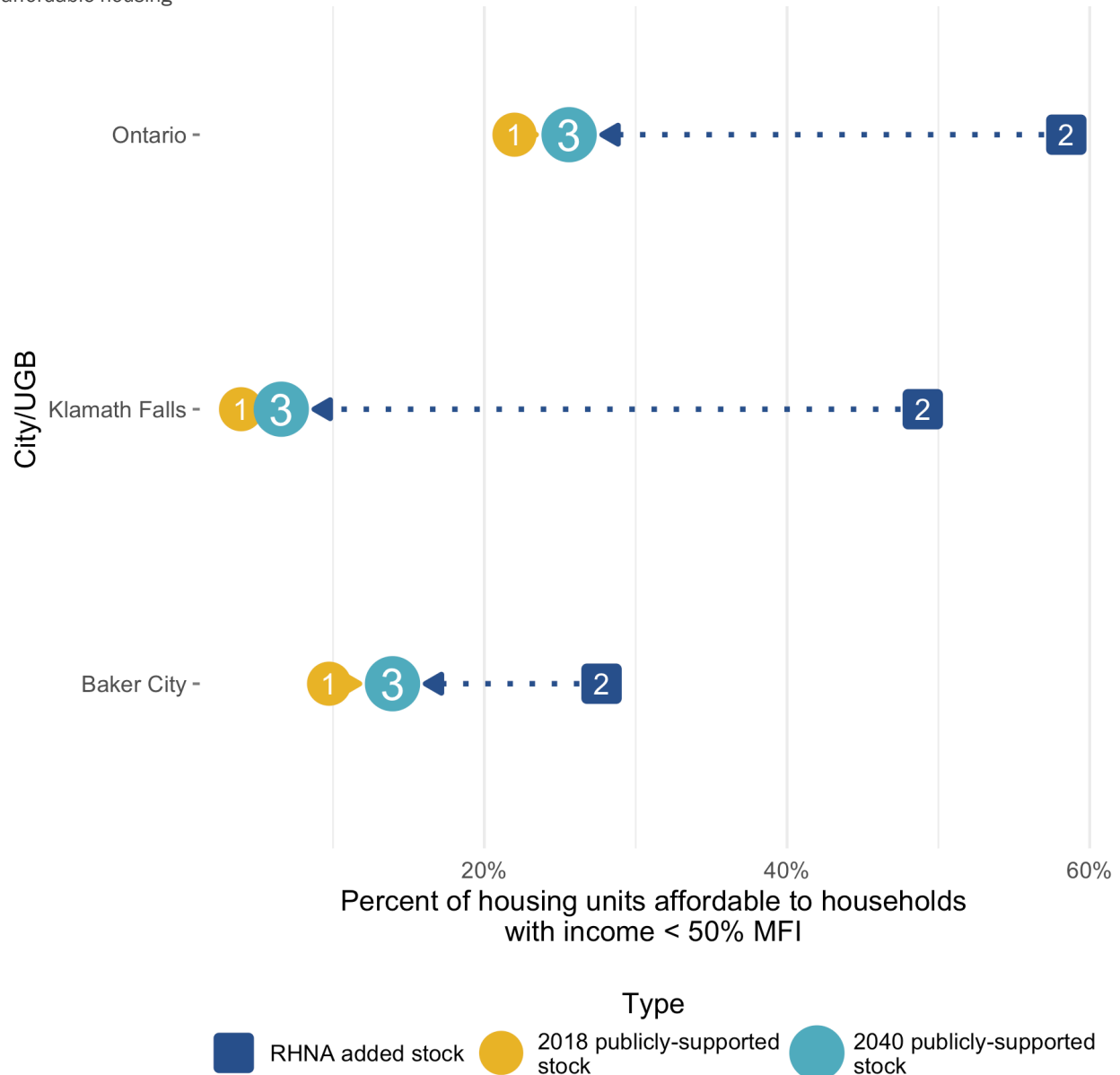


Median Family Income	New Units for each of the following ...			Total Units	% of Units
	Projected need	Under-production	Housing for the Homeless		
Malheur County Outside of any UGB					
+120%	0	0	0	0	-
80-120%	0	0	0	0	-
50-80%	0	0	0	0	-
30-50%	0	0	0	0	-
0-30%	0	0	0	0	-
Total Units	0	0	0	0	-
% of Units	-	-	-	-	-

Exhibit 166 shows that, in all the cities shown below, the total housing stock in 2040 shifts to the right, increasing the percentage of housing that is affordable to households with income below 50% of MFI. This exhibit only shows results for cities where information about rent-restricted and publicly supported housing is available from OHCS. Chapter 4 provides more information about interpreting these results.

**Exhibit 166. Estimated in Percent of Housing Stock Affordable to Households with Income Below 50% of MFI for Selected Cities within the Southeast region, 2018 to 2040**

Source(s): ECONorthwest analysis of the RHNA results; Oregon Affordable Housing Inventory of existing publicly supported affordable housing



Source: OHCS, US Census

## Appendix E. Housing Supply by Income and Affordability Analysis Results

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House Bill 2003 requires that the RHNA include a “housing shortage analysis,” which is defined as “...the difference between the estimated housing units of different affordability levels and housing types needed to accommodate the existing population and the existing housing stock, measured in dwelling units.”

In developing the RHNA, we defined shortage in two ways:

- Underproduction of housing based on the national ratio of dwelling units per household, as described in Appendix B.
- Shortage of units by income and housing affordability. Estimating the shortage of units by income and affordability involves the development of a cross tabulation that compares two variables: (1) housing stock (affordable to households in different income groups) including vacant units and (2) households by income groups. This analysis is conducted at the city level and for Metro. For Step 2 of RHNA, we aggregated the city level results to the regional level. This appendix presents an analysis of shortage of units by income and housing affordability.

In the RHNA, we used the approach of estimating underproduction of housing based on the national ratio of dwelling units per household, as described in Appendix B. While we think the underproduction methodology used in the RHNA is the better methodology for estimating a shortage of units, the information in this appendix meets the requirements of HB 2003 quoted above. The approach to estimating a shortage presented in this appendix relies on 2012-2016 CHAS data from the U.S. Department of Housing and Urban Development. This timeframe does not match the rest of the analysis (which primarily uses 2018 data). In addition, this approach assumes that each cost burdened household will need an additional unit. What they actually need is an additional *affordable* unit.

This appendix presents the shortage of units by income and housing affordability for the State of Oregon, the seven regions of the RHNA, and all cities by region.

## Interpreting the Analysis

This analysis combines both rental and owner-occupied housing. It groups income categories based on the best available data from the CHAS data, which results in somewhat different categories of income than in the rest of the report. For example, CHAS provides information about renter households in income category of 0-30% MFI and 30-50%% but only provides information about owner-occupied households for income the 0-50% MFI category.

Exhibit 143 presents an example of the analysis, for the City of Bend. The following information is presented for each jurisdiction in this analysis.

- **Red** shading indicates households that are cost burdened because they are spending more than 30% of their gross income for housing costs. Bend has 6,040 households that are cost burdened (2,320 + 1,680 + 2,040 units).
- **Green** shading indicates that households have housing units within their affordability range. Bend has 15,910 households that are paying what they can afford for housing (1,314 + 2,155 + 12,440 units).
- **Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs. Bend has 5,910 households that are renting or buying down because they could afford more than they are paying for housing (535 + 1,025 + 4,350 units).

Exhibit 167. Housing Supply by Income and Affordability Results, Sample City  
Source: ECONorthwest.

Unit Affordability		Household Income		
		0-50% MFI	50-80% MFI	+80% MFI
<b>City: Bend</b>				
0-50%		1,315	535	1,025
50-80%		2,320	2,155	4,350
+80%	Cost Burdened	1,680	2,040	12,440

"Renting / Buying Down"

## Region Summary

Exhibit 168 shows the summary of housing supply by income and affordability for the State of Oregon and for each region.

### Exhibit 168. Housing Supply by Income and Affordability, Oregon Regions, 2012-2016

Source: HUD CHAS, 2012-2016

Note: **Red** shading indicates that households are cost burdened.

**Green** shading indicates that households have housing units within their affordability range.

**Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>Oregon</b>				<b>Region: Southwest</b>			
0-50%	88,389	29,310	40,638	0-50%	8,311	2,732	4,282
50-80%	109,764	80,908	167,047	50-80%	11,470	8,156	15,742
+80%	43,420	44,367	309,733	+80%	5,141	5,231	29,953
<b>Region: Portland Metro</b>				<b>Region: Deschutes</b>			
0-50%	40,793	12,319	14,746	0-50%	2,451	856	1,478
50-80%	51,861	38,898	74,513	50-80%	3,837	3,083	6,976
+80%	21,205	22,276	170,391	+80%	2,059	2,450	14,819
<b>Region: North Coast</b>				<b>Region: Northeast</b>			
0-50%	3,566	999	1,544	0-50%	5,788	2,894	4,856
50-80%	3,297	2,903	6,065	50-80%	4,799	3,664	10,333
+80%	1,376	1,452	8,525	+80%	1,331	1,638	8,676
<b>Region: Willamette Valley</b>				<b>Region: Southeast</b>			
0-50%	24,984	8,619	11,684	0-50%	2,496	891	2,048
50-80%	31,968	22,706	49,902	50-80%	2,532	1,498	3,516
+80%	11,830	11,069	75,472	+80%	478	251	1,897

## Cities in the Portland Metro Region

Exhibit 169 shows the number of households by income level and unit affordability. Cells with **green** shading show households that live in housing units within their affordability range. Cells with **red** shading show households that live in housing units that are more expensive than they can afford, resulting in cost burdening. Cells in **blue** shading are households that live in housing units that cost less than the amount they can afford (assuming that they would spend a full 30% of their income on housing costs).

Exhibit 169. Housing Supply by Income and Affordability, Cities in the Portland Metro Region, 2012-2016

Source: HUD CHAS, 2012-2016

Note: **Red** shading indicates that households are cost burdened.

**Green** shading indicates that households have housing units within their affordability range.

**Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Banks</b>				<b>City: Lake Oswego</b>			
0-50%	19	4	16	0-50%	382	174	243
50-80%	28	52	132	50-80%	769	465	1,464
+80%	4	10	203	+80%	1,074	685	7,894
<b>UGB: Barlow</b>				<b>City: Maywood Park</b>			
0-50%	14	0	8	0-50%	4	0	10
50-80%	12	0	8	50-80%	8	12	47
+80%	4	4	12	+80%	8	18	172
<b>City: Beaverton</b>				<b>City: Milwaukie</b>			
0-50%	2,025	845	879	0-50%	610	150	280
50-80%	4,855	3,710	6,990	50-80%	965	615	1,900
+80%	1,545	1,660	11,304	+80%	439	345	2,060
<b>UGB: Canby</b>				<b>UGB: Molalla</b>			
0-50%	588	230	324	0-50%	325	165	89
50-80%	357	405	965	50-80%	165	365	940
+80%	95	205	1,890	+80%	95	155	469
<b>City: Cornelius</b>				<b>UGB: North Plains</b>			
0-50%	179	189	275	0-50%	61	18	28

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
50-80%	315	424	635	50-80%	37	55	164
+80%	110	60	565	+80%	18	43	257
<b>City: Damascus</b>				<b>City: Oregon City</b>			
0-50%	88	45	90	0-50%	815	280	416
50-80%	165	24	175	50-80%	879	785	2,230
+80%	215	155	1,854	+80%	445	655	4,529
<b>City: Durham</b>				<b>City: Portland</b>			
0-50%	58	4	4	0-50%	23,570	6,405	7,130
50-80%	120	30	27	50-80%	26,149	17,850	31,124
+80%	4	4	209	+80%	11,615	11,790	86,295
<b>UGB: Estacada</b>				<b>City: Rivergrove</b>			
0-50%	266	54	43	0-50%	4	0	0
50-80%	82	54	194	50-80%	4	4	8
+80%	14	50	270	+80%	4	4	97
<b>City: Fairview</b>				<b>City: Sandy</b>			
0-50%	315	85	330	0-50%	175	75	25
50-80%	370	325	890	50-80%	360	450	830
+80%	125	135	674	+80%	70	185	905
<b>City: Forest Grove</b>				<b>City: Sherwood</b>			
0-50%	1,358	535	419	0-50%	255	95	130
50-80%	515	510	783	50-80%	280	245	765
+80%	305	184	1,880	+80%	280	360	3,315
<b>UGB: Gaston</b>				<b>City: Tigard</b>			
0-50%	28	8	12	0-50%	1,084	300	460
50-80%	12	19	60	50-80%	2,275	1,609	2,560
+80%	4	10	32	+80%	750	905	7,160
<b>City: Gladstone</b>				<b>City: Troutdale</b>			

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
0-50%	455	65	140	0-50%	245	75	165
50-80%	535	380	885	50-80%	864	700	1,104
+80%	105	165	1,230	+80%	189	230	1,645
<b>City: Gresham</b>				<b>City: Tualatin</b>			
0-50%	4,005	1,300	1,679	0-50%	615	109	280
50-80%	5,970	4,170	6,925	50-80%	1,285	855	1,650
+80%	1,040	1,210	7,030	+80%	410	380	4,354
<b>City: Happy Valley</b>				<b>City: West Linn</b>			
0-50%	80	40	110	0-50%	295	225	90
50-80%	85	125	430	50-80%	305	360	730
+80%	260	125	3,375	+80%	410	600	5,124
<b>City: Hillsboro</b>				<b>City: Wilsonville</b>			
0-50%	2,035	614	810	0-50%	498	85	145
50-80%	3,260	3,035	7,910	50-80%	570	1,015	1,550
+80%	1,033	1,580	11,845	+80%	445	335	2,995
<b>City: Johnson City</b>				<b>City: Wood Village</b>			
0-50%	18	10	26	0-50%	165	95	90
50-80%	0	0	8	50-80%	150	125	210
+80%	0	4	8	+80%	20	0	134
<b>City: King City</b>							
0-50%	159	40	0				
50-80%	115	125	220				
+80%	70	25	605				



## Cities in the North Coast Region

Exhibit 170. Housing Supply by Income and Affordability, Cities in the North Coast Region, 2012-2016

Source: HUD CHAS, 2012-2016

Note: **Red** shading indicates that households are cost burdened.

**Green** shading indicates that households have housing units within their affordability range.

**Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Astoria</b>				<b>UGB: Rainier</b>			
0-50%	439	175	195	0-50%	174	12	74
50-80%	304	335	685	50-80%	67	44	149
+80%	180	125	1,225	+80%	0	10	27
<b>UGB: Bay City</b>				<b>UGB: Rockaway Beach</b>			
0-50%	22	18	4	0-50%	19	4	29
50-80%	26	25	100	50-80%	39	34	93
+80%	26	25	172	+80%	42	14	101
<b>UGB: Cannon Beach</b>				<b>UGB: Scappoose</b>			
0-50%	62	24	23	0-50%	235	80	110
50-80%	54	40	84	50-80%	165	145	464
+80%	14	29	238	+80%	50	55	575
<b>UGB: Clatskanie</b>				<b>UGB: Seaside</b>			
0-50%	142	27	20	0-50%	260	25	45
50-80%	44	70	154	50-80%	555	310	265
+80%	15	4	49	+80%	120	155	730
<b>UGB: Columbia City</b>				<b>UGB: Siletz</b>			
0-50%	29	4	20	0-50%	57	37	16
50-80%	8	64	209	50-80%	52	29	73
+80%	33	75	265	+80%	19	24	100
<b>UGB: Depoe Bay</b>				<b>UGB: St. Helens</b>			
0-50%	15	0	4	0-50%	850	154	290

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
50-80%	54	49	64	50-80%	560	430	1,148
+80%	35	44	308	+80%	125	100	470
<b>UGB: Garibaldi</b>				<b>UGB: Tillamook</b>			
0-50%	30	8	27	0-50%	132	74	115
50-80%	18	23	54	50-80%	330	305	315
+80%	8	29	52	+80%	79	135	369
<b>UGB: Gearhart</b>				<b>UGB: Toledo</b>			
0-50%	22	4	12	0-50%	83	19	49
50-80%	48	20	32	50-80%	47	115	318
+80%	44	60	233	+80%	138	15	269
<b>UGB: Lincoln City</b>				<b>UGB: Vernonia</b>			
0-50%	301	85	148	0-50%	108	40	109
50-80%	299	298	560	50-80%	52	69	175
+80%	164	183	927	+80%	0	0	59
<b>UGB: Manzanita</b>				<b>UGB: Waldport</b>			
0-50%	8	0	0	0-50%	84	55	24
50-80%	4	10	4	50-80%	54	35	134
+80%	4	0	59	+80%	4	65	230
<b>UGB: Nehalem</b>				<b>UGB: Warrenton</b>			
0-50%	0	0	4	0-50%	114	44	55
50-80%	8	8	18	50-80%	78	235	349
+80%	12	8	36	+80%	55	44	675
<b>UGB: Newport</b>				<b>UGB: Wheeler</b>			
0-50%	340	102	143	0-50%	22	0	16
50-80%	389	184	570	50-80%	4	22	12
+80%	174	223	1,227	+80%	8	8	33
<b>UGB: Prescott</b>				<b>UGB: Yachats</b>			

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
0-50%	4	0	0	0-50%	14	8	12
50-80%	0	0	8	50-80%	38	4	28
+80%	4	0	4	+80%	23	22	92

## Cities in the Willamette Valley Region

Exhibit 171. Housing Supply by Income and Affordability, Cities in the Willamette Valley Region, 2012-2016

Source: HUD CHAS, 2012-2016

Note: Red shading indicates that households are cost burdened.

Green shading indicates that households have housing units within their affordability range.

Blue shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Adair Village</b>				<b>UGB: Lebanon</b>			
0-50%	12	29	20	0-50%	464	170	320
50-80%	43	8	84	50-80%	1,145	600	1,355
+80%	8	4	56	+80%	264	150	905
<b>UGB: Albany</b>				<b>UGB: Lowell</b>			
0-50%	1,055	410	680	0-50%	8	15	24
50-80%	2,205	1,580	4,065	50-80%	10	45	62
+80%	720	520	5,115	+80%	0	29	92
<b>UGB: Amity</b>				<b>UGB: Lyons</b>			
0-50%	78	45	59	0-50%	4	18	34
50-80%	55	79	148	50-80%	24	55	72
+80%	4	4	29	+80%	10	14	145
<b>UGB: Aumsville</b>				<b>UGB: McMinnville</b>			
0-50%	165	24	83	0-50%	1,790	899	855
50-80%	165	60	263	50-80%	1,065	895	1,889
+80%	4	20	434	+80%	270	200	1,870
<b>UGB: Aurora</b>				<b>UGB: Mill City</b>			

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
0-50%	14	4	26	0-50%	42	34	44
50-80%	14	18	32	50-80%	103	69	184
+80%	15	24	239	+80%	25	8	80
<b>UGB: Brownsville</b>				<b>UGB: Millersburg</b>			
0-50%	22	16	28	0-50%	18	8	18
50-80%	36	19	159	50-80%	78	8	63
+80%	19	12	128	+80%	20	19	258
<b>UGB: Carlton</b>				<b>UGB: Monmouth</b>			
0-50%	20	4	68	0-50%	385	80	145
50-80%	74	55	130	50-80%	625	190	375
+80%	12	14	140	+80%	169	125	810
<b>UGB: Coburg</b>				<b>UGB: Monroe</b>			
0-50%	18	4	28	0-50%	72	37	37
50-80%	37	19	58	50-80%	22	14	41
+80%	18	23	163	+80%	14	4	4
<b>UGB: Corvallis</b>				<b>UGB: Mount Angel</b>			
0-50%	3,749	980	1,090	0-50%	118	30	30
50-80%	3,219	1,229	2,450	50-80%	10	60	140
+80%	725	495	4,384	+80%	60	120	225
<b>UGB: Cottage Grove</b>				<b>UGB: Newberg</b>			
0-50%	375	110	104	0-50%	859	460	415
50-80%	460	385	730	50-80%	519	580	1,290
+80%	104	125	750	+80%	309	370	1,820
<b>UGB: Creswell</b>				<b>UGB: Oakridge</b>			
0-50%	30	85	140	0-50%	160	145	125
50-80%	94	69	209	50-80%	155	90	159
+80%	15	105	824	+80%	35	10	120

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Dallas</b>				<b>UGB: Philomath</b>			
0-50%	445	169	410	0-50%	280	24	175
50-80%	460	310	999	50-80%	155	140	365
+80%	175	190	1,185	+80%	30	40	274
<b>UGB: Dayton</b>				<b>UGB: Salem</b>			
0-50%	92	39	46	0-50%	4,415	1,405	2,160
50-80%	86	130	198	50-80%	6,019	5,294	11,305
+80%	8	8	70	+80%	1,373	1,989	14,784
<b>UGB: Detroit</b>				<b>UGB: Scio</b>			
0-50%	4	8	8	0-50%	18	0	10
50-80%	0	0	8	50-80%	38	24	71
+80%	8	4	0	+80%	4	8	87
<b>UGB: Donald</b>				<b>UGB: Scotts Mills</b>			
0-50%	8	10	84	0-50%	12	8	8
50-80%	4	0	44	50-80%	8	8	18
+80%	26	4	151	+80%	12	4	62
<b>UGB: Dundee</b>				<b>UGB: Sheridan</b>			
0-50%	60	0	22	0-50%	389	150	175
50-80%	64	88	240	50-80%	130	110	255
+80%	23	59	350	+80%	45	0	60
<b>UGB: Dunes City</b>				<b>UGB: Silverton</b>			
0-50%	14	4	14	0-50%	165	95	134
50-80%	8	18	44	50-80%	140	195	490
+80%	37	27	151	+80%	80	30	1,389
<b>UGB: Eugene</b>				<b>UGB: Sodaville</b>			
0-50%	4,745	960	1,189	0-50%	4	8	20
50-80%	7,005	3,650	7,550	50-80%	8	14	34

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
+80%	5,215	3,600	22,083	+80%	4	4	43
<b>UGB: Falls City</b>				<b>UGB: Springfield</b>			
0-50%	34	4	29	0-50%	1,700	555	719
50-80%	40	30	58	50-80%	2,900	2,860	5,174
+80%	12	8	33	+80%	480	1,010	4,794
<b>UGB: Florence</b>				<b>UGB: St. Paul</b>			
0-50%	363	184	84	0-50%	4	0	4
50-80%	329	375	500	50-80%	8	0	12
+80%	164	185	640	+80%	4	12	67
<b>UGB: Gates</b>				<b>UGB: Stayton</b>			
0-50%	42	12	22	0-50%	269	55	80
50-80%	24	18	33	50-80%	375	230	525
+80%	4	4	18	+80%	170	85	770
<b>UGB: Gervais</b>				<b>UGB: Sublimity</b>			
0-50%	24	0	51	0-50%	60	38	14
50-80%	45	99	250	50-80%	49	29	69
+80%	14	24	74	+80%	78	37	452
<b>UGB: Halsey</b>				<b>UGB: Sweet Home</b>			
0-50%	24	4	33	0-50%	215	215	230
50-80%	12	29	88	50-80%	475	295	720
+80%	14	0	59	+80%	15	45	310
<b>UGB: Harrisburg</b>				<b>UGB: Tangent</b>			
0-50%	25	30	10	0-50%	24	18	26
50-80%	65	135	340	50-80%	29	19	22
+80%	4	10	250	+80%	12	8	123
<b>UGB: Hubbard</b>				<b>UGB: Turner</b>			
0-50%	14	29	54	0-50%	14	36	14

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
50-80%	43	38	135	50-80%	65	12	168
+80%	27	50	364	+80%	24	30	312
<b>UGB: Idanha</b>				<b>UGB: Veneta</b>			
0-50%	20	14	4	0-50%	158	44	79
50-80%	12	8	12	50-80%	185	80	165
+80%	0	4	8	+80%	50	85	570
<b>UGB: Independence</b>				<b>UGB: Waterloo town</b>			
0-50%	295	105	225	0-50%	8	8	0
50-80%	470	355	929	50-80%	12	4	22
+80%	110	120	300	+80%	0	4	18
<b>UGB: Jefferson</b>				<b>UGB: Westfir</b>			
0-50%	59	4	108	0-50%	28	8	4
50-80%	118	85	205	50-80%	12	18	23
+80%	0	50	223	+80%	0	0	22
<b>UGB: Junction City</b>				<b>UGB: Willamina</b>			
0-50%	130	90	135	0-50%	110	40	132
50-80%	174	115	380	50-80%	73	49	122
+80%	155	125	568	+80%	4	8	68
<b>UGB: Keizer</b>				<b>UGB: Woodburn</b>			
0-50%	513	297	429	0-50%	645	215	260
50-80%	1,265	1,075	2,379	50-80%	760	500	1,530
+80%	360	480	4,195	+80%	250	300	1,740
<b>UGB: Lafayette</b>				<b>UGB: Yamhill</b>			
0-50%	85	109	94	0-50%	12	18	16
50-80%	129	110	324	50-80%	16	30	138
+80%	15	15	140	+80%	4	8	74

## Cities in the Southwest Region

Exhibit 172. Housing Supply by Income and Affordability, Cities in the Southwest Region, 2012-2016

Source: HUD CHAS, 2012-2016

Note: **Red** shading indicates that households are cost burdened.

**Green** shading indicates that households have housing units within their affordability range.

**Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Ashland</b>				<b>UGB: Medford</b>			
0-50%	310	120	219	0-50%	1,655	550	933
50-80%	1,024	405	549	50-80%	3,555	2,224	4,600
+80%	670	660	3,503	+80%	1,390	1,654	8,544
<b>UGB: Bandon</b>				<b>UGB: Myrtle Creek</b>			
0-50%	203	78	48	0-50%	154	30	105
50-80%	144	165	129	50-80%	160	50	195
+80%	40	60	339	+80%	45	40	244
<b>UGB: Brookings</b>				<b>UGB: Myrtle Point</b>			
0-50%	80	20	20	0-50%	120	23	94
50-80%	240	349	330	50-80%	63	49	133
+80%	135	145	1,055	+80%	16	8	144
<b>UGB: Butte Falls town</b>				<b>UGB: North Bend</b>			
0-50%	18	14	12	0-50%	324	130	185
50-80%	22	12	20	50-80%	175	305	640
+80%	8	8	12	+80%	120	100	1,045
<b>UGB: Canyonville</b>				<b>UGB: Oakland</b>			
0-50%	98	54	52	0-50%	20	15	24
50-80%	73	149	125	50-80%	18	23	95
+80%	28	14	53	+80%	12	8	22
<b>UGB: Cave Junction</b>				<b>UGB: Phoenix</b>			
0-50%	94	30	40	0-50%	230	15	160
50-80%	99	99	189	50-80%	325	15	110



Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
+80%	37	49	38	+80%	95	75	450
<b>UGB: Central Point</b>				<b>UGB: Port Orford</b>			
0-50%	260	150	165	0-50%	75	4	25
50-80%	300	485	1,210	50-80%	69	34	37
+80%	290	270	2,240	+80%	23	18	74
<b>UGB: Coos Bay</b>				<b>UGB: Powers</b>			
0-50%	525	134	370	0-50%	62	4	29
50-80%	499	470	1,084	50-80%	8	18	40
+80%	210	235	1,568	+80%	0	4	30
<b>UGB: Coquille</b>				<b>UGB: Reedsport</b>			
0-50%	215	0	25	0-50%	289	99	54
50-80%	240	260	160	50-80%	69	155	244
+80%	30	10	190	+80%	79	25	210
<b>UGB: Drain</b>				<b>UGB: Riddle</b>			
0-50%	54	4	54	0-50%	50	10	74
50-80%	35	65	65	50-80%	29	20	94
+80%	0	23	33	+80%	20	4	55
<b>UGB: Eagle Point</b>				<b>UGB: Rogue River</b>			
0-50%	105	30	150	0-50%	145	12	18
50-80%	300	175	380	50-80%	108	145	187
+80%	80	155	1,175	+80%	23	8	173
<b>UGB: Elkton</b>				<b>UGB: Roseburg</b>			
0-50%	4	4	0	0-50%	745	430	410
50-80%	8	4	4	50-80%	955	490	1,384
+80%	0	8	28	+80%	410	335	2,380
<b>UGB: Glendale</b>				<b>UGB: Shady Cove</b>			
0-50%	38	8	26	0-50%	160	20	15

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
50-80%	37	44	77	50-80%	100	100	95
+80%	4	8	24	+80%	50	85	280
<b>UGB: Gold Beach</b>				<b>UGB: Sutherlin</b>			
0-50%	98	19	28	0-50%	280	150	180
50-80%	124	20	122	50-80%	375	225	490
+80%	10	59	280	+80%	40	95	440
<b>UGB: Gold Hill</b>				<b>UGB: Talent</b>			
0-50%	42	18	12	0-50%	185	40	105
50-80%	34	53	97	50-80%	325	70	380
+80%	14	14	128	+80%	220	170	570
<b>UGB: Grants Pass</b>				<b>UGB: Winston</b>			
0-50%	1,260	325	484	0-50%	230	135	90
50-80%	1,490	1,365	1,730	50-80%	335	40	454
+80%	800	765	3,570	+80%	150	19	255
<b>UGB: Jacksonville</b>				<b>UGB: Yoncalla</b>			
0-50%	30	15	15	0-50%	75	28	33
50-80%	95	0	115	50-80%	27	39	59
+80%	60	80	609	+80%	0	8	44
<b>UGB: Lakeside</b>							
0-50%	78	14	28				
50-80%	10	34	119				
+80%	32	12	148				

## Cities in the Deschutes Region

### Exhibit 173. Housing Supply by Income and Affordability, Cities in the Deschutes Region, 2012-2016

Source: HUD CHAS, 2012-2016

Note: **Red** shading indicates that households are cost burdened.

**Green** shading indicates that households have housing units within their affordability range.

**Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Bend</b>				<b>UGB: Redmond</b>			
0-50%	1,315	535	1,025	0-50%	940	254	345
50-80%	2,320	2,155	4,350	50-80%	1,325	755	2,400
+80%	1,680	2,040	12,440	+80%	325	385	2,020
<b>UGB: La Pine</b>				<b>UGB: Sisters</b>			
0-50%	140	57	68	0-50%	56	10	40
50-80%	90	108	93	50-80%	102	65	133
+80%	16	15	105	+80%	38	10	254

## Cities in the Northeast Region

Exhibit 174. Housing Supply by Income and Affordability, Cities in the Northeast Region, 2012-2016

Source: HUD CHAS, 2012-2016

Note: **Red** shading indicates that households are cost burdened.

**Green** shading indicates that households have housing units within their affordability range.

**Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Adams</b>				<b>UGB: Lexington town</b>			
0-50%	12	0	4	0-50%	8	0	12
50-80%	4	4	47	50-80%	0	10	8
+80%	4	4	27	+80%	0	0	4
<b>UGB: Antelope</b>				<b>UGB: Lonerock</b>			
0-50%	4	0	4	0-50%	0	0	0
50-80%	8	0	4	50-80%	0	0	0
+80%	0	0	0	+80%	0	0	0
<b>UGB: Arlington</b>				<b>UGB: Long Creek</b>			
0-50%	27	18	22	0-50%	12	0	12
50-80%	18	18	51	50-80%	0	4	8
+80%	0	0	22	+80%	0	4	8
<b>UGB: Athena</b>				<b>UGB: Lostine</b>			
0-50%	43	14	14	0-50%	4	0	8
50-80%	29	18	139	50-80%	12	12	39
+80%	8	0	49	+80%	8	4	16
<b>UGB: Baker City</b>				<b>UGB: Madras</b>			
0-50%	397	254	474	0-50%	196	235	150
50-80%	199	175	654	50-80%	260	160	494
+80%	129	65	675	+80%	74	40	290
<b>UGB: Boardman</b>				<b>UGB: Maupin</b>			
0-50%	103	19	189	0-50%	16	19	18
50-80%	82	79	233	50-80%	30	4	50

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
+80%	10	0	44	+80%	12	0	20
<b>UGB: Canyon City town</b>				<b>UGB: Metolius</b>			
0-50%	36	14	28	0-50%	26	22	59
50-80%	18	10	67	50-80%	42	22	64
+80%	0	8	65	+80%	12	14	16
<b>UGB: Cascade Locks</b>				<b>UGB: Milton-Freewater</b>			
0-50%	102	18	8	0-50%	355	135	225
50-80%	27	59	87	50-80%	164	140	555
+80%	12	10	34	+80%	15	20	130
<b>UGB: Condon</b>				<b>UGB: Mitchell</b>			
0-50%	12	27	23	0-50%	12	10	4
50-80%	12	8	46	50-80%	0	0	4
+80%	15	4	12	+80%	0	0	8
<b>UGB: Cove</b>				<b>UGB: Monument</b>			
0-50%	18	4	33	0-50%	4	0	8
50-80%	22	12	45	50-80%	4	0	0
+80%	16	4	58	+80%	0	4	4
<b>UGB: Culver</b>				<b>UGB: Moro</b>			
0-50%	18	40	52	0-50%	38	16	22
50-80%	22	58	128	50-80%	24	8	22
+80%	0	20	33	+80%	4	0	12
<b>UGB: Dayville town</b>				<b>UGB: Mosier</b>			
0-50%	12	12	8	0-50%	31	16	48
50-80%	0	8	20	50-80%	10	8	8
+80%	0	0	8	+80%	0	4	49
<b>UGB: Dufur</b>				<b>UGB: Mount Vernon</b>			
0-50%	0	8	4	0-50%	55	38	16

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
50-80%	8	19	36	50-80%	14	14	32
+80%	8	14	89	+80%	0	4	4
<b>UGB: Echo</b>				<b>UGB: North Powder</b>			
0-50%	20	10	22	0-50%	24	8	16
50-80%	14	8	61	50-80%	36	8	22
+80%	0	8	22	+80%	8	0	19
<b>UGB: Elgin</b>				<b>UGB: Pendleton</b>			
0-50%	66	22	53	0-50%	542	399	378
50-80%	28	28	135	50-80%	535	370	1,360
+80%	8	8	41	+80%	140	195	884
<b>UGB: Enterprise</b>				<b>UGB: Pilot Rock</b>			
0-50%	67	37	53	0-50%	97	24	104
50-80%	84	48	138	50-80%	10	44	89
+80%	0	22	128	+80%	10	0	30
<b>UGB: Fossil</b>				<b>UGB: Prairie City</b>			
0-50%	29	18	56	0-50%	19	22	44
50-80%	4	8	14	50-80%	28	19	54
+80%	4	0	14	+80%	0	14	42
<b>UGB: Granite</b>				<b>UGB: Prineville</b>			
0-50%	0	0	0	0-50%	519	225	400
50-80%	0	0	0	50-80%	470	335	625
+80%	0	0	0	+80%	25	195	475
<b>UGB: Grass Valley</b>				<b>UGB: Richland</b>			
0-50%	20	8	20	0-50%	10	16	4
50-80%	0	14	8	50-80%	8	0	8
+80%	4	0	8	+80%	0	4	8
<b>UGB: Greenhorn</b>				<b>UGB: Rufus</b>			

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
0-50%	0	0	0	0-50%	28	8	16
50-80%	0	0	0	50-80%	0	4	14
+80%	0	0	0	+80%	0	0	0
<b>UGB: Haines</b>				<b>UGB: Seneca</b>			
0-50%	16	22	22	0-50%	8	8	4
50-80%	12	22	47	50-80%	0	4	4
+80%	0	0	20	+80%	0	0	4
<b>UGB: Halfway</b>				<b>UGB: Shaniko</b>			
0-50%	32	12	12	0-50%	0	0	0
50-80%	20	8	4	50-80%	0	0	0
+80%	4	4	14	+80%	0	0	0
<b>UGB: Helix</b>				<b>UGB: Spray town</b>			
0-50%	0	8	4	0-50%	8	4	16
50-80%	0	14	18	50-80%	4	4	0
+80%	0	4	12	+80%	0	0	0
<b>UGB: Heppner</b>				<b>UGB: Stanfield</b>			
0-50%	62	44	126	0-50%	78	32	97
50-80%	44	0	72	50-80%	30	47	234
+80%	0	4	23	+80%	30	8	96
<b>UGB: Hermiston</b>				<b>UGB: Summerville town</b>			
0-50%	555	260	435	0-50%	8	4	4
50-80%	740	395	1,415	50-80%	4	4	12
+80%	115	25	1,010	+80%	0	0	12
<b>UGB: Hood River</b>				<b>UGB: Sumpter</b>			
0-50%	290	125	180	0-50%	12	0	8
50-80%	110	175	234	50-80%	10	4	8
+80%	255	260	980	+80%	0	4	8

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Huntington</b>				<b>UGB: The Dalles</b>			
0-50%	22	12	32	0-50%	262	209	273
50-80%	4	8	12	50-80%	603	445	895
+80%	0	0	8	+80%	130	360	1,671
<b>UGB: Imbler</b>				<b>UGB: Ukiah</b>			
0-50%	0	0	4	0-50%	16	10	12
50-80%	8	8	18	50-80%	8	10	8
+80%	8	20	38	+80%	8	4	8
<b>UGB: Ione</b>				<b>UGB: Umatilla</b>			
0-50%	22	4	12	0-50%	230	65	119
50-80%	0	8	33	50-80%	195	175	395
+80%	4	0	12	+80%	4	4	175
<b>UGB: Irrigon</b>				<b>UGB: Union</b>			
0-50%	27	67	183	0-50%	131	4	69
50-80%	40	50	134	50-80%	53	50	144
+80%	10	0	32	+80%	18	20	113
<b>UGB: Island City</b>				<b>UGB: Unity</b>			
0-50%	12	4	12	0-50%	8	0	14
50-80%	16	19	83	50-80%	4	0	8
+80%	29	14	107	+80%	0	0	8
<b>UGB: John Day</b>				<b>UGB: Wallowa</b>			
0-50%	51	51	48	0-50%	54	18	14
50-80%	48	65	130	50-80%	65	20	43
+80%	50	10	65	+80%	10	0	18
<b>UGB: Joseph</b>				<b>UGB: Wasco</b>			
0-50%	102	8	25	0-50%	28	12	28
50-80%	18	12	69	50-80%	22	12	31



Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
+80%	10	29	73	+80%	8	4	16
<b>UGB: La Grande</b>				<b>UGB: Weston</b>			
0-50%	760	180	449	0-50%	12	15	43
50-80%	505	365	849	50-80%	10	4	64
+80%	112	195	789	+80%	0	0	16

## Cities in the Southeast Region

Exhibit 175. Housing Supply by Income and Affordability, Cities in the Southeast Region, 2012-2016

Source: HUD CHAS, 2012-2016

Note: **Red** shading indicates that households are cost burdened.

**Green** shading indicates that households have housing units within their affordability range.

**Blue** shading indicates that households are buying down, meaning that the housing they occupy costs less than the amount they could afford if they spent 30% of their income on housing costs.

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Adrian</b>				<b>UGB: Lakeview town</b>			
0-50%	8	0	16	0-50%	186	58	134
50-80%	8	14	20	50-80%	120	100	218
+80%	0	0	0	+80%	4	20	54
<b>UGB: Bonanza town</b>				<b>UGB: Malin</b>			
0-50%	8	28	42	0-50%	66	8	32
50-80%	12	4	49	50-80%	8	8	49
+80%	4	0	14	+80%	4	0	4
<b>UGB: Burns</b>				<b>UGB: Merrill</b>			
0-50%	100	80	300	0-50%	62	14	52
50-80%	80	60	130	50-80%	22	4	65
+80%	0	0	10	+80%	0	0	19
<b>UGB: Chiloquin</b>				<b>UGB: Nyssa</b>			
0-50%	73	39	33	0-50%	136	55	218
50-80%	8	29	18	50-80%	83	65	134
+80%	0	14	22	+80%	8	10	38

Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI	Unit Affordability	0-50% HAMFI	50-80% HAMFI	+80% HAMFI
<b>UGB: Hines</b>				<b>UGB: Ontario</b>			
0-50%	116	43	76	0-50%	699	140	437
50-80%	15	25	155	50-80%	745	310	609
+80%	4	0	19	+80%	120	64	325
<b>UGB: Jordan Valley</b>				<b>UGB: Paisley</b>			
0-50%	8	4	16	0-50%	12	18	36
50-80%	0	0	8	50-80%	4	4	14
+80%	0	0	0	+80%	4	4	8
<b>UGB: Klamath Falls</b>				<b>UGB: Vale</b>			
0-50%	910	365	583	0-50%	112	39	73
50-80%	1,370	845	1,895	50-80%	57	30	152
+80%	320	135	1,345	+80%	10	4	39

## Appendix F. Regional Distribution of Unmet Housing Needs Across Demographic Categories

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The methodology recommended in this report identifies housing need by income category. Chapter 5, together with this appendix with additional detailed results, provides information about housing disparities by other demographic categories, to support the locally-driven and comprehensive approach to addressing housing inequity that is needed in Oregon and envisioned in HB 2003.

This appendix presents information about housing disparities by other demographic categories for each of the regions in the Regional Housing Needs Analysis (RHNA). It is organized by region.

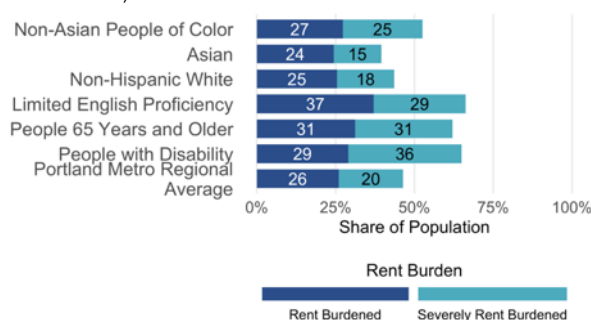
# Portland Metro Region

## Summary of Unmet Housing Needs: Portland Metro

Below is a summary of unmet housing needs and characteristics of non-Asian people of color,<sup>75</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, people with a disability, and the regional averages of the total population.

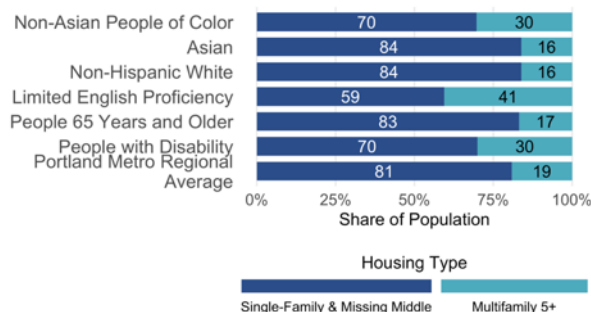
Throughout the Portland Metro region, there are 384,000 non-Asian persons of color, accounting for 21% of the region's population, 148,000 or 8% Asian people, 85,000 or 5% with limited English proficiency, 259,000 or 14% aged 65 years or older, and 191,000 or 11% with a disability.

**Exhibit 176. Rent Burdened and Severely Rent Burdened, 2018**



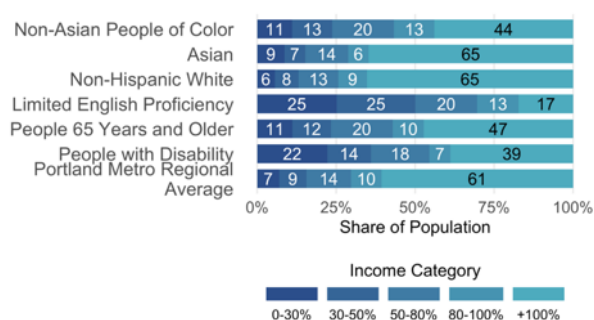
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 178. Housing Type, 2018**



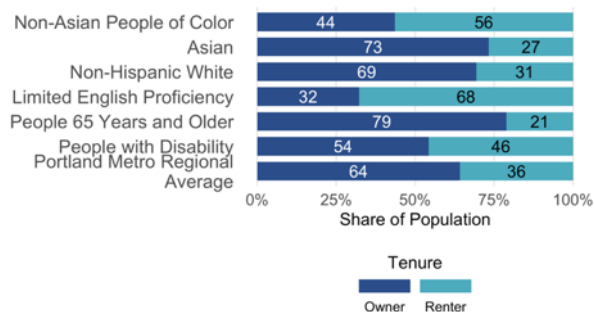
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 177. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 179. Tenure, 2018**



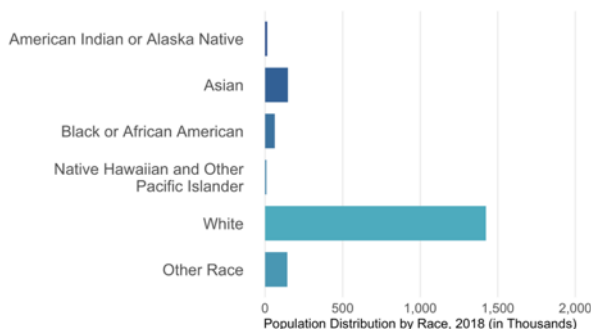
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>75</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and Hispanic population. The Non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

## Population by Race: Portland Metro

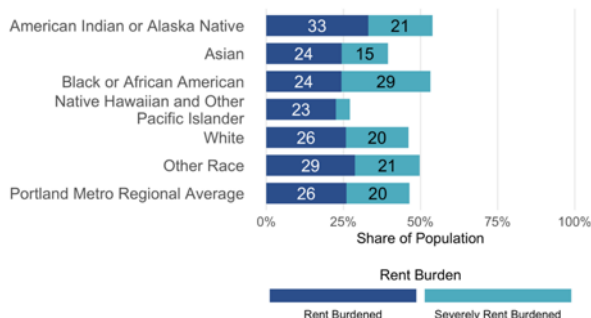
Below is information about housing affordability and characteristics for the following races: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Pacific Islander, White, and Other Races. These charts compare information with the regional average.

**Exhibit 180. Population Distribution by Race, 2018**



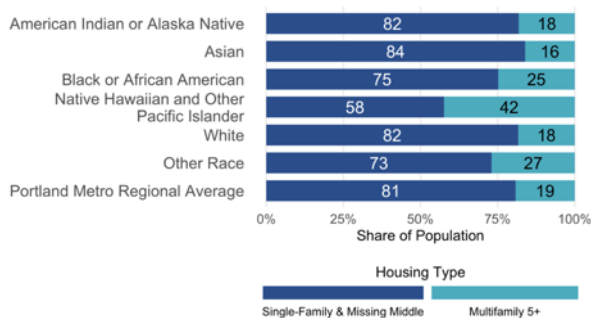
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 182. Rent Burdened and Severely Rent Burdened, 2018**



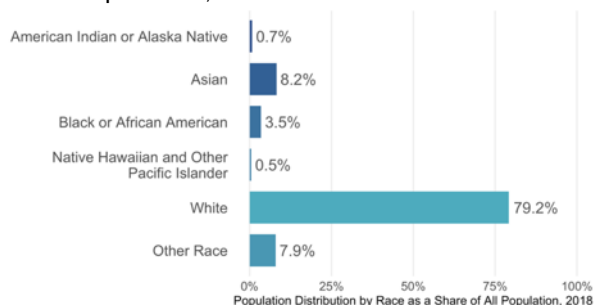
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 184. Housing Type, 2018**



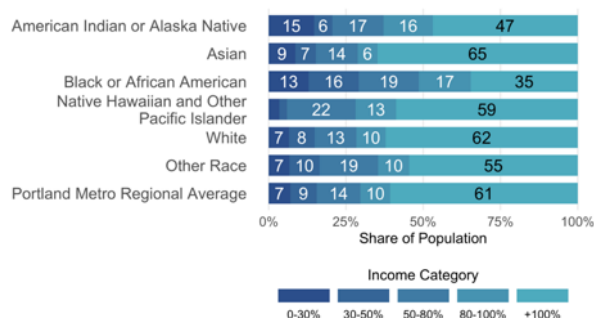
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 181. Population Distribution by Race of Total Population, 2018**



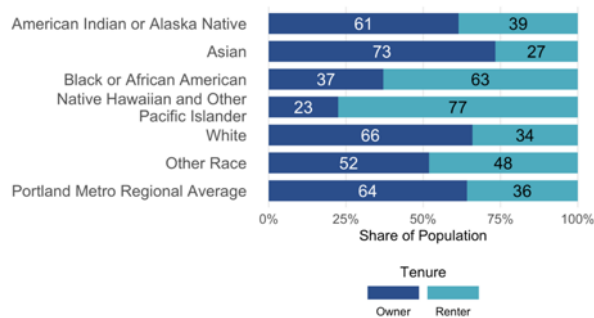
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 183. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 185. Tenure, 2018**

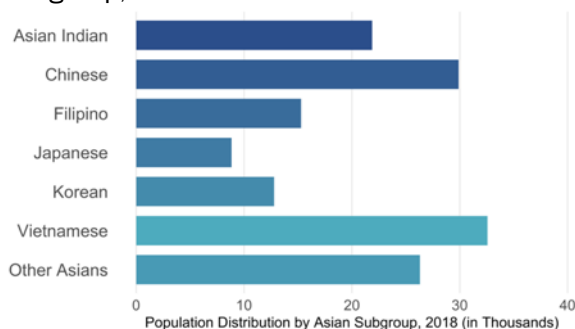


Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## Asian Population by Subgroups: Portland Metro

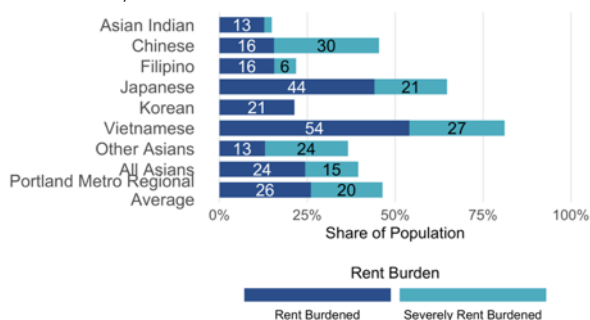
Below is information about housing affordability and characteristics for subgroups of the Asian population including: Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese and other Asians. These charts compare information about subgroups of Asian populations and the regional average.

**Exhibit 186. Population Distribution by Asian Subgroup, 2018**



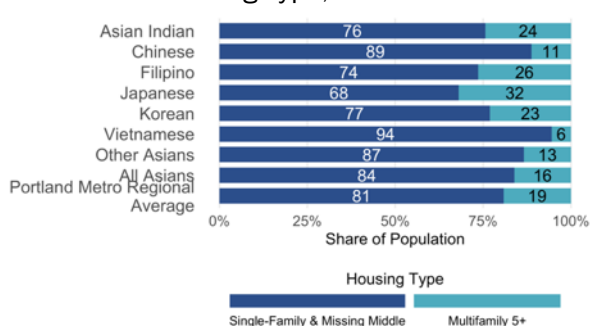
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 188. Rent Burdened and Severely Rent Burdened, 2018**



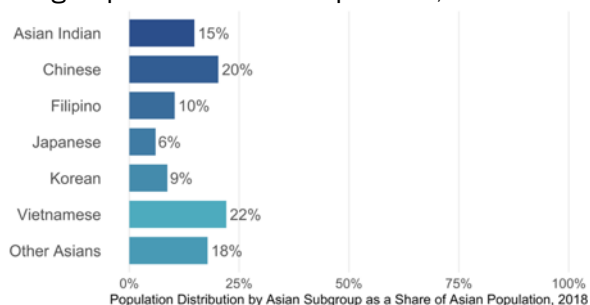
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 190. Housing Type, 2018**



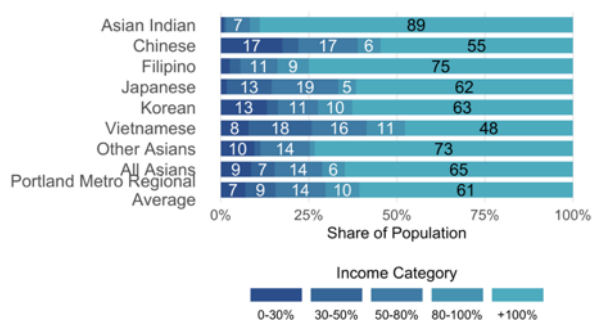
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 187. Population Distribution by Asian Subgroup of Total Asian Population, 2018**



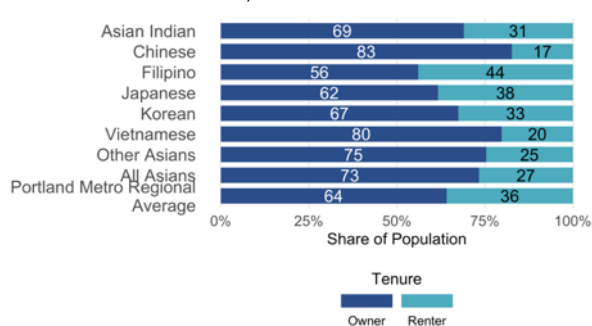
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 189. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 191. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

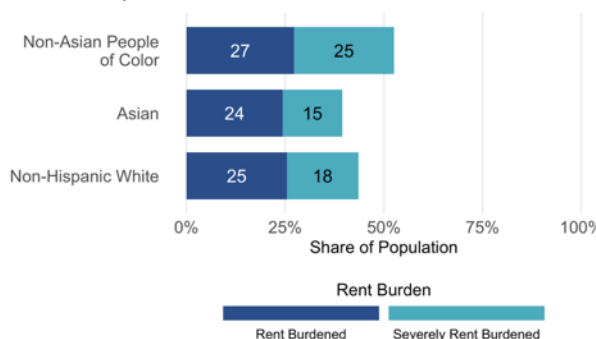
## People of Color: Portland Metro

Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and Hispanic population.<sup>76</sup> These charts compare information about the Asian population and people of color with the White population.

The Portland Metro region has 384,000 non-Asian persons of color, accounting for 21% of the region's population. In addition, the Portland Metro region has 148,000 Asian people and 1,266,000 White people, accounting for 8% and 70% of the region's population, respectively.

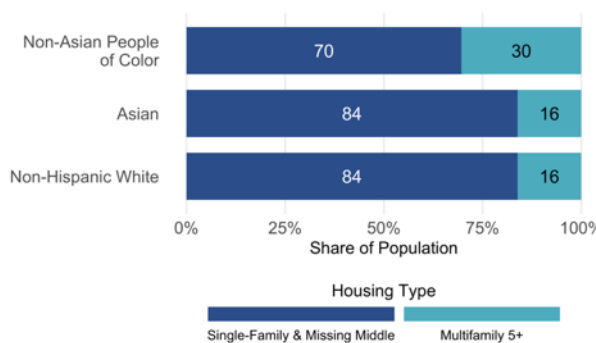
The Portland Metro region has 5,800 people experiencing homelessness, of whom 36% are people of color, compared with 1% of Asian people and 63% of White people.

**Exhibit 192. Rent Burdened and Severely Rent Burdened, 2018**



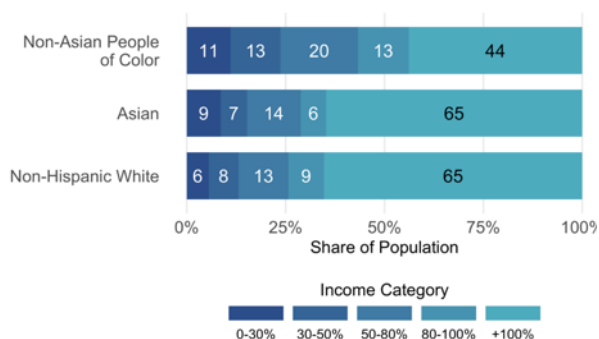
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 194. Housing Type, 2018**



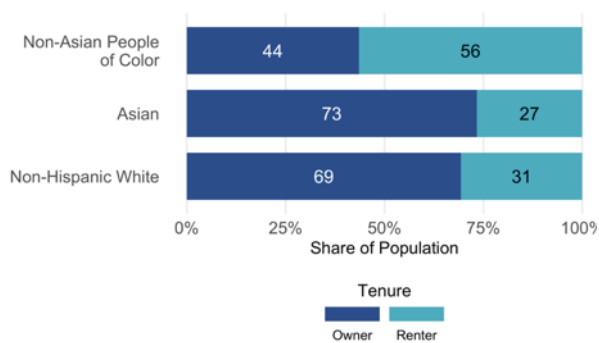
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 193. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 195. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

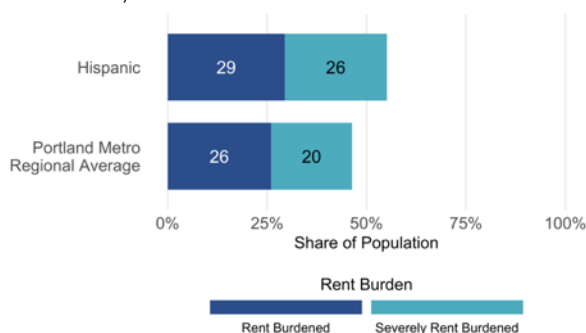
<sup>76</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available.

## Hispanic: Portland Metro

Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the regional average.

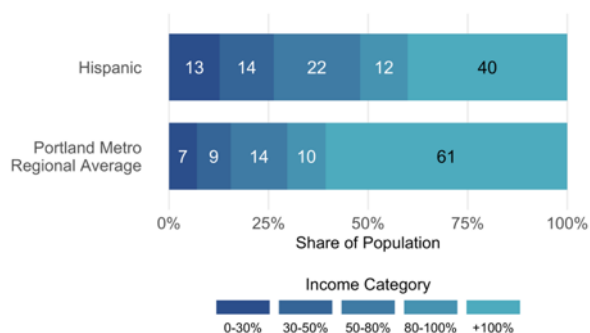
The Portland Metro region has 231,000 Hispanic persons, accounting for 13% of the region's population. The Portland Metro region has 5,200 people experiencing homelessness, of whom 11% are Hispanic, compared with 1% of Asian people, 59% of White people, and 29% of people of color.<sup>77</sup>

**Exhibit 196. Rent Burdened and Severely Rent Burdened, 2018**



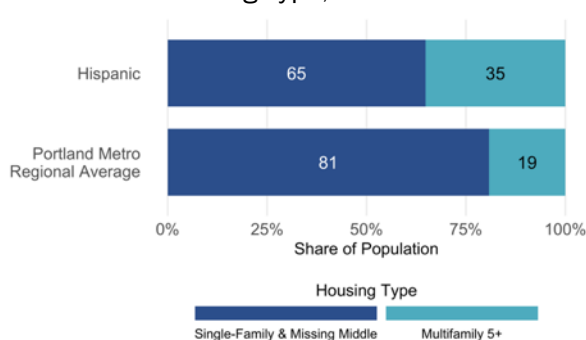
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 197. Household Income Distribution, 2018**



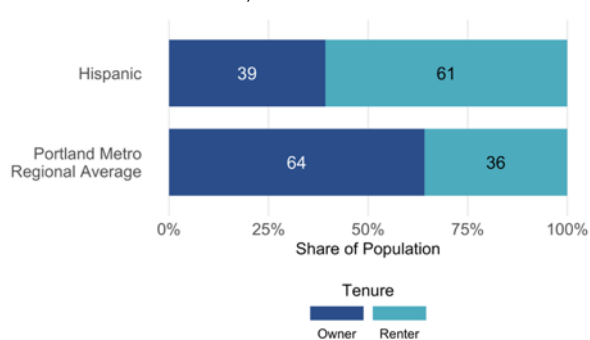
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 198. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 199. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>77</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

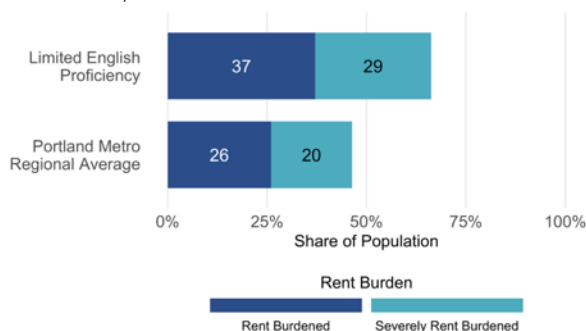


## Limited English Proficiency: Portland Metro

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the regional average.

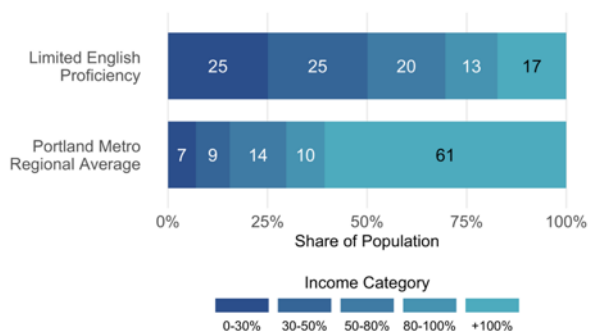
The Portland Metro region has 85,000 persons with limited English proficiency, accounting for 5% of the region's population.

**Exhibit 200. Rent Burdened and Severely Rent Burdened, 2018**



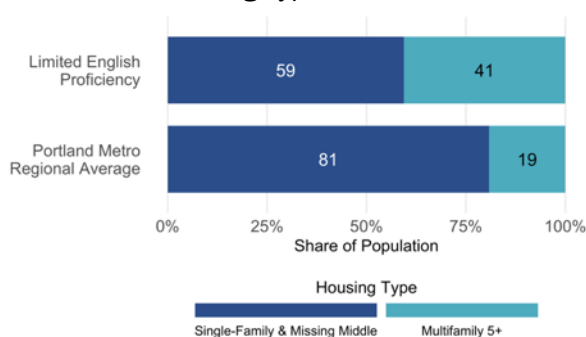
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 201. Household Income Distribution, 2018**



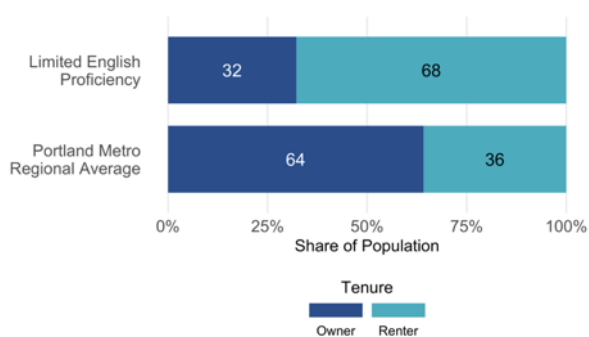
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 202. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 203. Tenure, 2018**



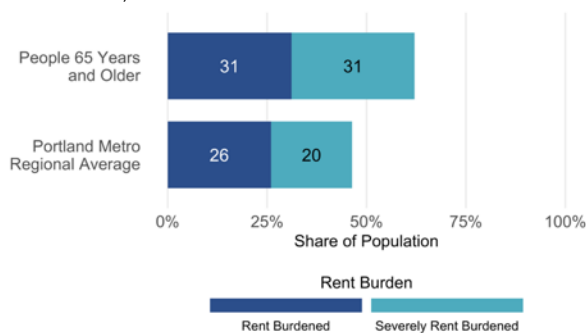
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## Seniors 65 Years and Older: Portland Metro

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the regional average.

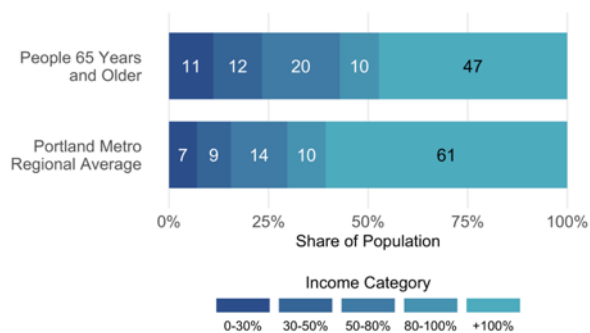
The Portland Metro region has 259,000 persons 65 years and older, accounting for 14% of the region's population.

**Exhibit 204. Rent Burdened and Severely Rent Burdened, 2018**



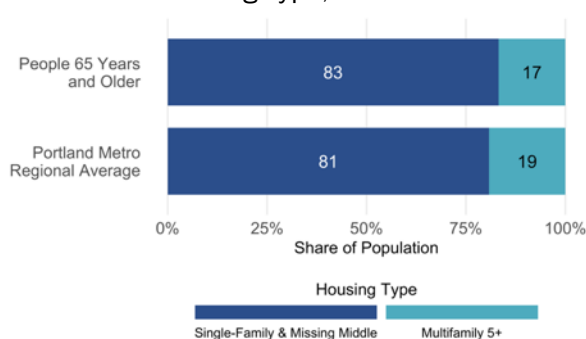
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 205. Household Income Distribution, 2018**



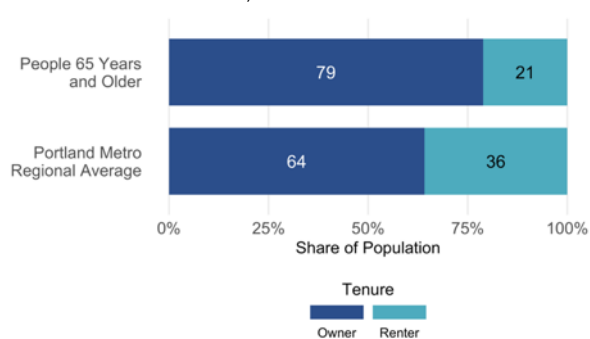
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 206. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 207. Tenure, 2018**



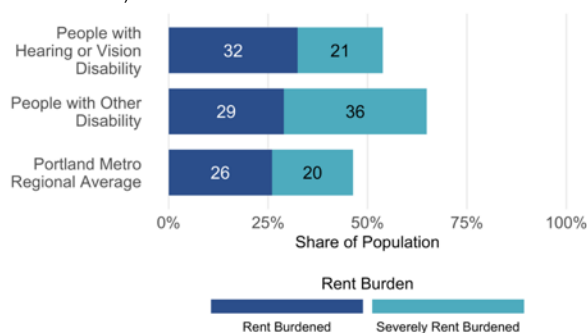
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## People with Disabilities: Portland Metro

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>78</sup> and the regional average.

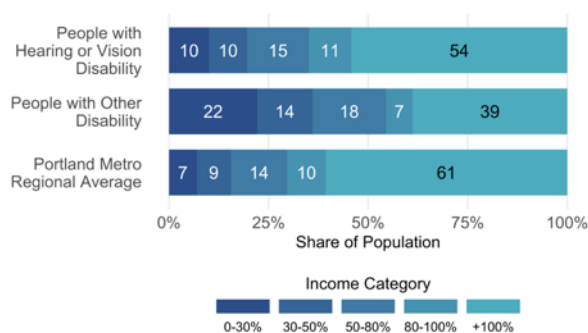
The Portland Metro region has 191,000 persons with disabilities, accounting for 11% of the region's population. Of these individuals, 47,000 have a hearing or vision disability and 144,000 have some other type of disability, accounting for 3% and 8% of the state's total population, respectively.

**Exhibit 208. Rent Burdened and Severely Rent Burdened, 2018**



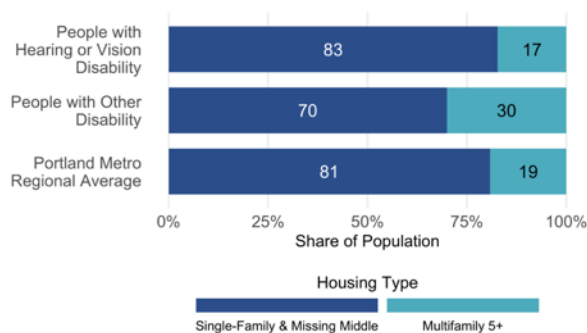
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 209. Household Income Distribution, 2018**



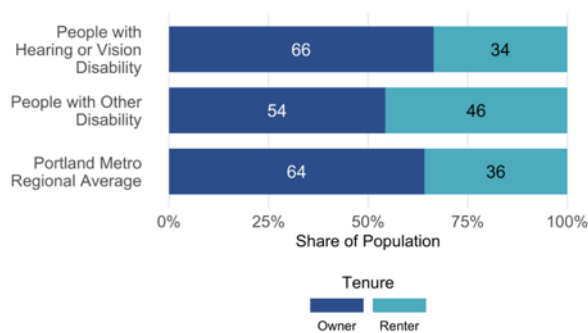
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 210. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 211. Tenure, 2018**



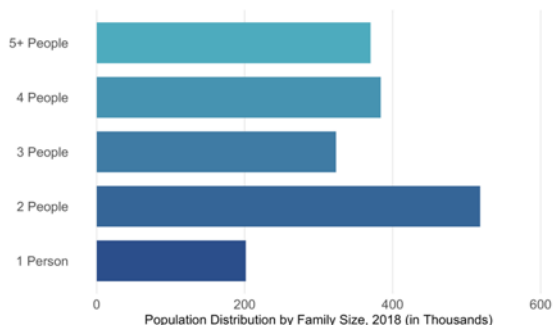
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>78</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

## Family Size: Portland Metro

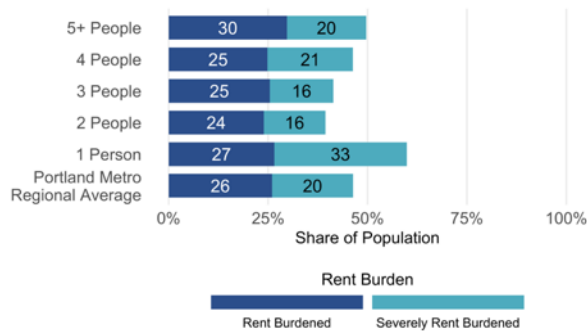
Below is a summary of family size characteristics in the Portland Metro region and the region's averages of the total population. These charts compare information about family size<sup>79</sup> and the regional average.

**Exhibit 212. Population Distribution by Family Size, 2018**



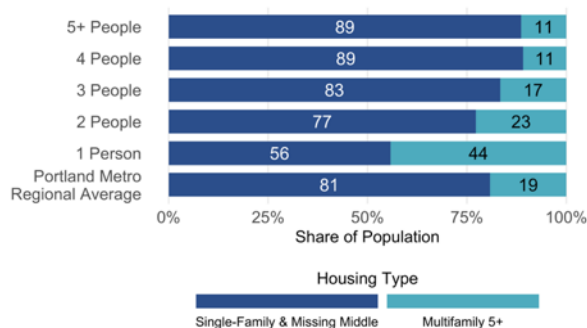
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 214. Rent Burdened and Severely Rent Burdened, 2018**



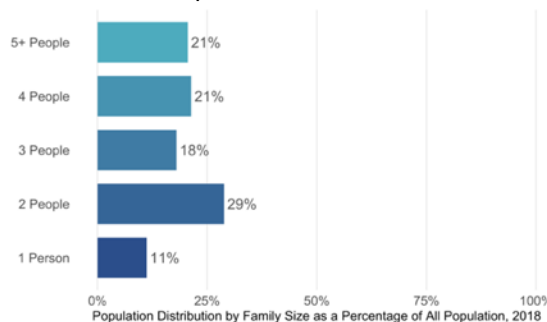
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 216. Housing Type, 2018**



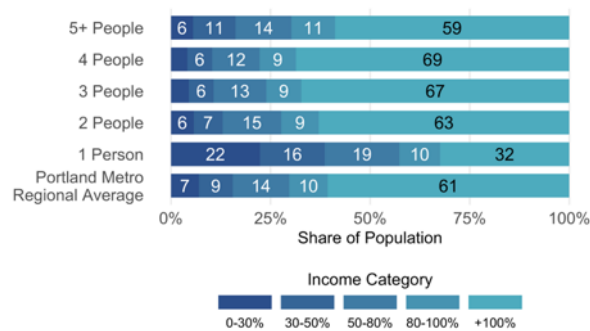
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 213. Population Distribution by Family Size of Total Population, 2018**



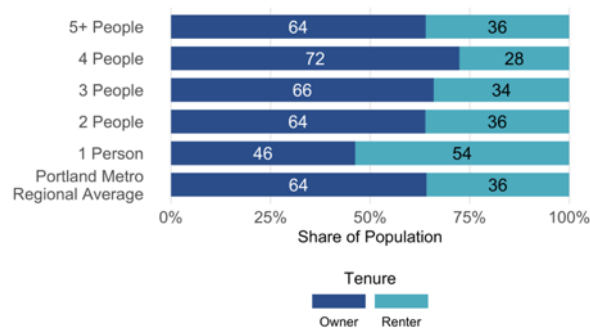
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 215. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 217. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

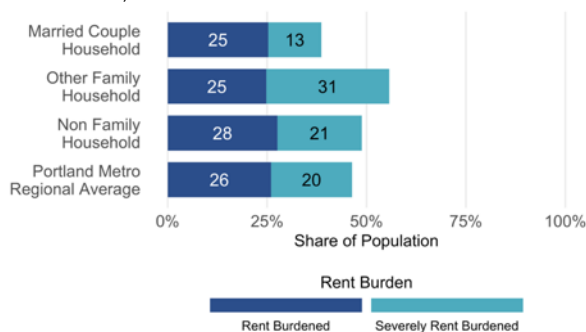
<sup>79</sup> For the purposes of this summary, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

## Household Type: Portland Metro

Below is a summary of characteristics of household types in the Portland Metro region and the region's averages of the total population. These charts compare information about married couple households, other family households,<sup>80</sup> non-family households,<sup>81</sup> and the regional average.

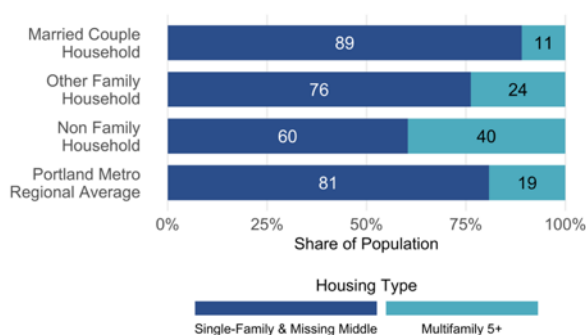
The Portland Metro region has 1,100,000 persons in married households, accounting for 62% of the region's total population. In addition, the Portland Metro region has 295,000 persons in other family households and 384,000 persons in non-family households, accounting for 17% and 21% of the region's population, respectively.

**Exhibit 218. Rent Burdened and Severely Rent Burdened, 2018**



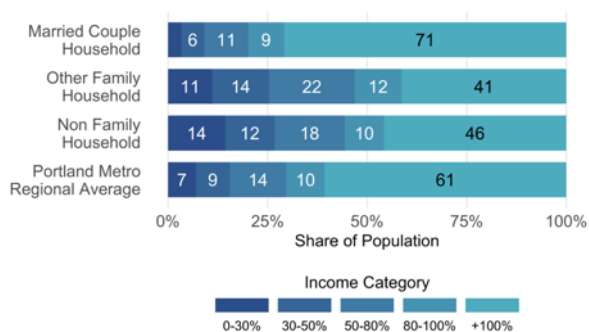
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 220. Housing Type, 2018**



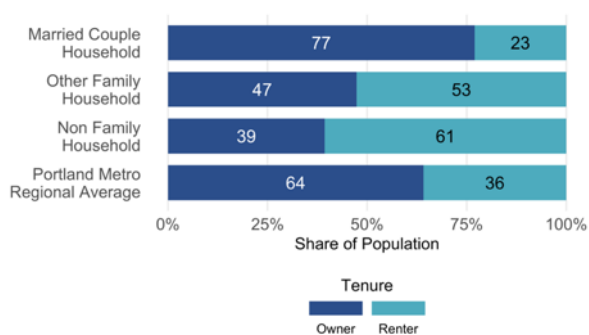
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 219. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 221. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>80</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>81</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

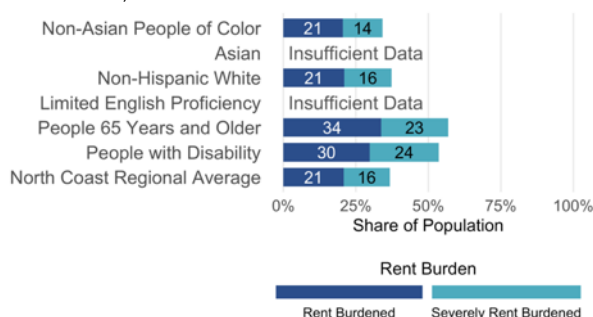
# North Coast Region

## Summary of Unmet Housing Needs: North Coast

Below is a summary of unmet housing needs and characteristics of non-Asian people of color,<sup>82</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, people with a disability, and the regional averages of the total population.

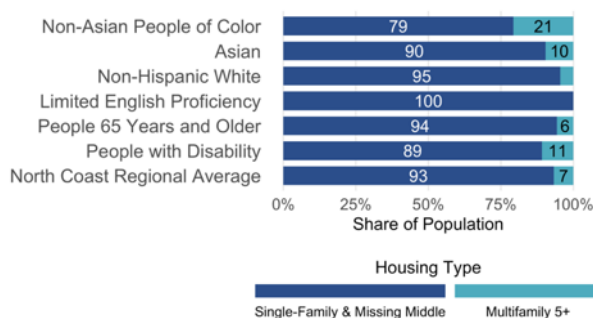
Throughout the North Coast region, there are 22,000 non-Asian persons of color, accounting for 14% of the region's population, 2,000 or 1% Asian people, 1,000 or less than 1% with limited English proficiency, 40,000 or 24% aged 65 years or older, and 34,000 or 21% with a disability.

**Exhibit 222. Rent Burdened and Severely Rent Burdened, 2018**



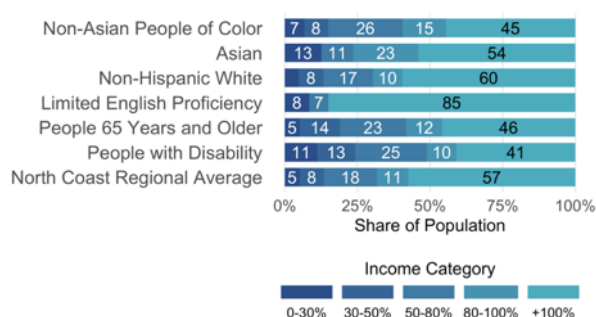
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 224. Housing Type, 2018**



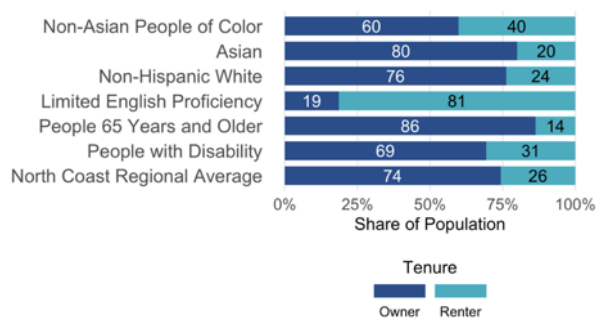
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 223. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 225. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>82</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

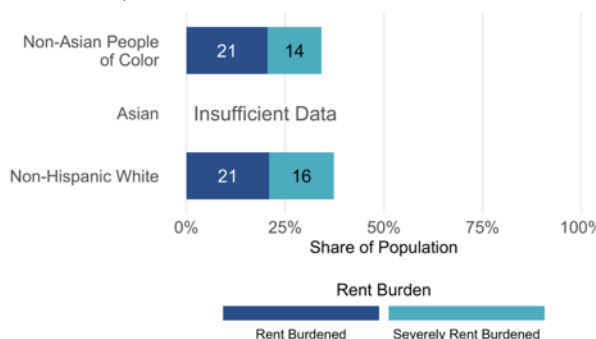
## People of Color: North Coast

Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population.<sup>83</sup> These charts compare information about Asian population and people of color with the White population.

The North Coast region has 22,000 non-Asian persons of color, accounting for 14% of the region's population. In addition, the North Coast region has 2,000 Asian people and 142,000 White people, accounting for 1% and 85% of the region's population, respectively.

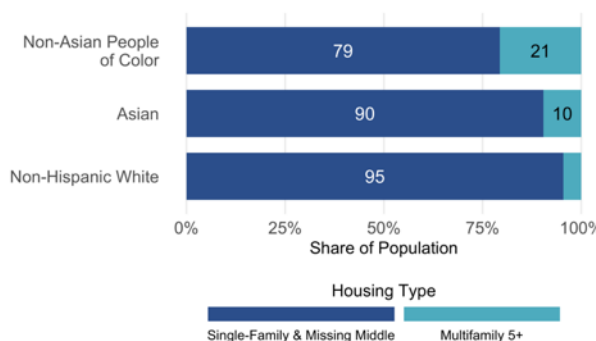
The North Coast region has 1,300 people experiencing homelessness, of whom 14% are people of color, compared with less than 1% of Asian people and 85% of White people.

**Exhibit 226. Rent Burdened and Severely Rent Burdened, 2018**



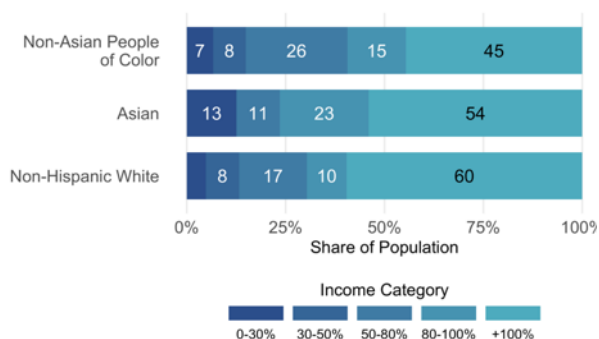
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 228. Housing Type, 2018**



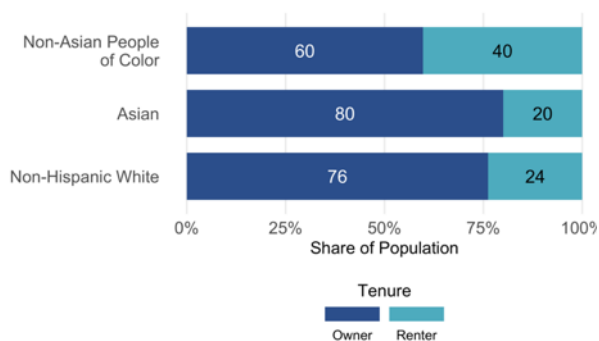
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 227. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 229. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

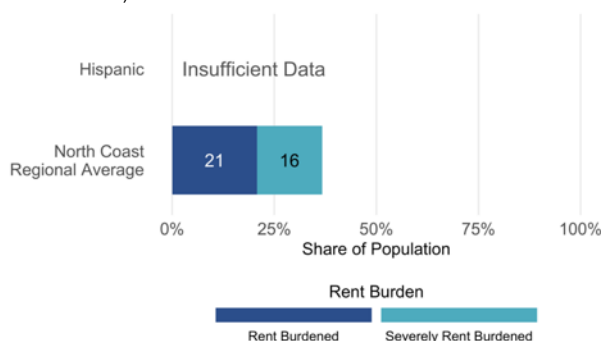
<sup>83</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available.

## Hispanic: North Coast

Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the regional average.

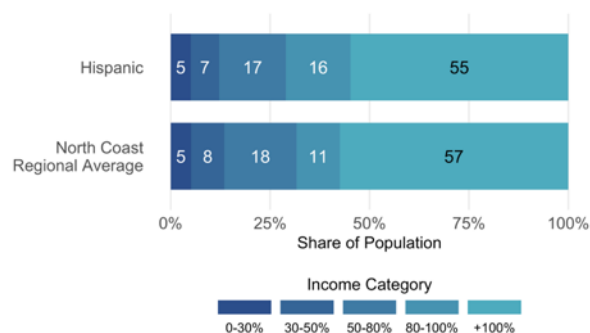
The North Coast region has 13,400 Hispanic persons, accounting for 8% of the region's population. The North Coast region has 1,300 people experiencing homelessness, of whom 7% are Hispanic, compared with less than 1% of Asian people, 84% of White people, and 8% of people of color.<sup>84</sup>

**Exhibit 230. Rent Burdened and Severely Rent Burdened, 2018**



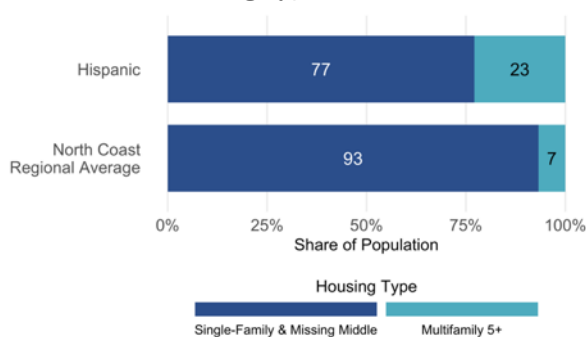
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 231. Household Income Distribution, 2018**



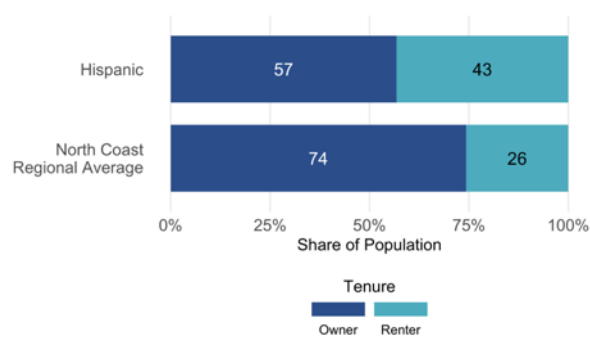
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 232. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 233. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>84</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

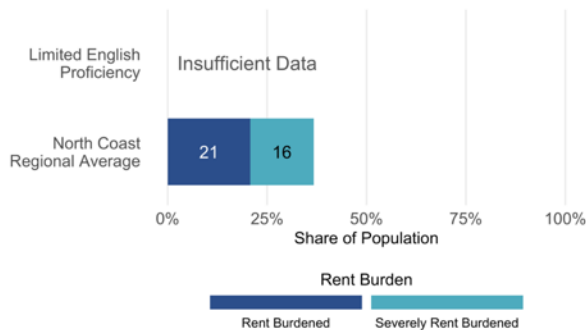


## Limited English Proficiency: North Coast

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the regional average.

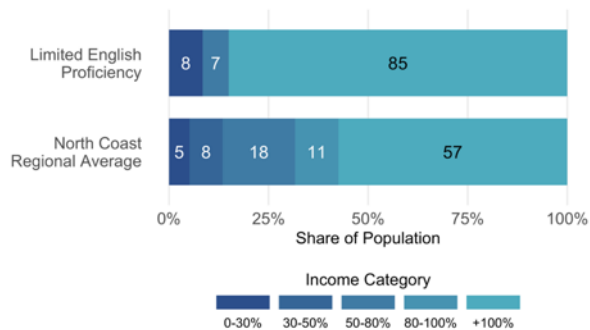
The North Coast region has 1,400 persons with limited English proficiency, accounting for 1% of the region's population.

**Exhibit 234. Rent Burdened and Severely Rent Burdened, 2018**



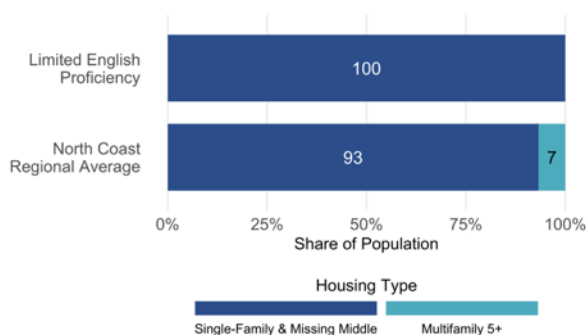
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 235. Household Income Distribution, 2018**



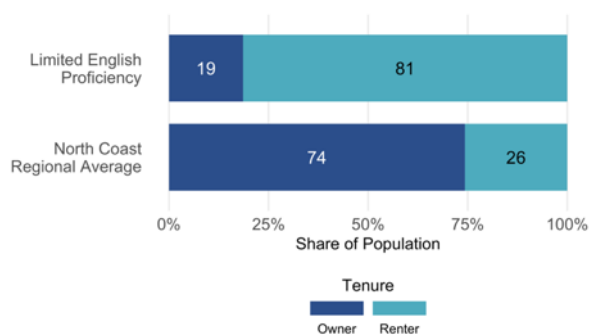
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 236. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 237. Tenure, 2018**



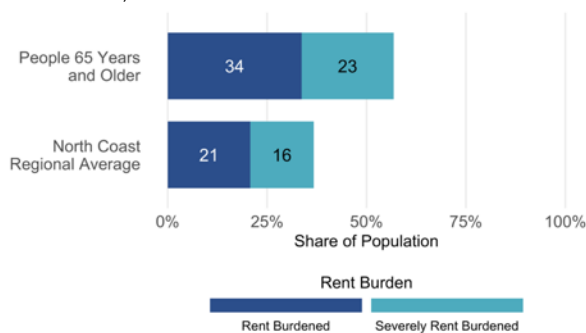
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## Seniors 65 Years and Older: North Coast

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the regional average.

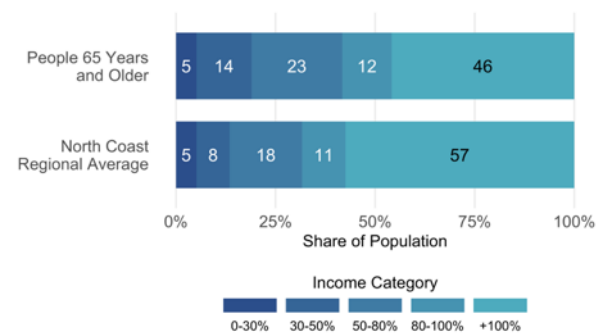
The North Coast region has 40,000 persons 65 years and older, accounting for 24% of the region's population.

**Exhibit 238. Rent Burdened and Severely Rent Burdened, 2018**



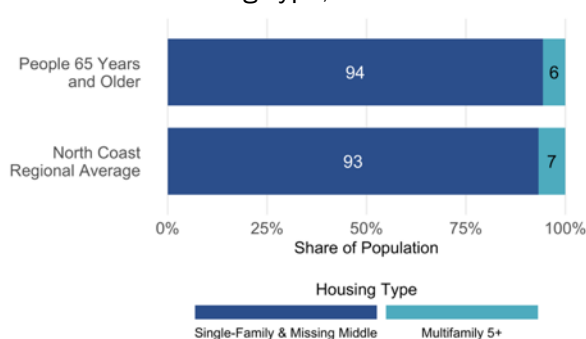
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 239. Household Income Distribution, 2018**



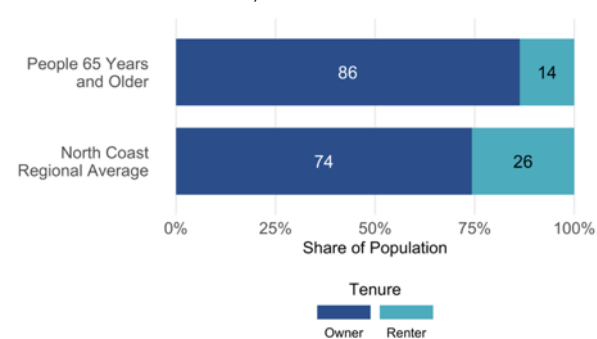
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 240. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 241. Tenure, 2018**



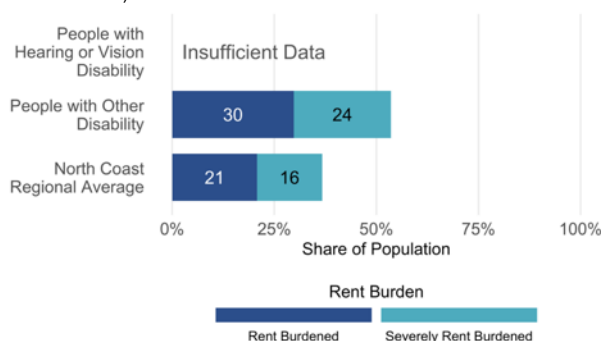
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## People with Disabilities: North Coast

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>85</sup> and the regional average.

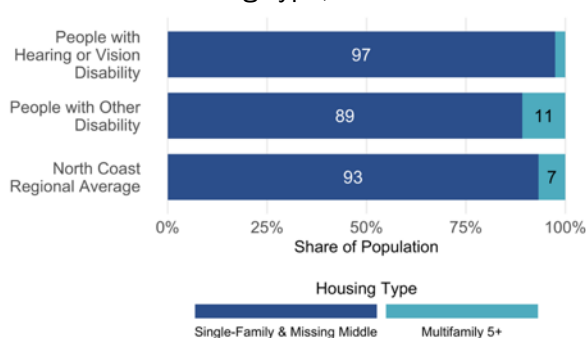
The North Coast region has 34,000 persons with disabilities, accounting for 21% of the region's population. Of these individuals, 7,000 have a hearing or vision disability and 27,000 have some other type of disability, accounting for 4% and 16% of the state's total population, respectively.

**Exhibit 242. Rent Burdened and Severely Rent Burdened, 2018**



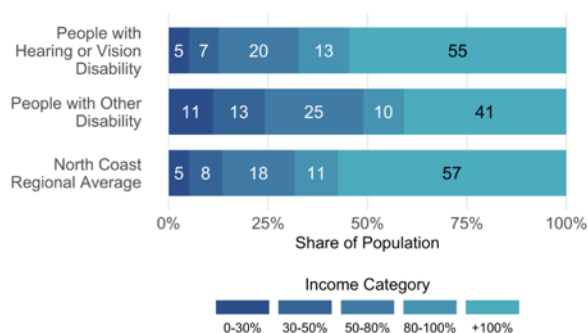
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 244. Housing Type, 2018**



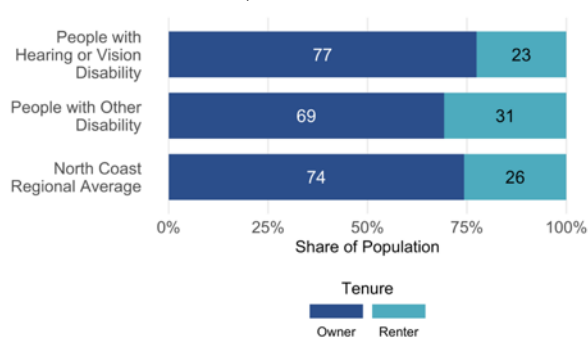
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 243. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 245. Tenure, 2018**



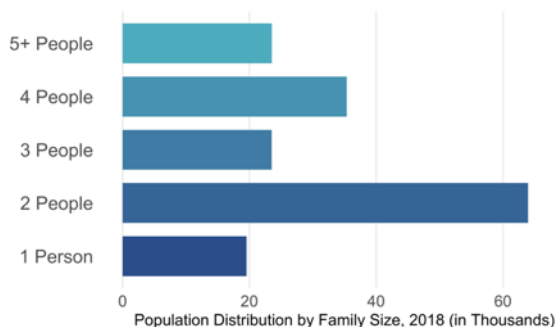
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>85</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

## Family Size: North Coast

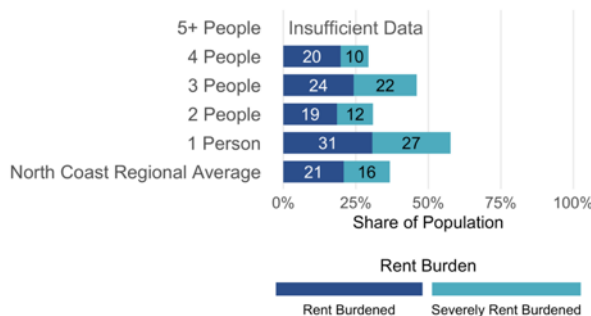
Below is a summary of family size characteristics in the North Coast region and the region's averages of the total population. These charts compare information about family size<sup>86</sup> and the regional average.

**Exhibit 246. Population Distribution by Family Size, 2018**



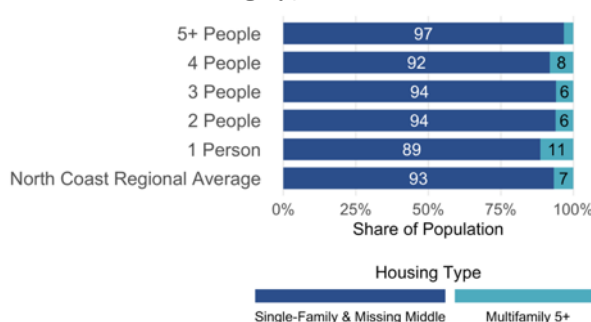
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 248. Rent Burdened and Severely Rent Burdened, 2018**



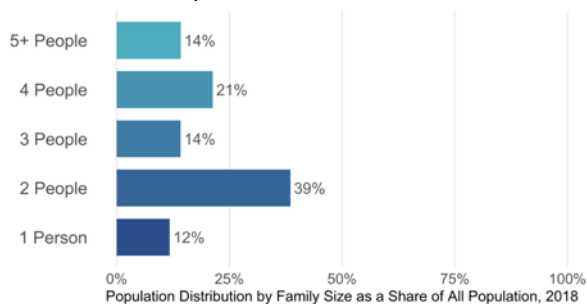
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 250. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 247. Population Distribution by Family Size of Total Population, 2018**



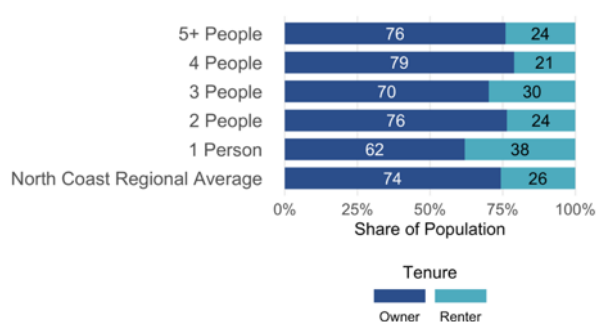
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 249. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 251. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

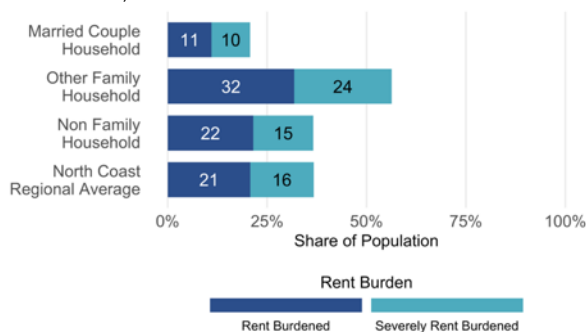
<sup>86</sup> For the purposes of this summary, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

## Household Type: North Coast

Below is a summary of characteristics of household types in the North Coast region and the region's averages of the total population. These charts compare information about married couple households, other family households,<sup>87</sup> non-family households,<sup>88</sup> and the regional average.

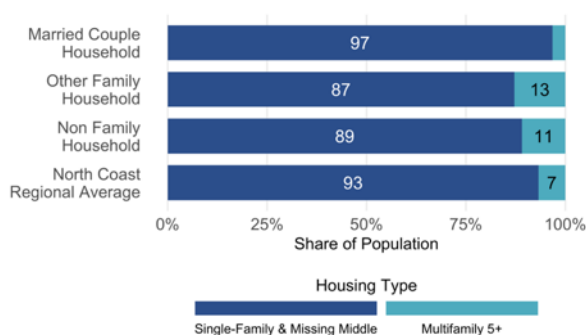
The North Coast region has 98,000 persons in married households, accounting for 59% of the region's total population. In addition, the North Coast region has 34,000 persons in other family households and 34,000 persons in non-family households, accounting for 20% and 21% of the region's population, respectively.

**Exhibit 252. Rent Burdened and Severely Rent Burdened, 2018**



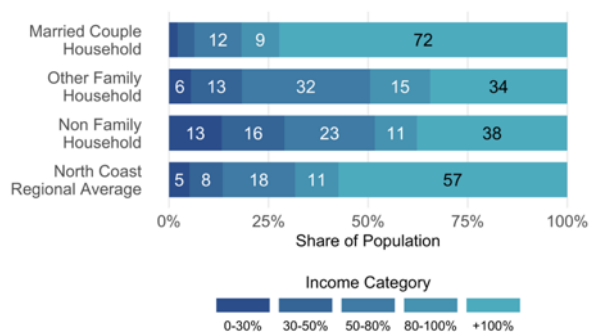
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 254. Housing Type, 2018**



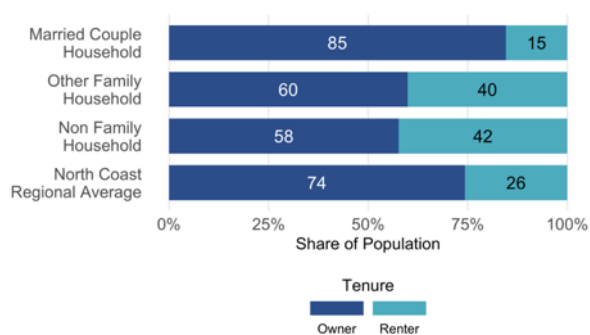
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 253. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 255. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>87</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>88</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

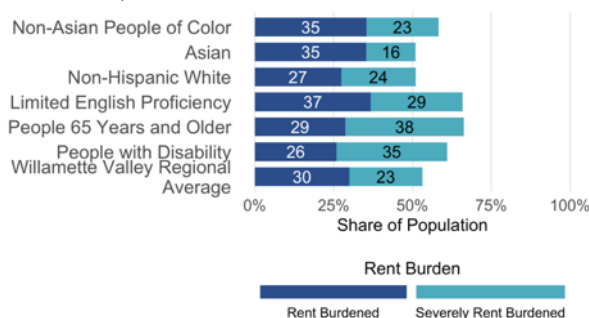
# Willamette Valley Region

## Summary of Unmet Housing Needs: Willamette Valley

Below is a summary of unmet housing needs and characteristics for non-Asian people of color,<sup>89</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, people with a disability, and the regional averages of the total population.

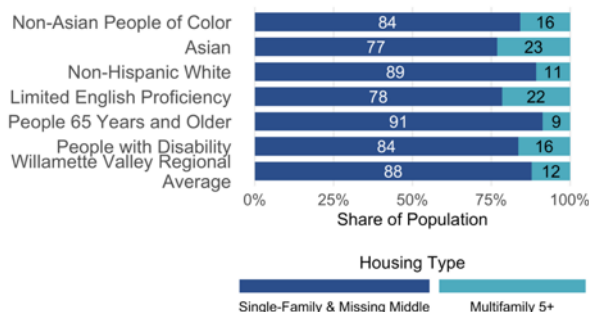
Throughout the Willamette Valley region, there are 237,000 non-Asian persons of color, accounting for 21% of the region's population, 28,000 or 3% Asian people, 19,000 or 2% with limited English proficiency, 193,000 or 18% aged 65 years or older, and 173,000 or 16% with a disability.

**Exhibit 256. Rent Burdened and Severely Rent Burdened, 2018**



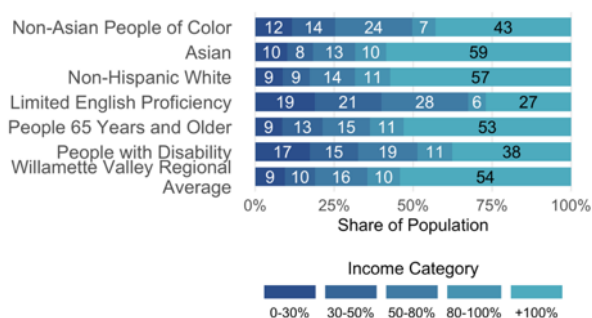
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 258. Housing Type, 2018**



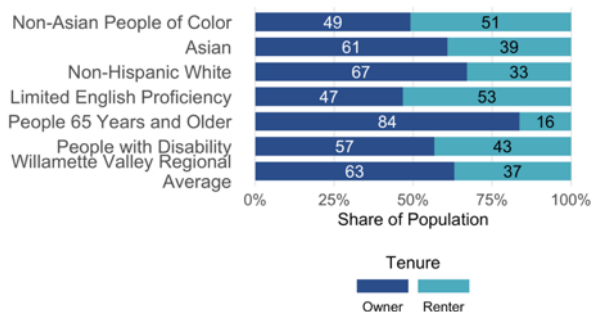
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 257. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 259. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>89</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

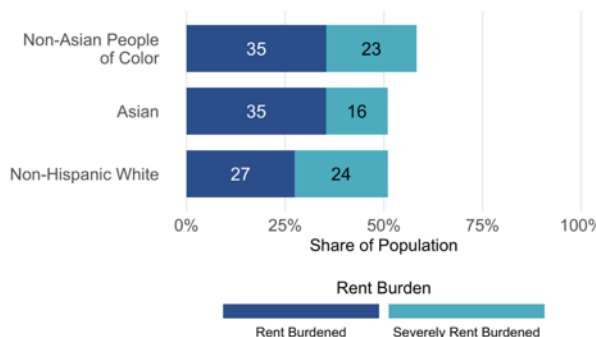
## People of Color: Willamette Valley

Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population.<sup>90</sup> These charts compare information about the Asian population and people of color with the White population.

The Willamette Valley region has 237,000 non-Asian persons of color, accounting for 21% of the region's population. In addition, the Willamette Valley region has 28,000 Asian people and 84,000 White people, accounting for 3% and 76% of the region's population, respectively.

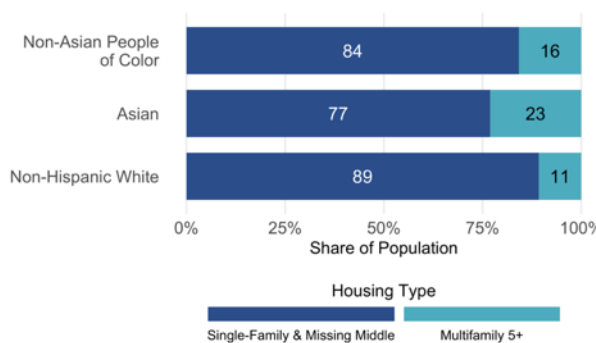
The Willamette Valley region has 4,000 people experiencing homelessness, of whom 21% are people of color, compared with 1% of Asian people and 79% of White people.

**Exhibit 260. Rent Burdened and Severely Rent Burdened, 2018**



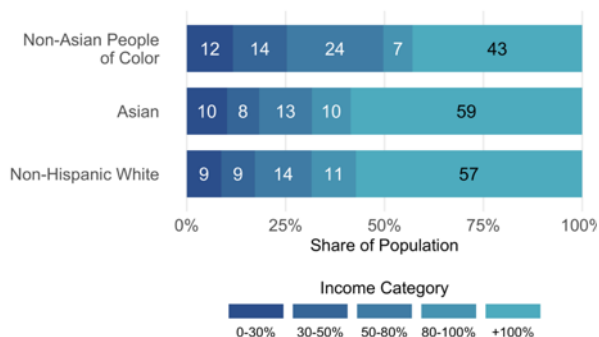
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 262. Housing Type, 2018**



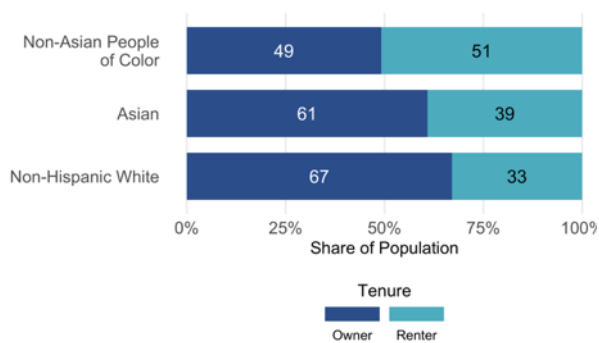
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 261. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 263. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

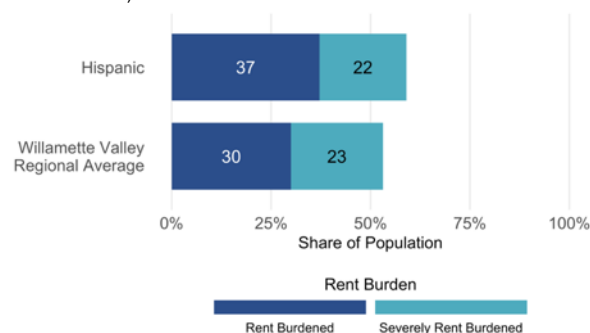
<sup>90</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available.

## Hispanic: Willamette Valley

Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the regional average.

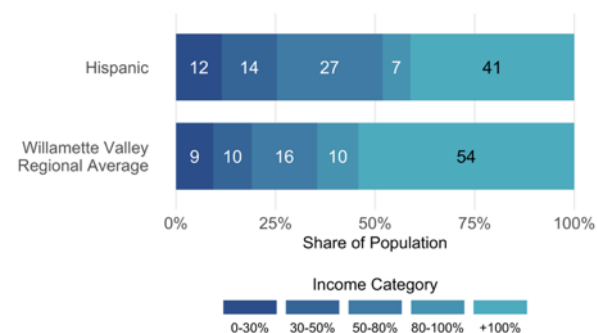
The Willamette Valley region has 173,000 Hispanic persons, accounting for 16% of the region's population. The Willamette Valley region has 3,600 people experiencing homelessness, of whom 10% are Hispanic, compared with 1% of Asian people, 76% of White people, and 13% of people of color.<sup>91</sup>

**Exhibit 264. Rent Burdened and Severely Rent Burdened, 2018**



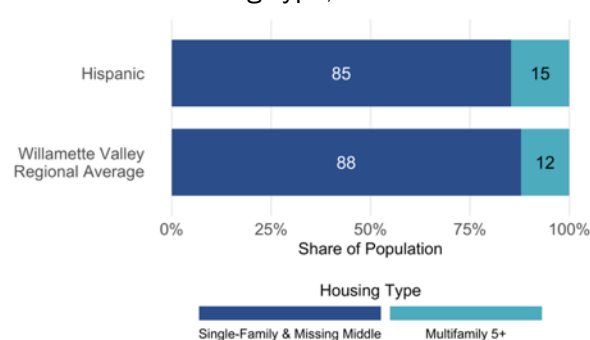
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 265. Household Income Distribution, 2018**



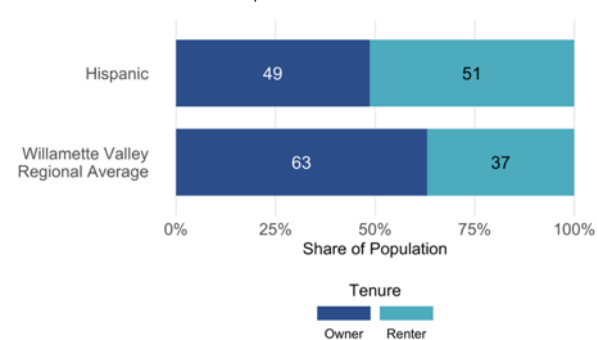
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 266. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 267. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>91</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

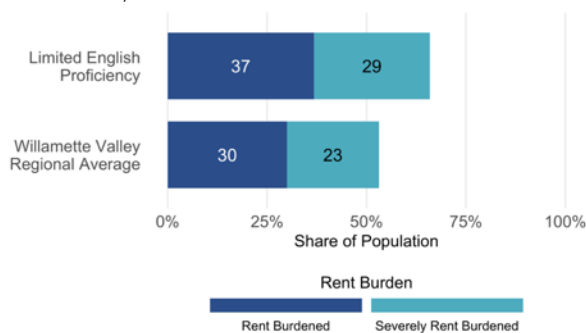


## Limited English Proficiency: Willamette Valley

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the regional average.

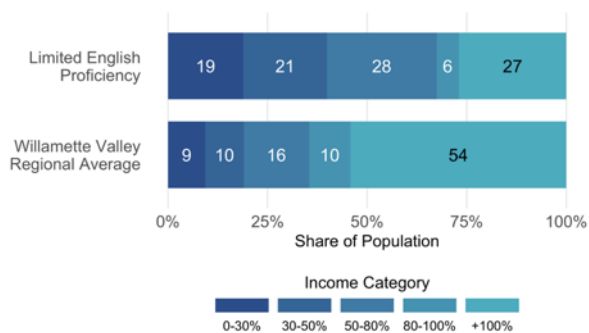
The Willamette Valley region has 19,000 persons with limited English proficiency, accounting for 2% of the region's population.

**Exhibit 268. Rent Burdened and Severely Rent Burdened, 2018**



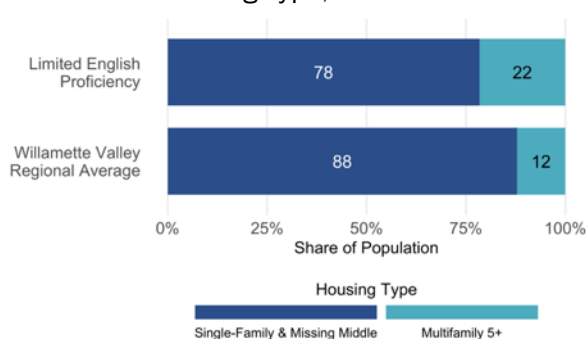
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 269. Household Income Distribution, 2018**



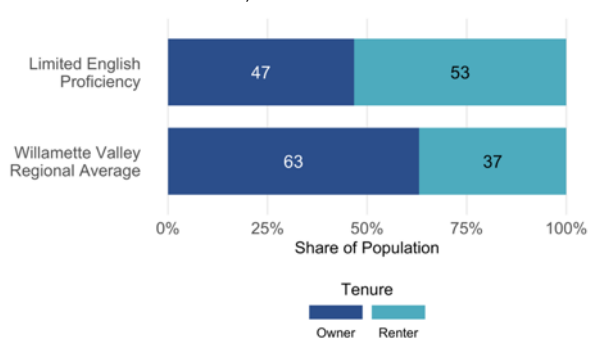
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 270. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 271. Tenure, 2018**



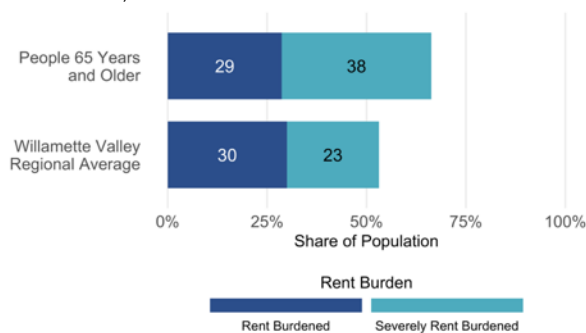
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## Seniors 65 Years and Older: Willamette Valley

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the regional average.

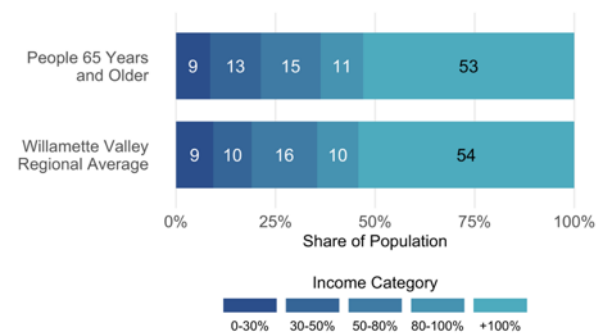
The Willamette Valley region has 193,000 persons 65 years and older, accounting for 18% of the region's population.

**Exhibit 272. Rent Burdened and Severely Rent Burdened, 2018**



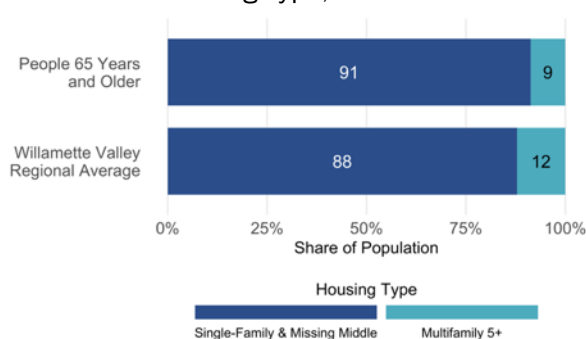
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 273. Household Income Distribution, 2018**



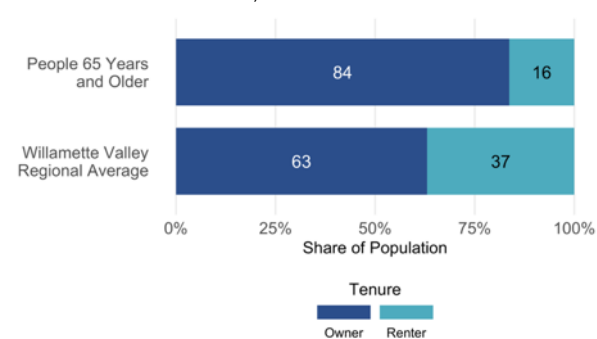
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 274. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 275. Tenure, 2018**



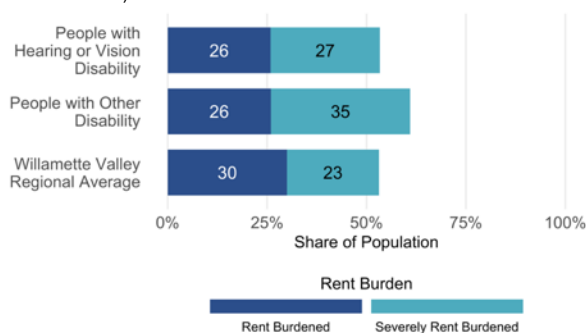
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## People with Disabilities: Willamette Valley

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>92</sup> and the regional average.

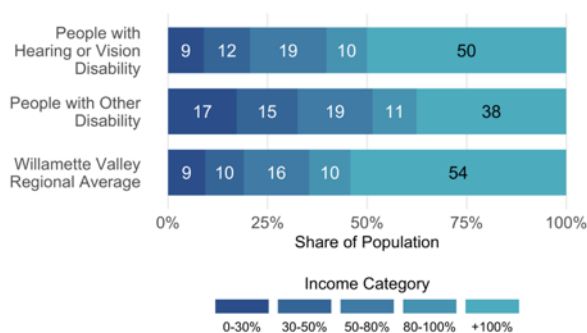
The Willamette Valley region has 173,000 persons with disabilities, accounting for 16% of the region's population. Of these individuals, 38,000 have a hearing or vision disability and 136,000 have some other type of disability, accounting for 3% and 12% of the state's total population, respectively.

**Exhibit 276. Rent Burdened and Severely Rent Burdened, 2018**



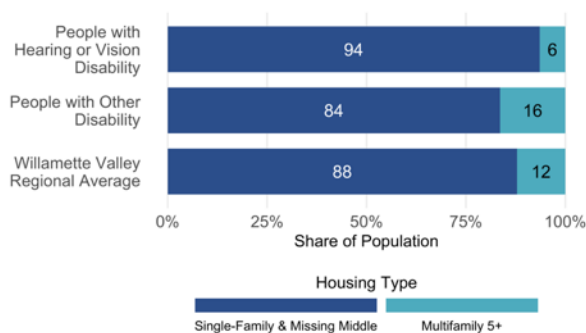
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 277. Household Income Distribution, 2018**



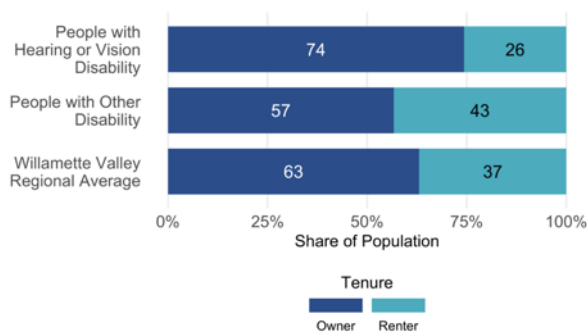
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 278. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 279. Tenure, 2018**



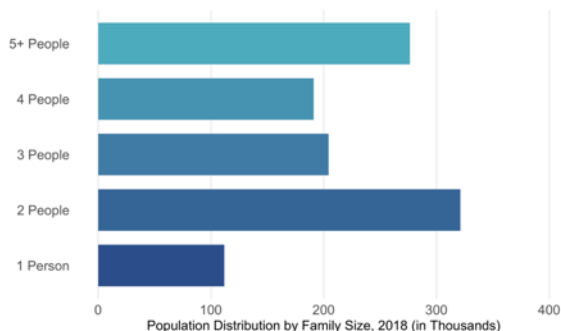
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>92</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

## Family Size: Willamette Valley

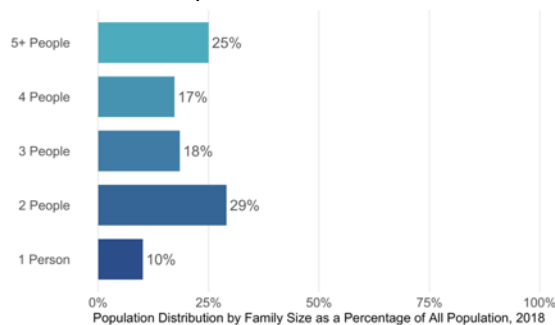
Below is a summary of family size characteristics in the Willamette Valley region and the region's averages of the total population. These charts compare information about family size<sup>93</sup> and the regional average.

**Exhibit 280. Population Distribution by Family Size, 2018**



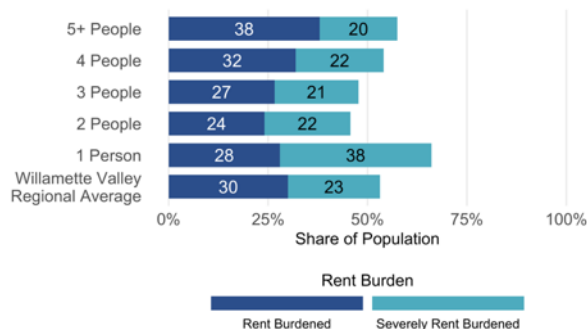
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 281. Population Distribution by Family Size of Total Population, 2018**



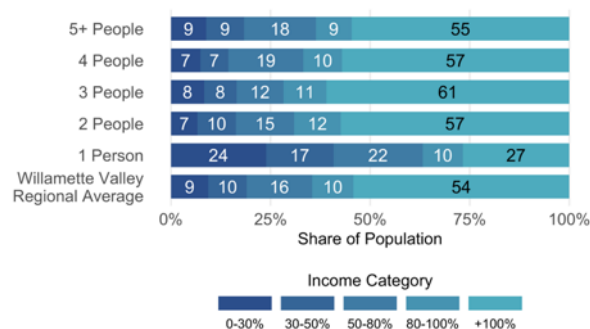
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 282. Rent Burdened and Severely Rent Burdened, 2018**



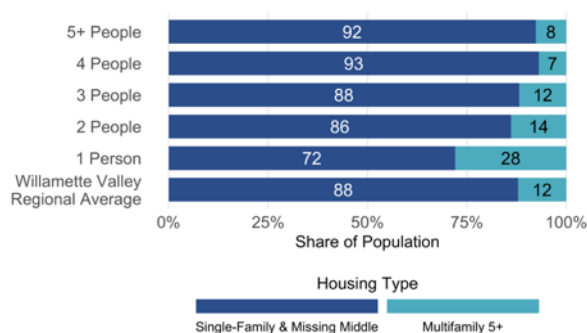
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 283. Household Income Distribution, 2018**



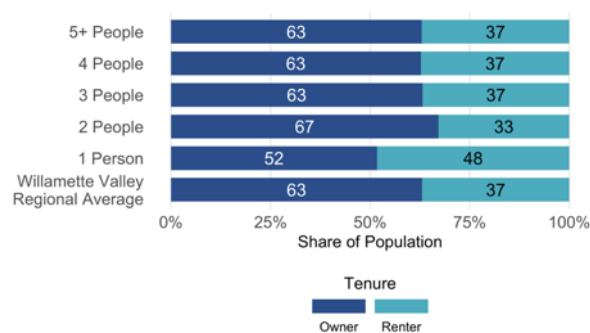
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 284. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 285. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

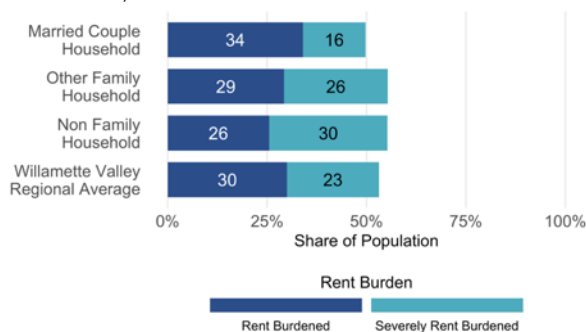
<sup>93</sup> For the purposes of this summary, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

## Household Type: Willamette Valley

Below is a summary of characteristics of household types in the Willamette Valley region and the region's averages of the total population. These charts compare information about married couple households, other family households,<sup>94</sup> non-family households,<sup>95</sup> and the regional average.

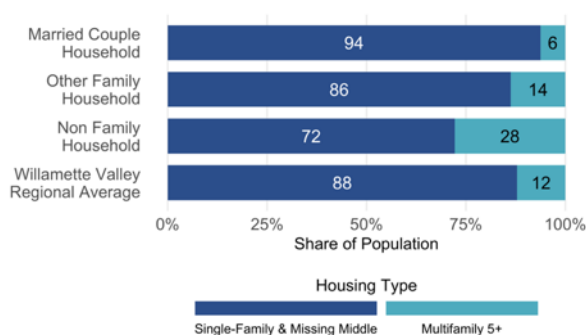
The Willamette Valley region has 645,000 persons in married households, accounting for 58% of the region's total population. In addition, the Willamette Valley region has 238,000 persons in other family households and 221,000 persons in non-family households, accounting for 22% and 20% of the region's population, respectively.

**Exhibit 286. Rent Burdened and Severely Rent Burdened, 2018**



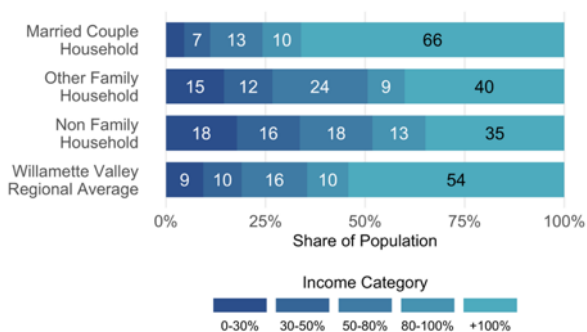
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 288. Housing Type, 2018**



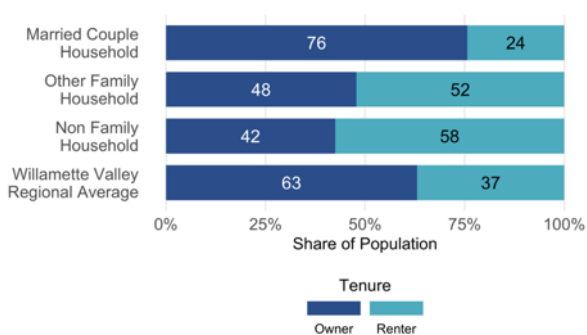
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 287. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 289. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>94</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>95</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

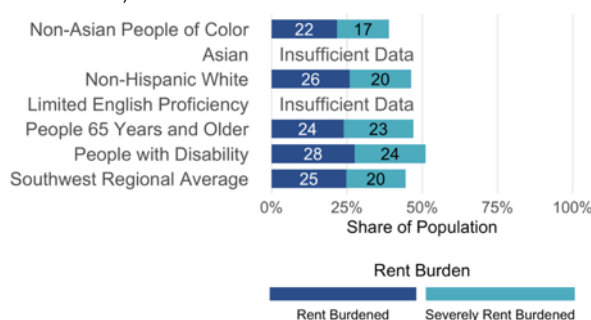
# Southwest Region

## Summary of Unmet Housing Needs: Southwest

Below is a summary of unmet housing needs and characteristics for non-Asian people of color,<sup>96</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, people with a disability, and the regional averages of the total population.

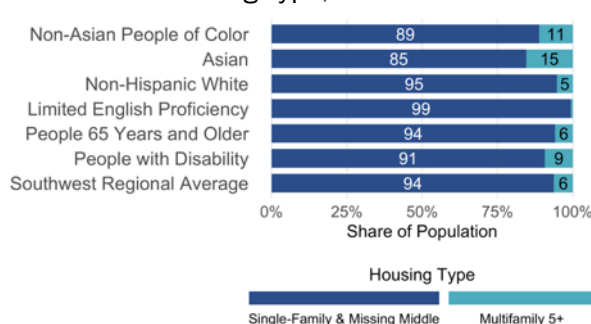
Throughout the Southwest region, there are 72,000 non-Asian persons of color, accounting for 14% of the region's population, 7,000 or 1% Asian people, 7,000 or 1% with limited English proficiency, 123,000 or 25% aged 65 years or older, and 82,000 or 17% with a disability.

**Exhibit 290. Rent Burdened and Severely Rent Burdened, 2018**



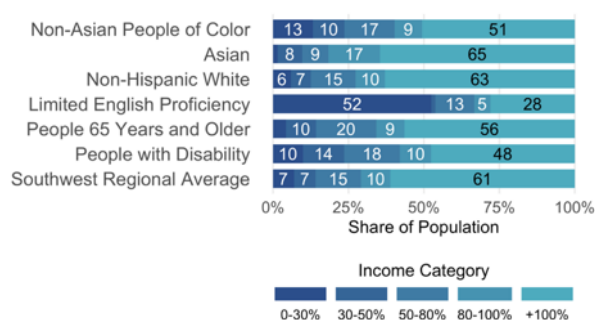
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 292. Housing Type, 2018**



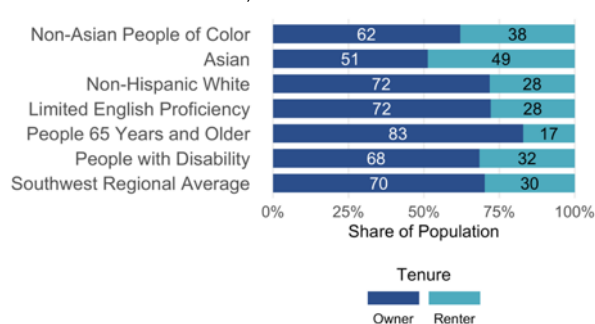
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 291. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 293. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>96</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

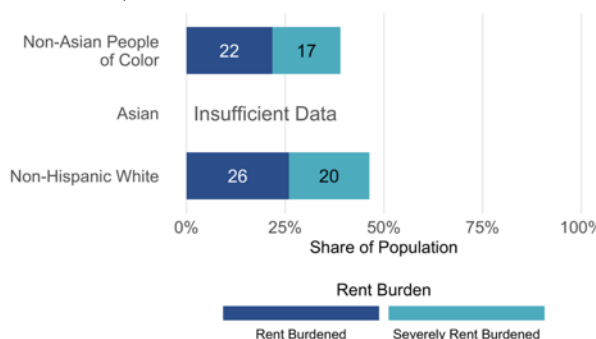
## People of Color: Southwest

Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population.<sup>97</sup> These charts compare information about the Asian population and people of color with the White population.

The Southwest region has 72,000 non-Asian persons of color, accounting for 14% of the region's population. In addition, the Southwest region has 7,000 Asian people and 418,000 White people, accounting for 1% and 84% of the region's population, respectively.

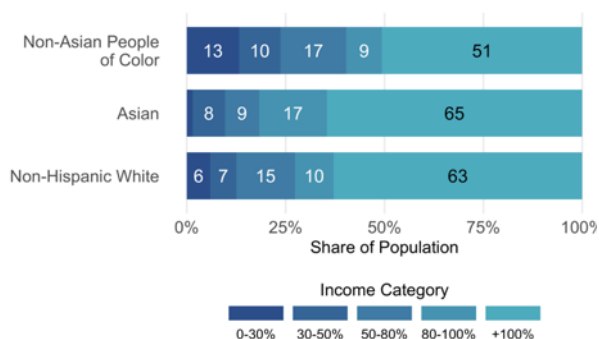
The Southwest region has 2,500 people experiencing homelessness, of whom 19% are people of color, compared with less than 1% of Asian people and 81% of White people.

**Exhibit 294. Rent Burdened and Severely Rent Burdened, 2018**



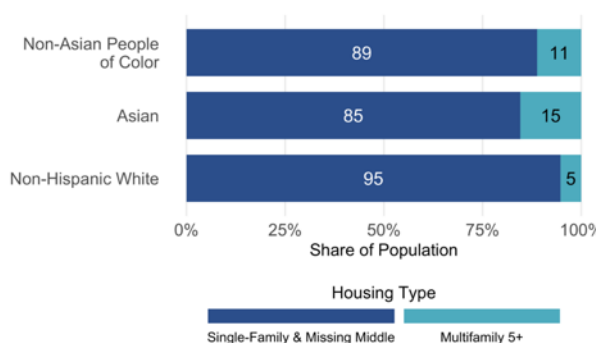
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 295. Household Income Distribution, 2018**



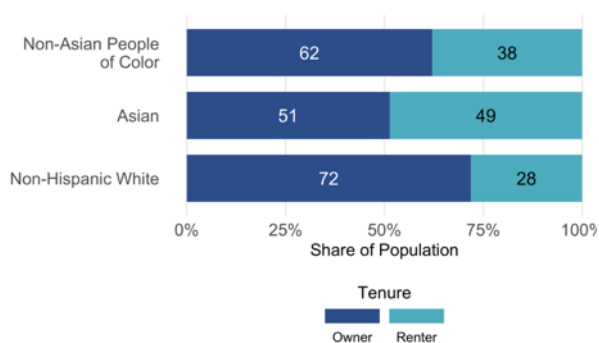
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 296. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 297. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

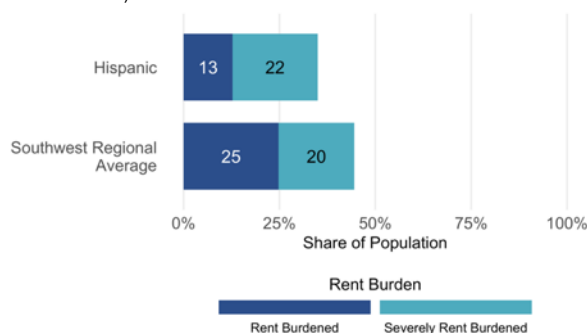
<sup>97</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available.

## Hispanic: Southwest

Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the regional average.

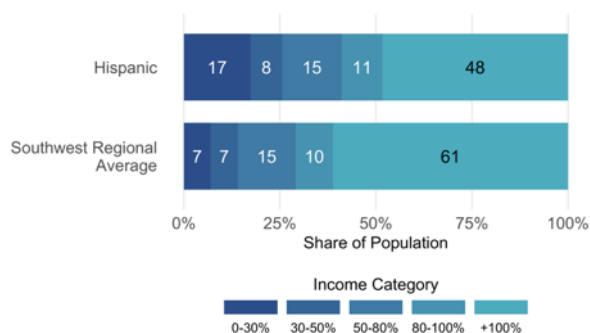
The Southwest region has 47,000 Hispanic persons, accounting for 9% of the region's population. The Southwest region has 2,300 people experiencing homelessness, of whom 8% are Hispanic, compared with less than 1% of Asian people, 79% of White people, and 12% of people of color.<sup>98</sup>

**Exhibit 298. Rent Burdened and Severely Rent Burdened, 2018**



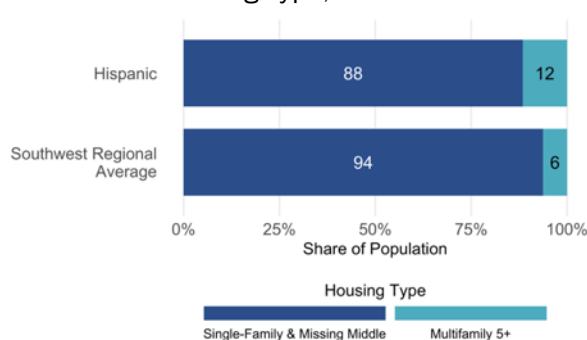
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 299. Household Income Distribution, 2018**



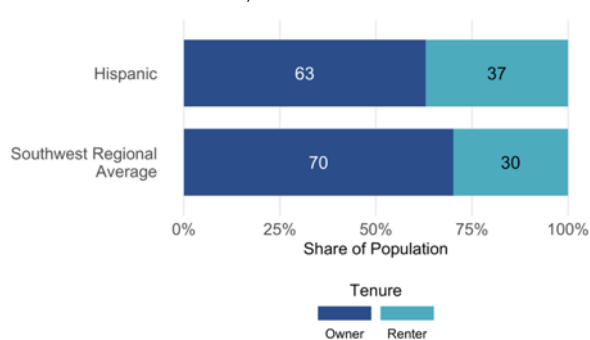
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 300. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 301. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>98</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

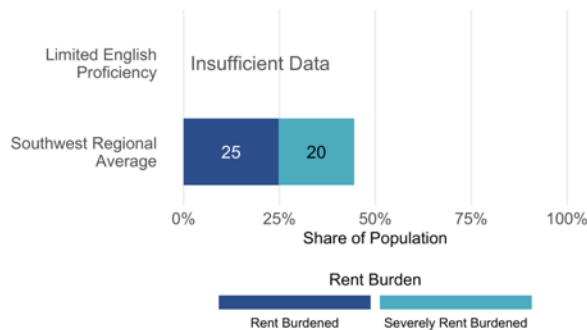


## Limited English Proficiency: Southwest

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the regional average.

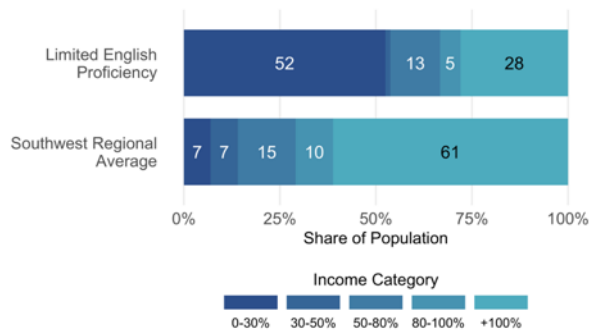
The Southwest region has 7,200 persons with limited English proficiency, accounting for 1% of the region's population.

**Exhibit 302. Rent Burdened and Severely Rent Burdened, 2018**



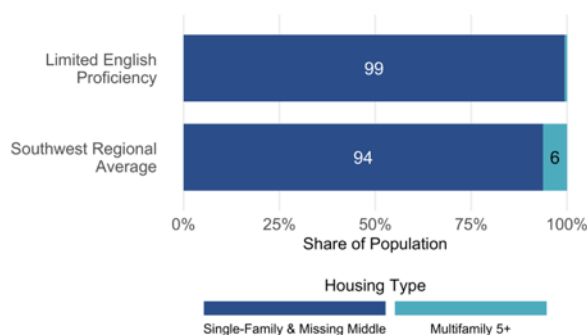
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 303. Household Income Distribution, 2018**



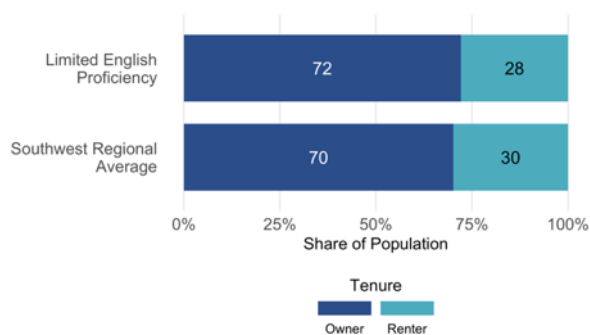
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 304. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 305. Tenure, 2018**



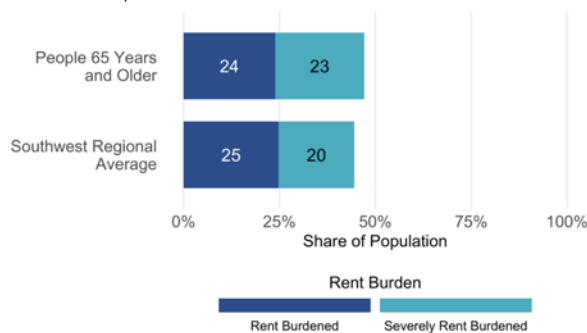
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## Seniors 65 Years and Older: Southwest

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the regional average.

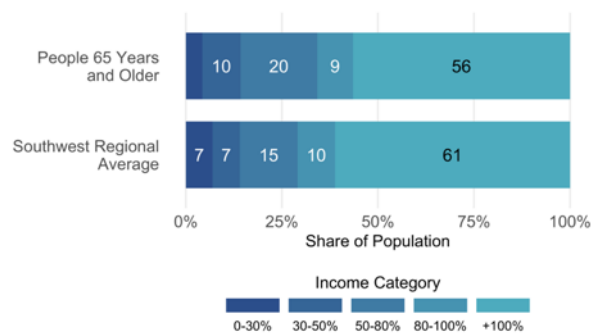
The Southwest region has 123,000 persons 65 years and older, accounting for 25% of the region's population.

**Exhibit 306. Rent Burdened and Severely Rent Burdened, 2018**



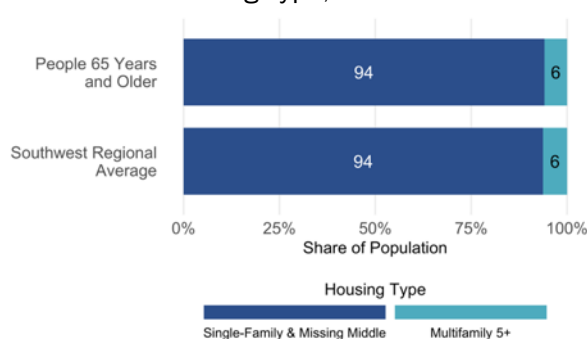
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 307. Household Income Distribution, 2018**



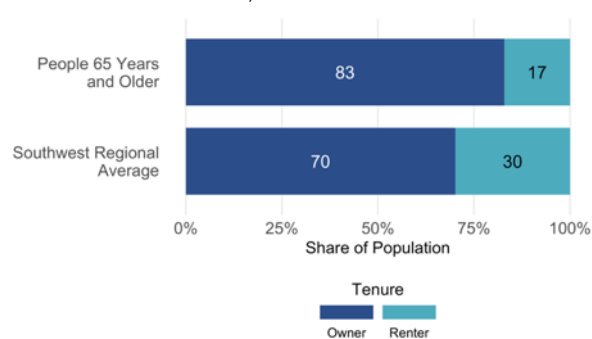
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 308. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 309. Tenure, 2018**



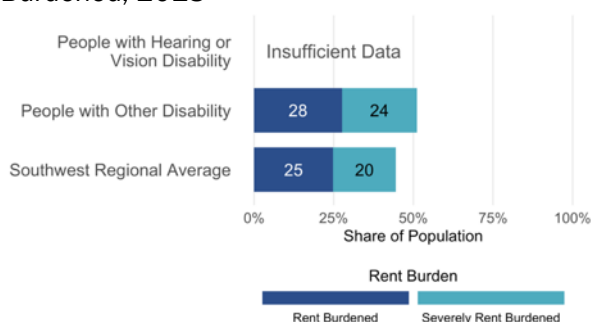
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## People with Disabilities: Southwest

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>99</sup> and the regional average.

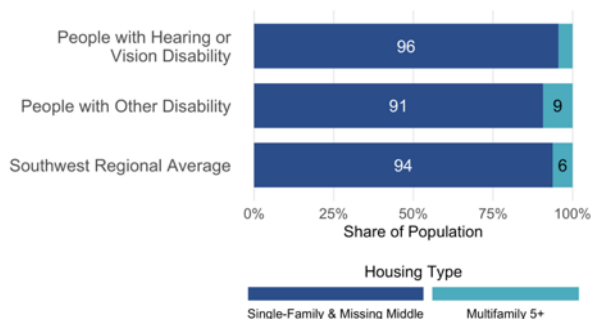
The Southwest region has 82,000 persons with disabilities, accounting for 17% of the region's population. Of these individuals, 20,000 have a hearing or vision disability and 62,000 have some other type of disability, accounting for 4% and 13% of the state's total population, respectively.

**Exhibit 310. Rent Burdened and Severely Rent Burdened, 2018**



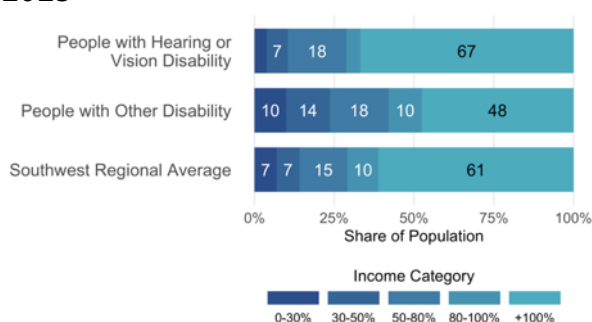
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 312. Housing Type, 2018**



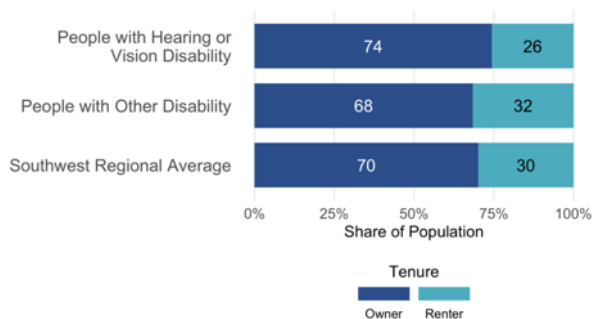
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 311. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 313. Tenure, 2018**



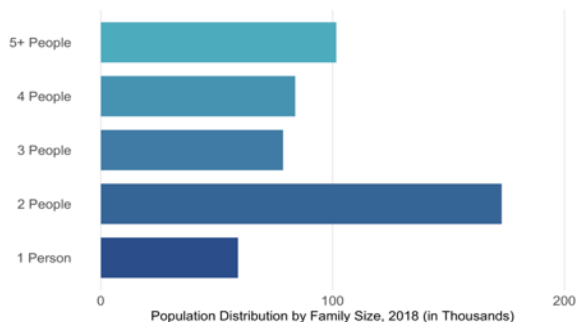
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>99</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

## Family Size: Southwest

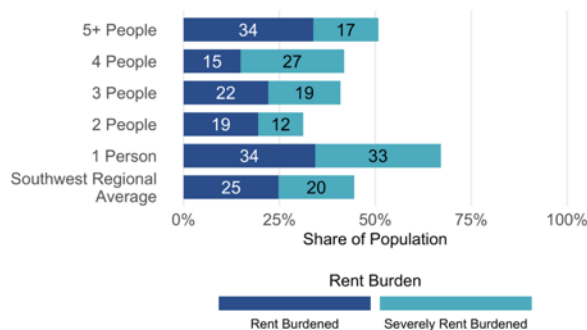
Below is a summary of family size characteristics in the Southwest region and the region's averages of the total population. These charts compare information about family size<sup>100</sup> and the regional average.

**Exhibit 314. Population Distribution by Family Size, 2018**



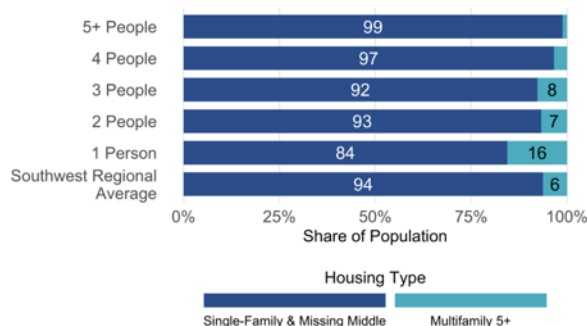
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 316. Rent Burdened and Severely Rent Burdened, 2018**



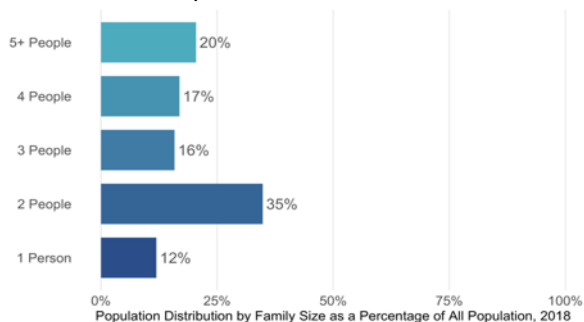
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 318. Housing Type, 2018**



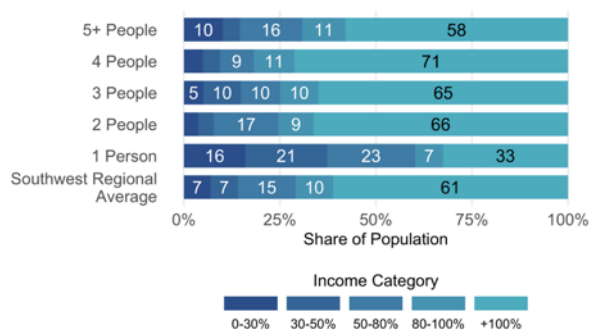
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 315. Population Distribution by Family Size of Total Population, 2018**



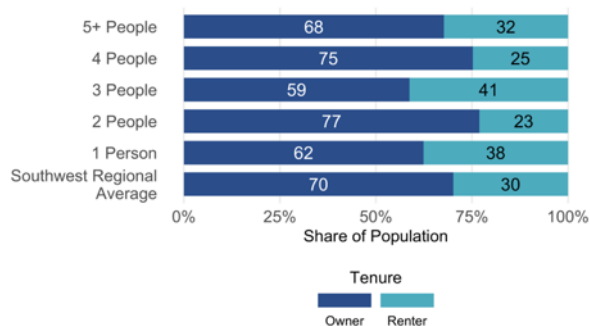
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 317. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 319. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

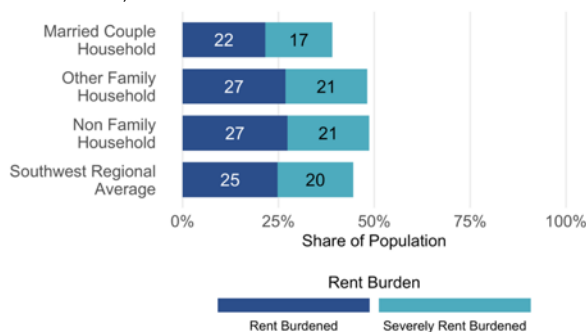
<sup>100</sup> For the purposes of this summary, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

## Household Type: Southwest

Below is a summary of characteristics of household types in the Southwest region and the region's averages of the total population. These charts compare information about married couple households, other family households,<sup>101</sup> non-family households,<sup>102</sup> and the regional average.

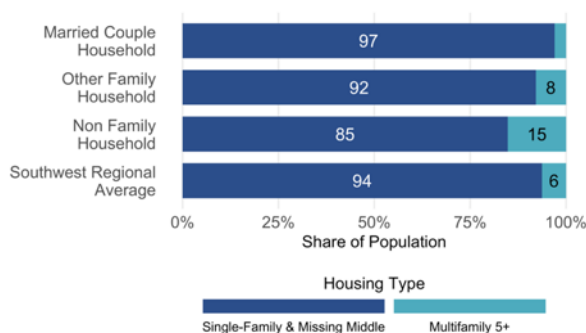
The Southwest region has 309,000 persons in married households, accounting for 62% of the region's total population. In addition, the Southwest region has 90,000 persons in other family households and 97,000 persons in non-family households, accounting for 18% and 20% of the region's population, respectively.

**Exhibit 320. Rent Burdened and Severely Rent Burdened, 2018**



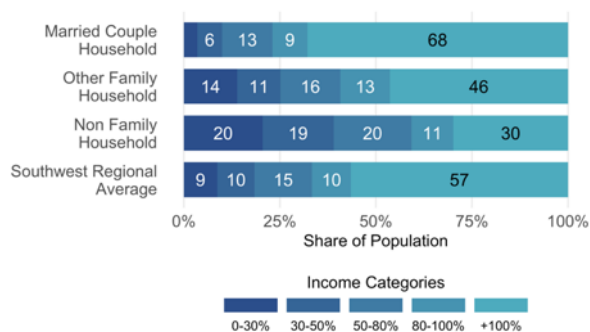
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 322. Housing Type, 2018**



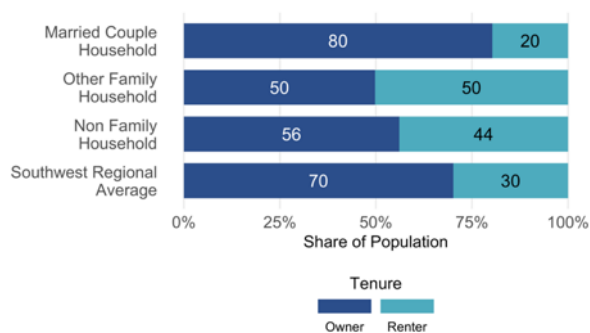
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 321. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 323. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>101</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>102</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

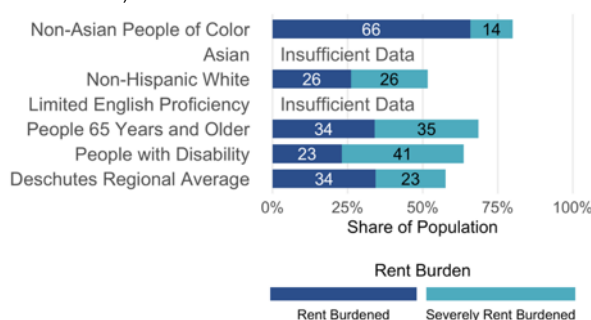
# Deschutes Region

## Summary of Unmet Housing Needs: Deschutes

Below is a summary of unmet housing needs and characteristics for non-Asian people of color,<sup>103</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, people with a disability, and the regional averages of the total population.

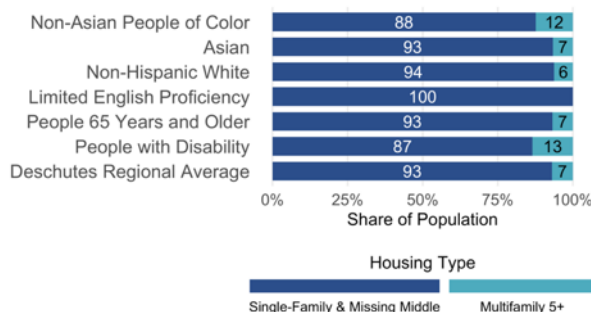
Throughout the Deschutes region, there are 22,000 non-Asian persons of color, accounting for 12% of the region's population, 2,000 or 1% Asian people, 2,000 or 1% with limited English proficiency, 38,000 or 20% aged 65 years or older, and 26,000 or 14% with a disability.

**Exhibit 324. Rent Burdened and Severely Rent Burdened, 2018**



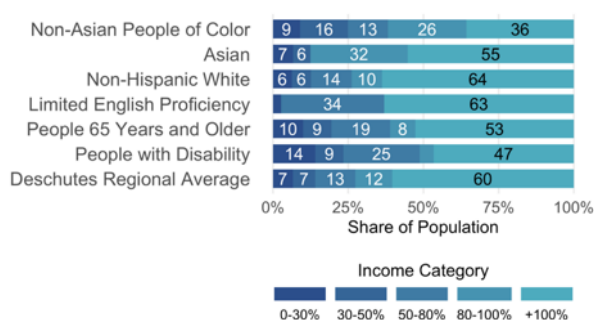
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 326. Housing Type, 2018**



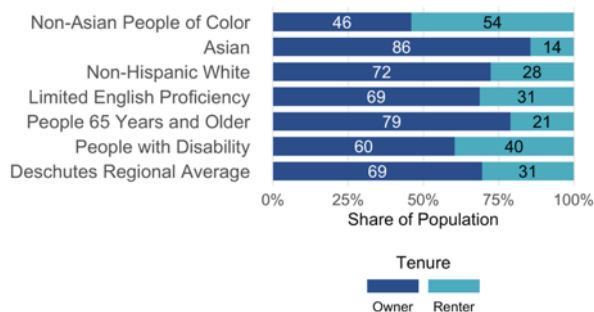
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 325. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 327. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>103</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

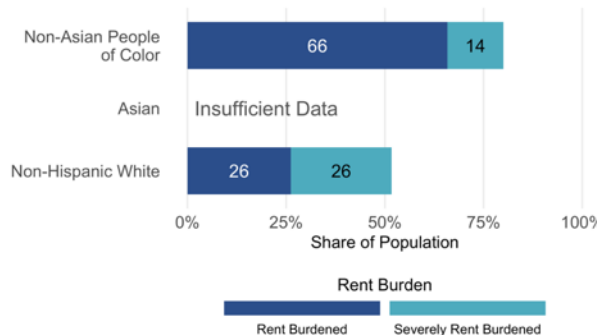
## People of Color: Deschutes

Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population.<sup>104</sup> These charts compare information about the Asian population and people of color with the White population.

The Deschutes region has 22,000 non-Asian persons of color, accounting for 12% of the region's population. In addition, the Deschutes region has 2,000 Asian people and 166,000 White people, accounting for 1% and 87% of the region's population, respectively.

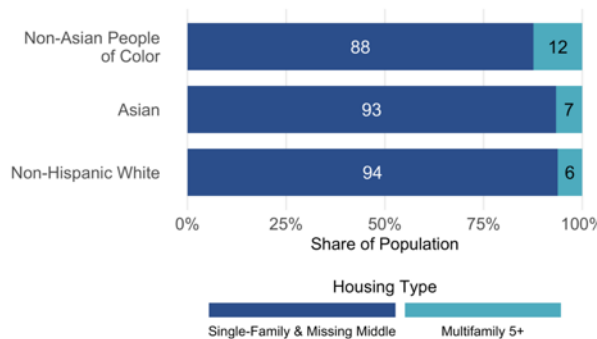
The Deschutes region has 800 people experiencing homelessness, of whom 19% are people of color, compared with less than 1% of Asian people and 81% of White people.

**Exhibit 328. Rent Burdened and Severely Rent Burdened, 2018**



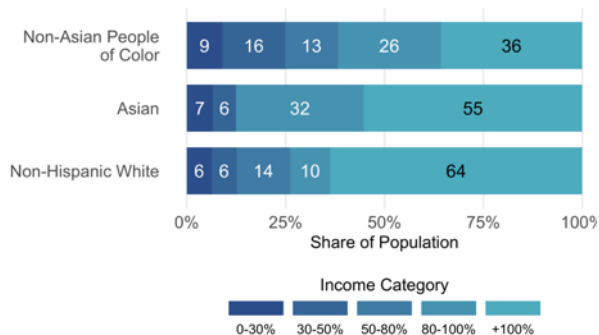
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 330. Housing Type, 2018**



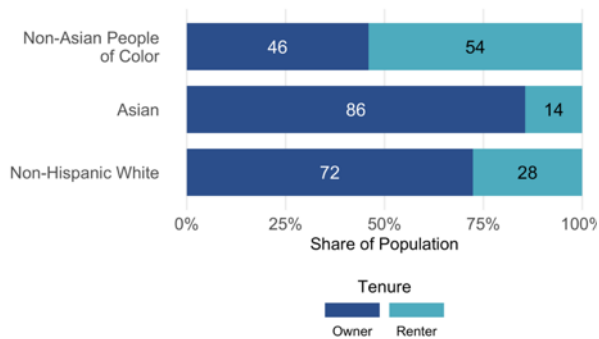
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 329. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 331. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

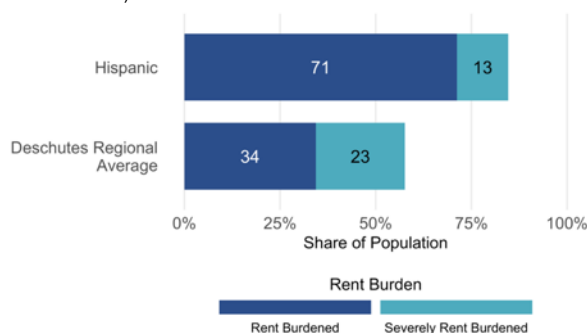
<sup>104</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available.

## Hispanic: Deschutes

Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the regional average.

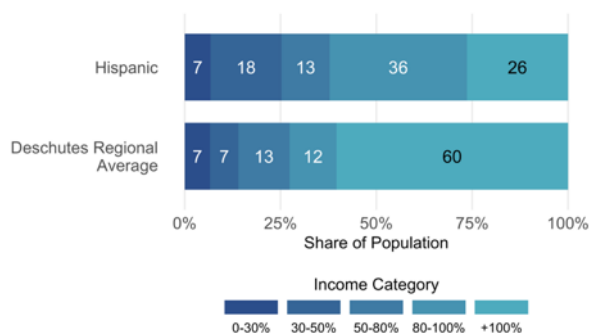
The Deschutes region has 15,000 Hispanic persons, accounting for 8% of the region's population. The Deschutes region has 700 people experiencing homelessness, of whom 13% are Hispanic, compared with less than 1% of Asian people, 79% of White people, 9% of people of color.<sup>105</sup>

**Exhibit 332. Rent Burdened and Severely Rent Burdened, 2018**



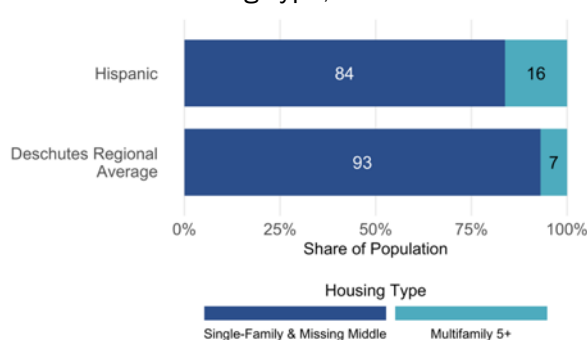
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 333. Household Income Distribution, 2018**



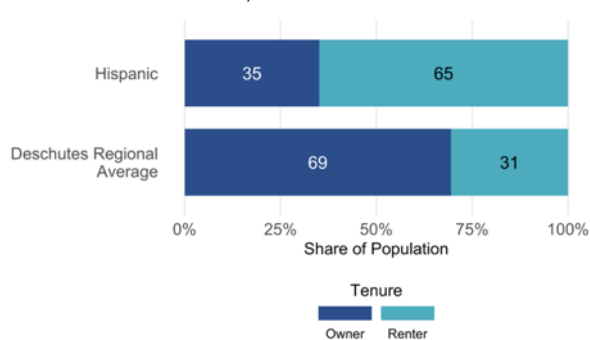
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 334. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 335. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>105</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

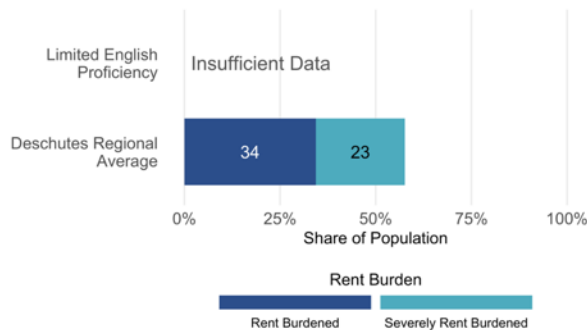


## Limited English Proficiency: Deschutes

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the regional average.

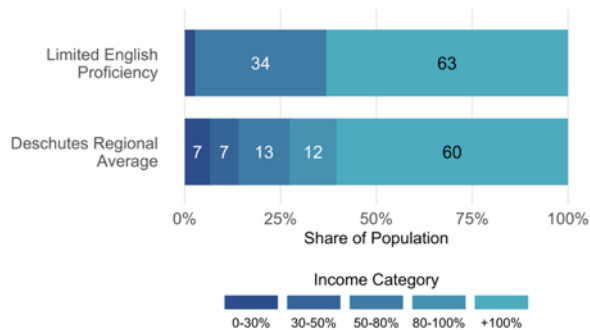
The Deschutes region has 1,600 persons with limited English proficiency, accounting for 1% of the region's population.

**Exhibit 336. Rent Burdened and Severely Rent Burdened, 2018**



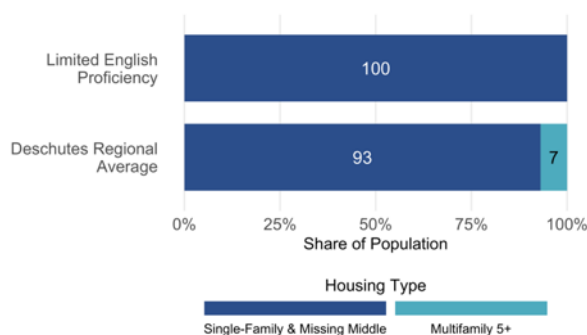
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 337. Household Income Distribution, 2018**



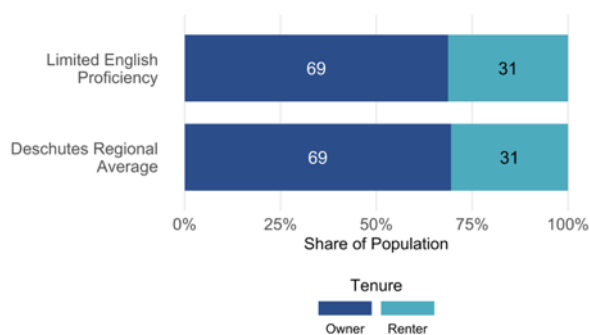
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 338. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 339. Tenure, 2018**



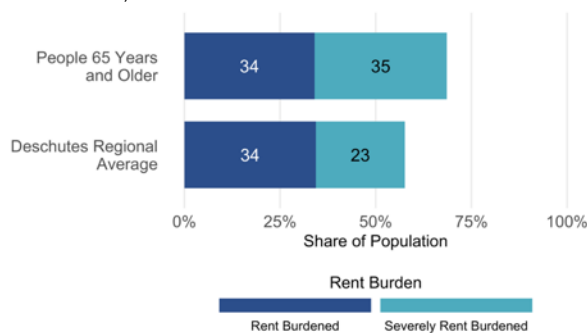
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## Seniors 65 Years and Older: Deschutes

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the regional average.

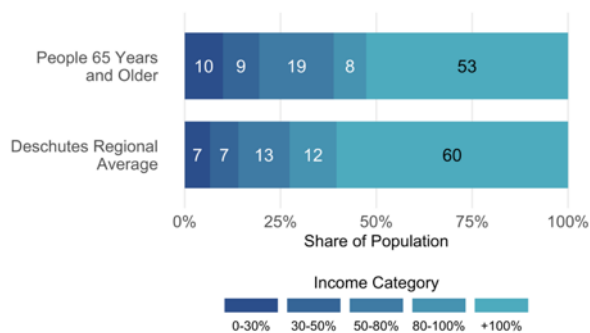
The Deschutes region has 38,000 persons 65 years and older, accounting for 20% of the region's population.

**Exhibit 340. Rent Burdened and Severely Rent Burdened, 2018**



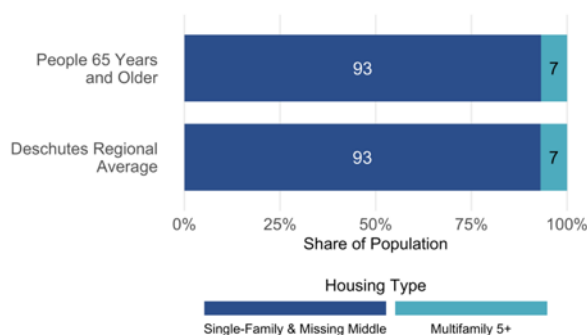
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 341. Household Income Distribution, 2018**



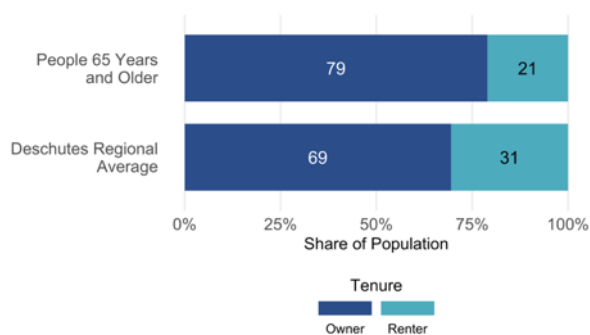
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 342. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 343. Tenure, 2018**



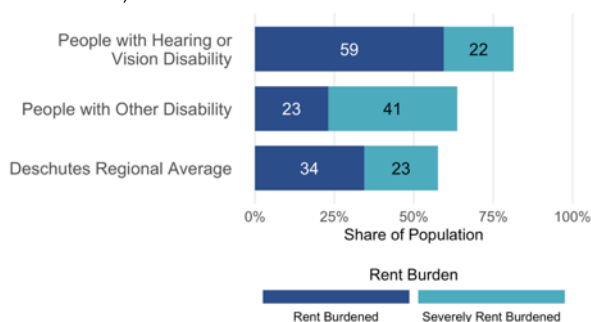
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## People with Disabilities: Deschutes

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>106</sup> and the regional average.

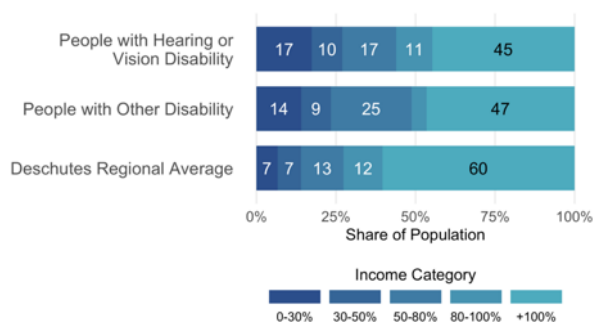
The Deschutes region has 26,000 persons with disabilities, accounting for 14% of the region's population. Of these individuals, 9,000 have a hearing or vision disability and 17,000 have some other type of disability, accounting for 5% and 9% of the state's total population, respectively.

**Exhibit 344. Rent Burdened and Severely Rent Burdened, 2018**



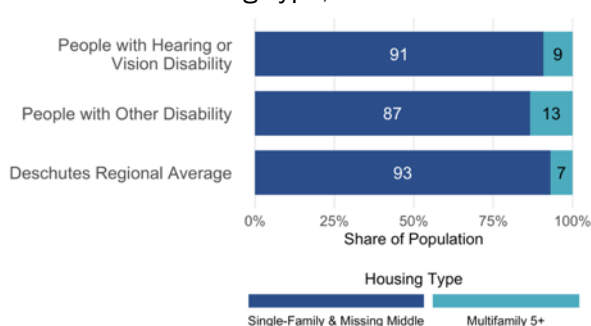
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 345. Household Income Distribution, 2018**



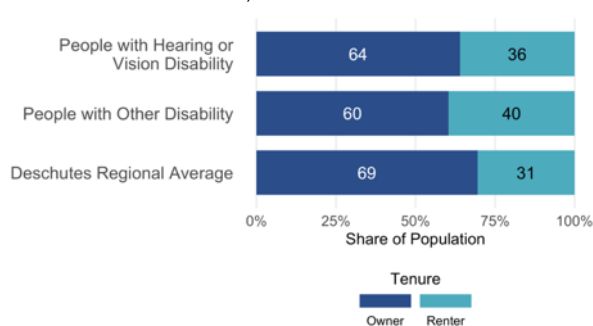
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 346. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 347. Tenure, 2018**



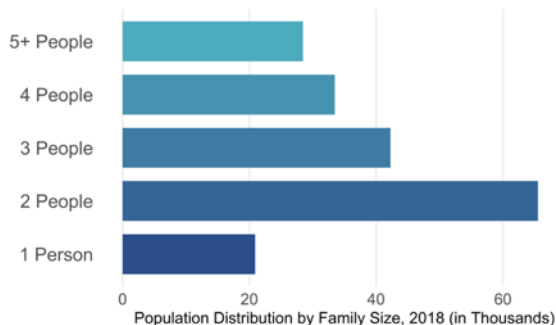
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>106</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

## Family Size: Deschutes

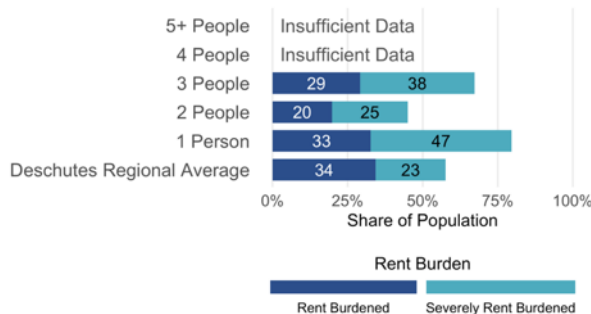
Below is a summary of family size characteristics in the Deschutes region and the region's averages of the total population. These charts compare information about family size<sup>107</sup> and the regional average.

**Exhibit 348. Population Distribution by Family Size, 2018**



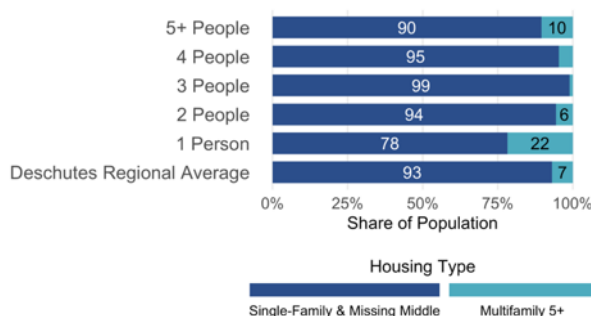
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 350. Rent Burdened and Severely Rent Burdened, 2018**



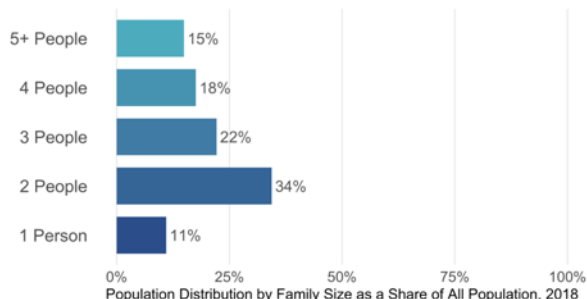
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 352. Housing Type, 2018**



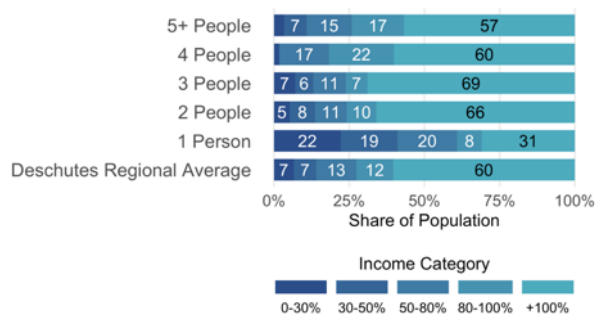
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 349. Population Distribution by Family Size of Total Population, 2018**



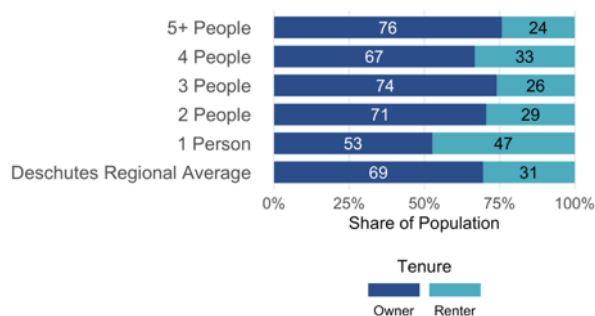
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 351. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 353. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

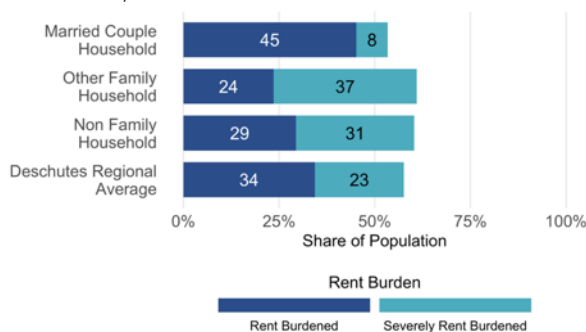
<sup>107</sup> For the purposes of this summary, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

## Household Type: Deschutes

Below is a summary of characteristics of household types in the Deschutes region and the region's averages of the total population. These charts compare information about married couple households, other family households,<sup>108</sup> non-family households,<sup>109</sup> and the regional average.

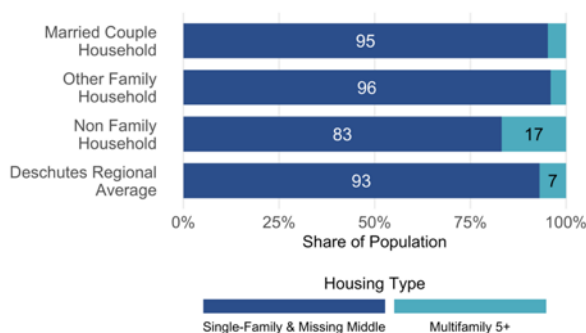
The Deschutes region has 124,000 persons in married households, accounting for 65% of the region's total population. In addition, the Deschutes region has 30,000 persons in other family households and 36,000 persons in non-family households, accounting for 16% and 19% of the region's population, respectively.

**Exhibit 354. Rent Burdened and Severely Rent Burdened, 2018**



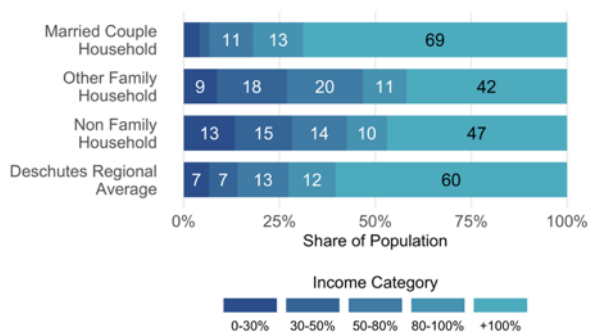
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 356. Housing Type, 2018**



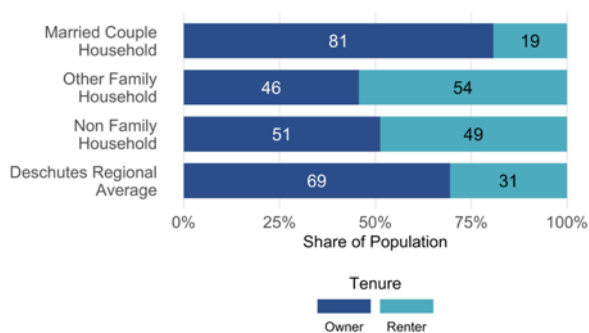
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 355. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 357. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>108</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>109</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

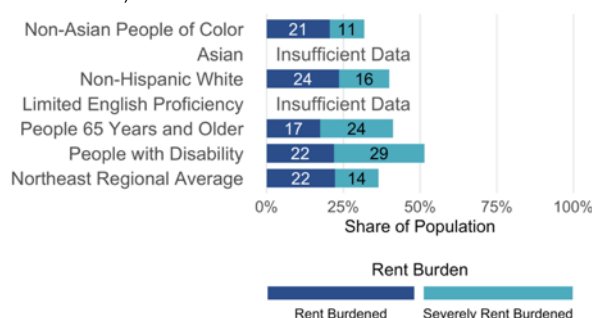
# Northeast Region

## Summary of Unmet Housing Needs: Northeast

Below is a summary of unmet housing needs and characteristics for non-Asian people of color,<sup>110</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, people with a disability, and the regional averages of the total population.

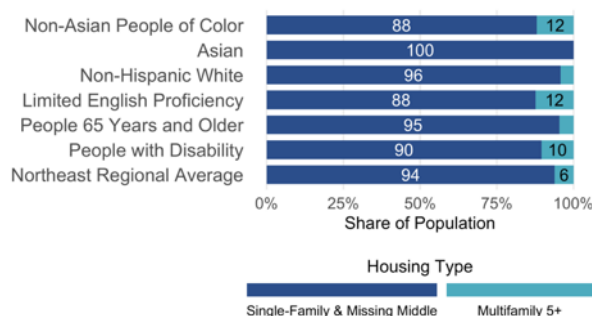
Throughout the Northeast region, there are 60,000 non-Asian persons of color, accounting for 25% of the region's population, 2,000 or 1% Asian people, 6,000 or 3% with limited English proficiency, 47,000 or 20% aged 65 years or older, and 42,000 or 17% with a disability.

**Exhibit 358. Rent Burdened and Severely Rent Burdened, 2018**



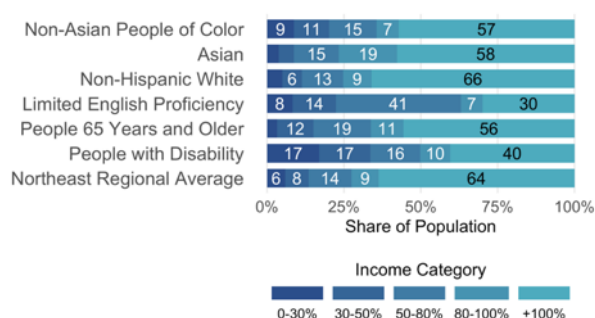
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 360. Housing Type, 2018**



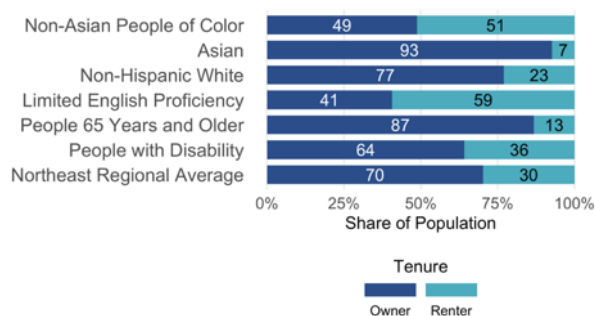
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 359. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 361. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>110</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

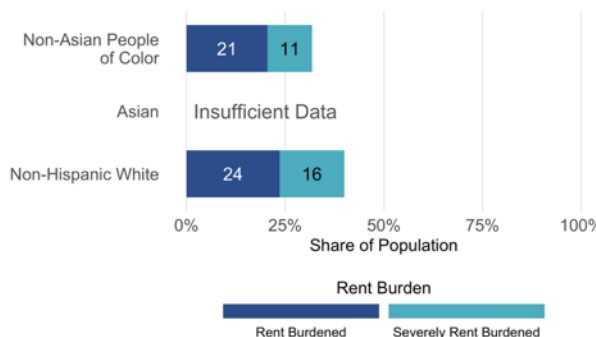
## People of Color: Northeast

Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population.<sup>111</sup> These charts compare information about the Asian population and people of color with the White population.

The Northeast region has 60,000 non-Asian persons of color, accounting for 25% of the region's population. In addition, the Northeast region has 2,000 Asian people and 177,000 White people, accounting for 1% and 74% of the region's population, respectively.

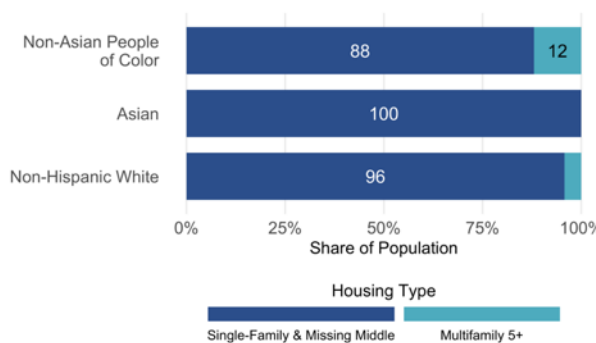
The Northeast region has 500 people experiencing homelessness, of whom 27% are people of color, compared with less than 1% of Asian people and 73% of White people.

**Exhibit 362. Rent Burdened and Severely Rent Burdened, 2018**



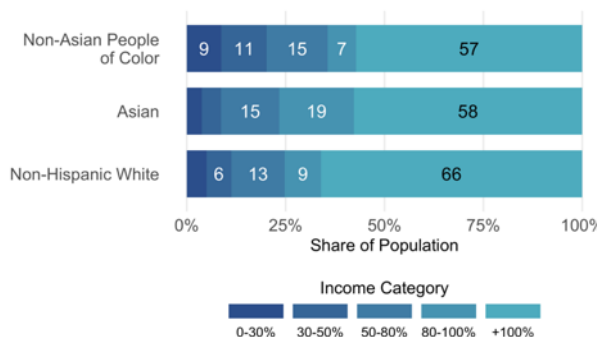
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 364. Housing Type, 2018**



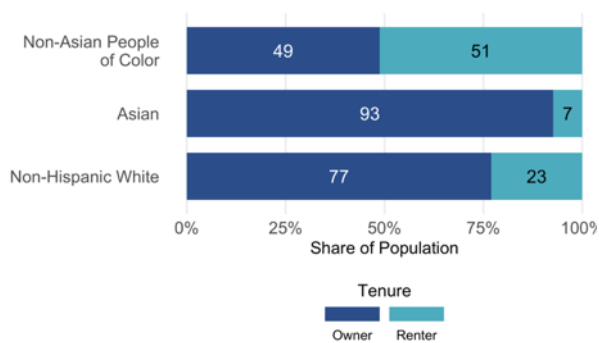
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 363. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 365. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

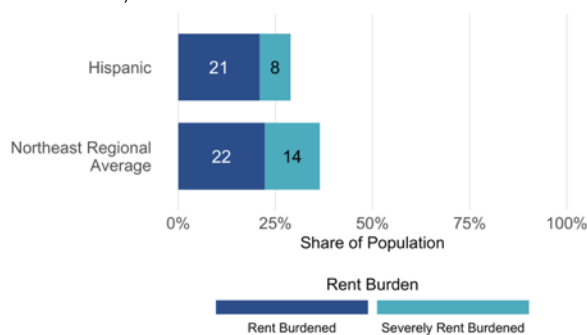
<sup>111</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available.

## Hispanic: Northeast

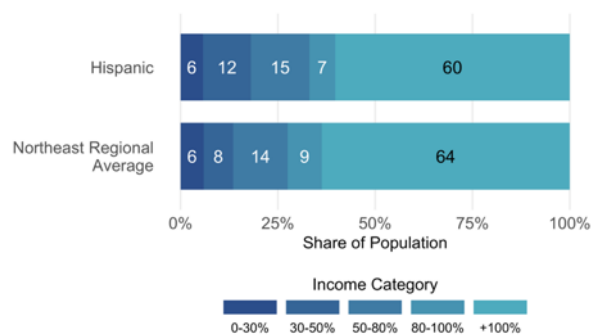
Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the regional average.

The Northeast region has 46,000 Hispanic persons, accounting for 19% of the region's population. The Northeast region has 500 people experiencing homelessness, of whom 16% are Hispanic, compared with less than 1% of Asian people, 68% of White people, and 15% of people of color.<sup>112</sup>

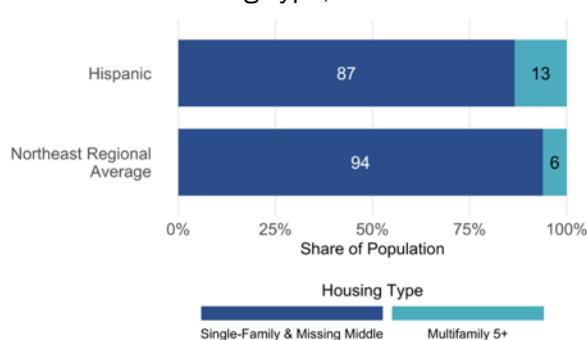
**Exhibit 366. Rent Burdened and Severely Rent Burdened, 2018**



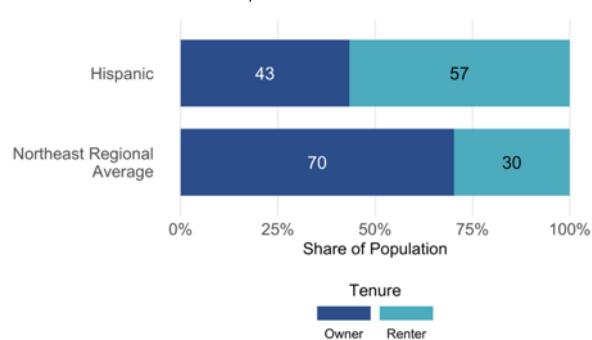
**Exhibit 367. Household Income Distribution, 2018**



**Exhibit 368. Housing Type, 2018**



**Exhibit 369. Tenure, 2018**



<sup>112</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

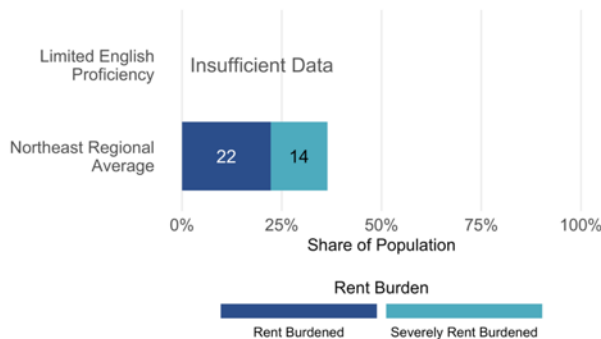


## Limited English Proficiency: Northeast

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the regional average.

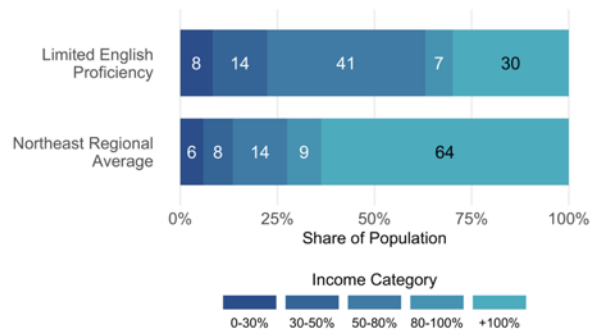
The Northeast region has 6,000 persons with limited English proficiency, accounting for 3% of the region's population.

**Exhibit 370. Rent Burdened and Severely Rent Burdened, 2018**



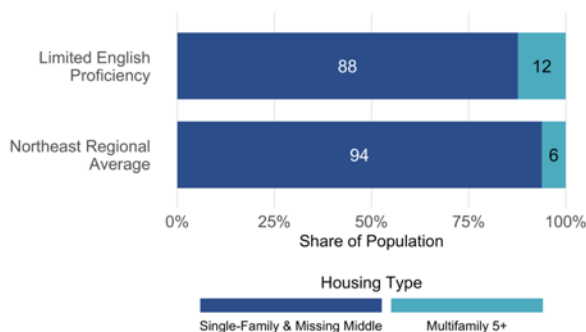
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 371. Household Income Distribution, 2018**



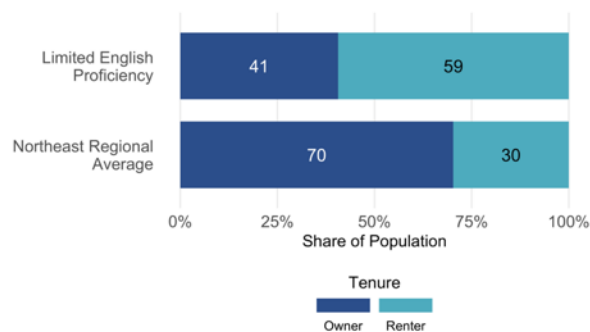
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 372. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 373. Tenure, 2018**



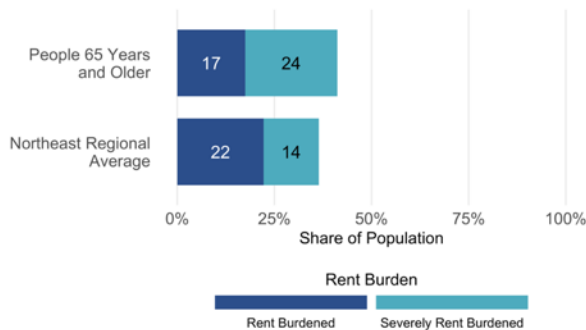
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## 65 Years and Older: Northeast

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the regional average.

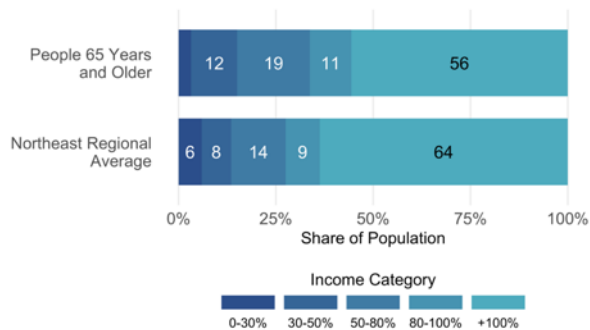
The Northeast region has 47,000 persons 65 years and older, accounting for 20% of the region's population.

**Exhibit 374. Rent Burdened and Severely Rent Burdened, 2018**



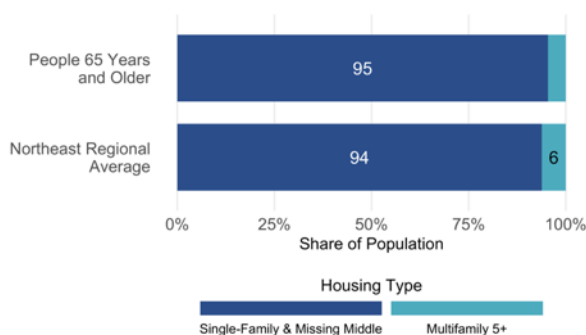
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 375. Household Income Distribution, 2018**



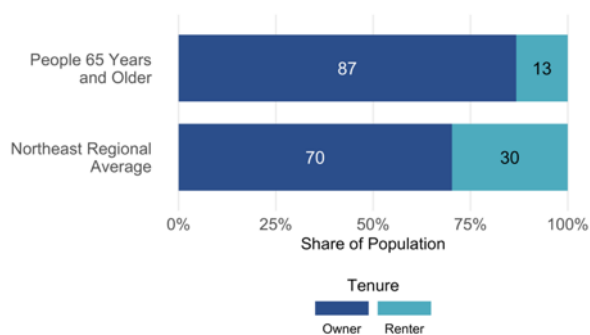
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 376. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 377. Tenure, 2018**



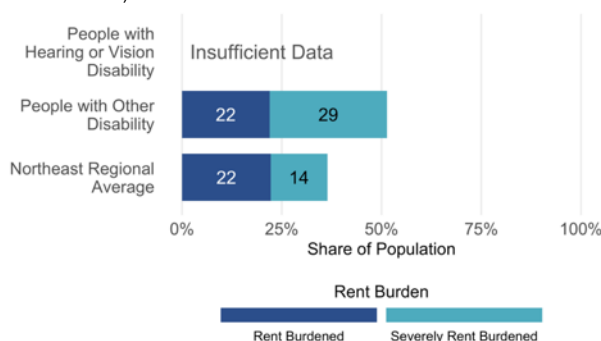
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## People with Disabilities: Northeast

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>113</sup> and the regional average.

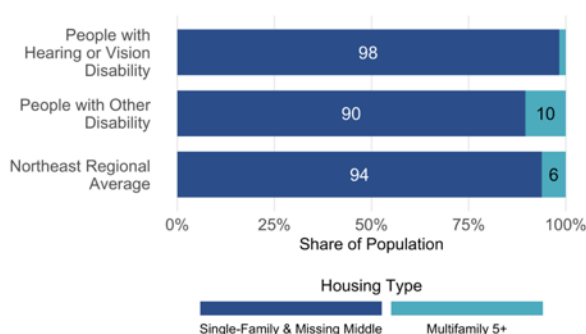
The Northeast region has 42,000 persons with disabilities, accounting for 17% of the region's population. Of these individuals, 12,000 have a hearing or vision disability and 30,000 have some other type of disability, accounting for 5% and 12% of the state's total population, respectively.

**Exhibit 378. Rent Burdened and Severely Rent Burdened, 2018**



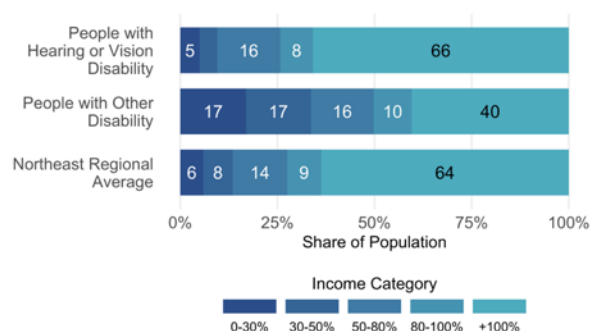
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 380. Housing Type, 2018**



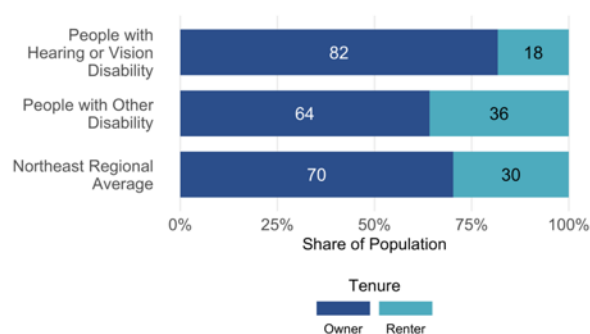
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 379. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 381. Tenure, 2018**



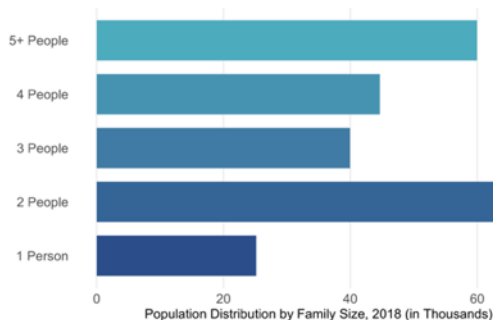
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>113</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

## Family Size: Northeast

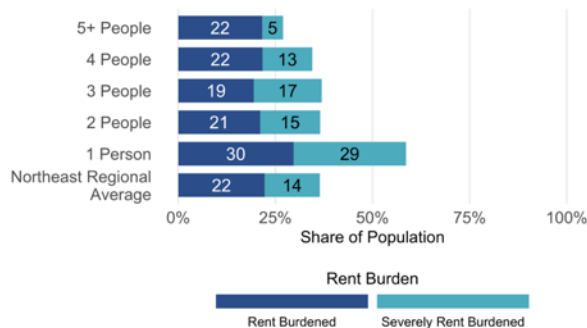
Below is a summary of family size characteristics in the Northeast region and the region's averages of the total population. These charts compare information about family size<sup>114</sup> and the regional average.

**Exhibit 382. Population Distribution by Family Size, 2018**



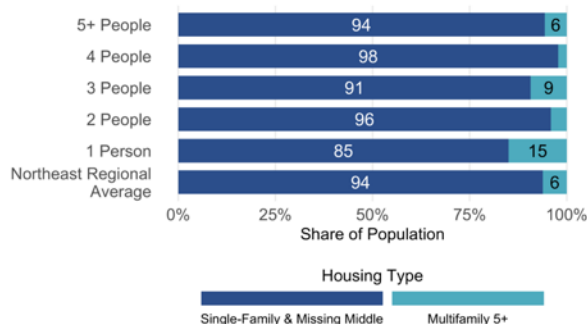
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 384. Rent Burdened and Severely Rent Burdened, 2018**



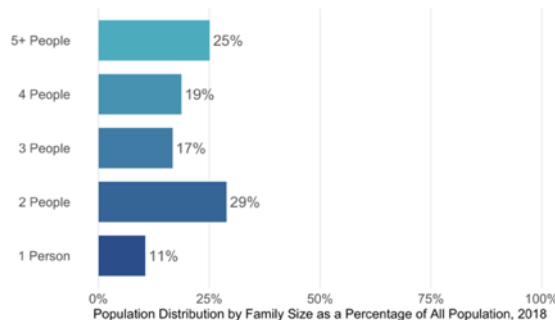
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 386. Housing Type, 2018**



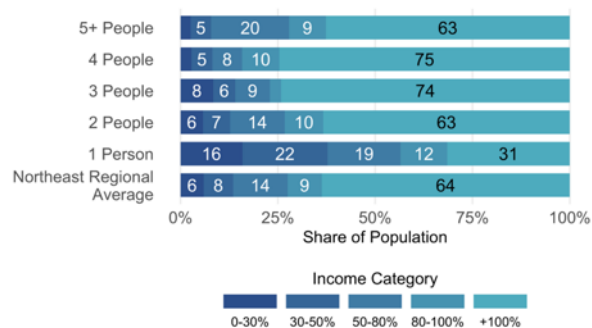
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 383. Population Distribution by Family Size of Total Population, 2018**



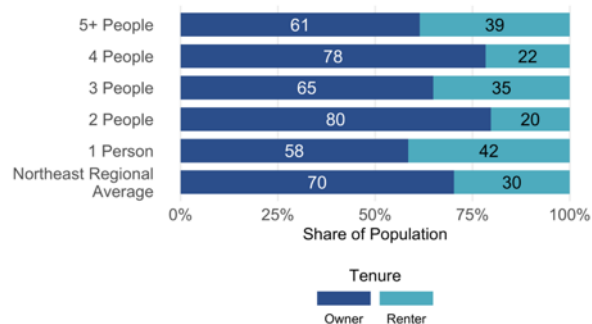
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 385. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 387. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

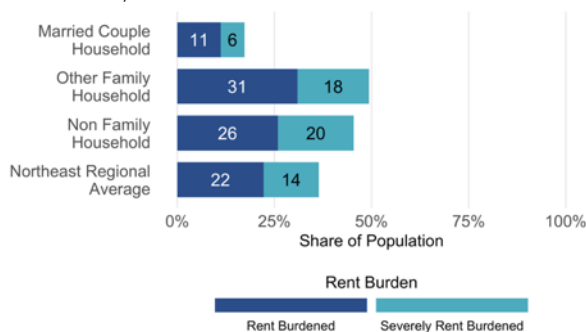
<sup>114</sup> For the purposes of this summary, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

## Household Type: Northeast

Below is a summary of characteristics of household types in the Northeast region and the region's averages of the total population. These charts compare information about married couple households, other family households,<sup>115</sup> non-family households,<sup>116</sup> and the regional average.

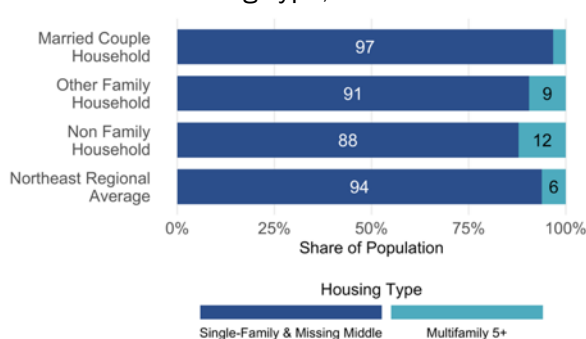
The Northeast region has 144,000 persons in married households, accounting for 61% of the region's total population. In addition, the Northeast region has 54,000 persons in other family households and 41,000 persons in non-family households, accounting for 22% and 17% of the region's population, respectively.

**Exhibit 388. Rent Burdened and Severely Rent Burdened, 2018**



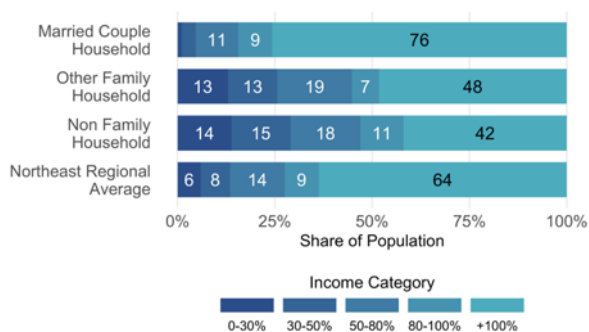
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 390. Housing Type, 2018**



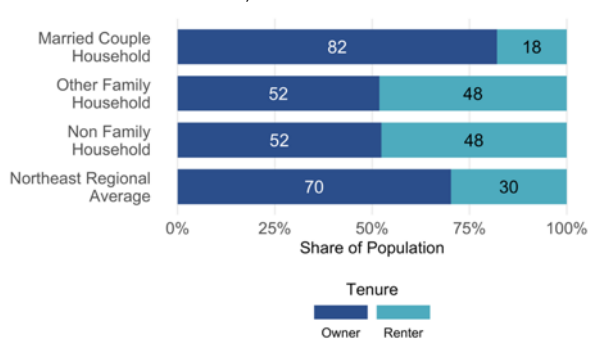
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 389. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 391. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>115</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>116</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

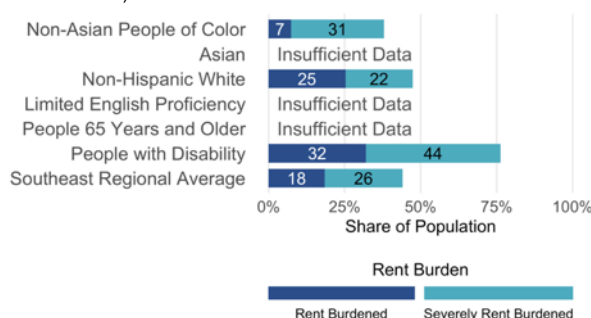
## Southeast Region

### Summary of Unmet Housing Needs: Southeast

Below is a summary of unmet housing needs and characteristics for non-Asian people of color,<sup>117</sup> Asian and White populations, individuals with limited English proficiency, the population aged 65 years and older, people with a disability, and the regional averages of the total population.

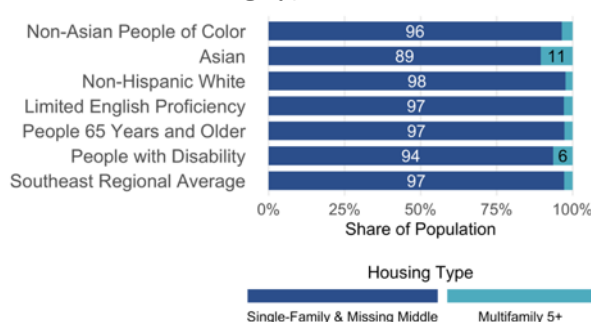
Throughout the Southeast region, there are 27,000 non-Asian persons of color, accounting for 25% of the region's population, 1,000 or 1% Asian people, 4,000 or 4% with limited English proficiency, the population aged 65 years or older, 23,000 or 21% aged 65 years or older, and 22,000 or 20% with a disability.

**Exhibit 392. Rent Burdened and Severely Rent Burdened, 2018**



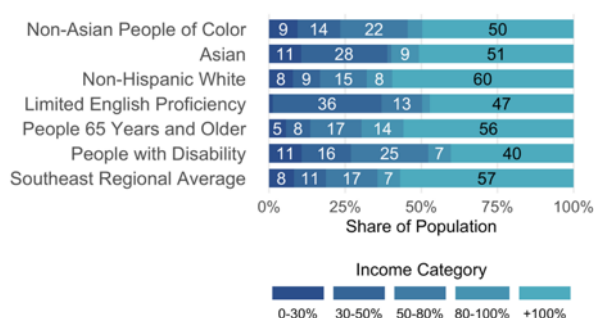
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 394. Housing Type, 2018**



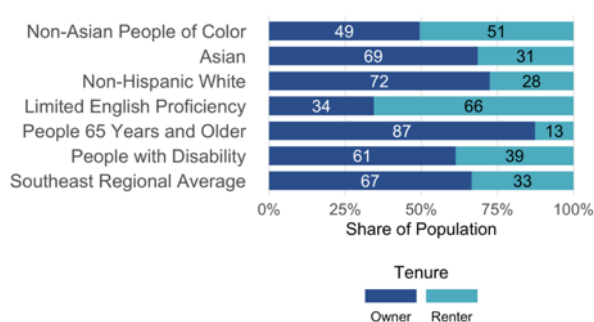
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 393. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 395. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>117</sup> For this summary, the non-Asian people of color category includes: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population. The non-Asian people of color category does not include Asian populations because the income distribution and rates of cost burden among Asian populations are, on average, similar to those among the non-Hispanic White population. Information about Asian and White populations are presented in other parts of the chapter.

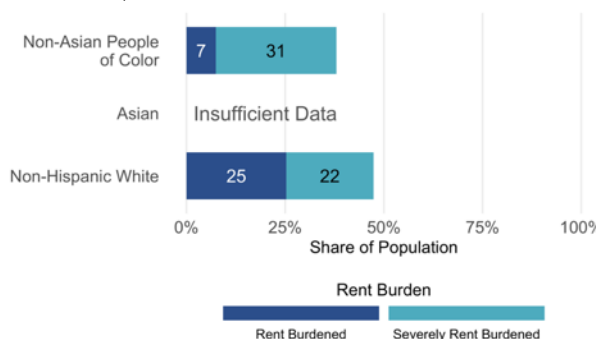
## People of Color: Southeast

Below is information about housing affordability and characteristics for non-Asian people of color, which includes people in the following groups: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, people of two or more races, and the Hispanic population.<sup>118</sup> These charts compare information about the Asian population and people of color with the White population.

The Southeast region has 27,000 non-Asian persons of color, accounting for 25% of the region's population. In addition, the Southwest region has 1,000 Asian people and 79,000 White people, accounting for 1% and 74% of the region's population, respectively.

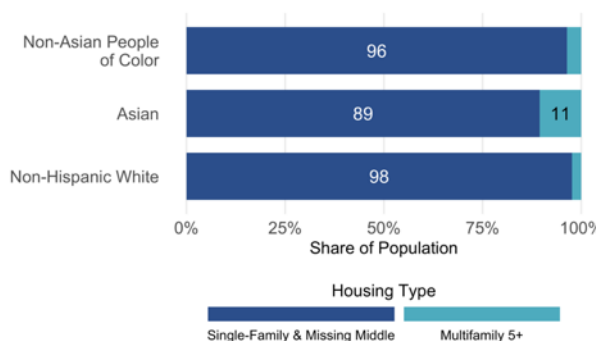
The Southeast region has 500 people experiencing homelessness, of whom 32% are people of color, compared with 1% of Asian people and 68% of White people.

**Exhibit 396. Rent Burdened and Severely Rent Burdened, 2018**



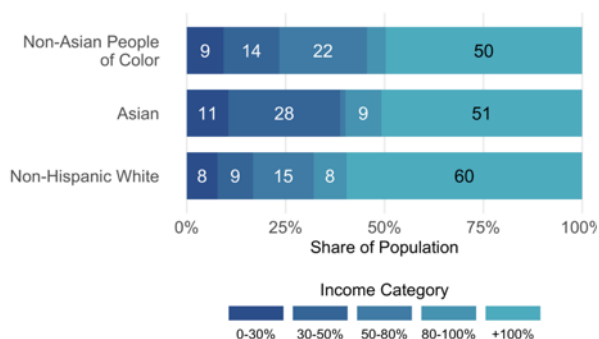
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 398. Housing Type, 2018**



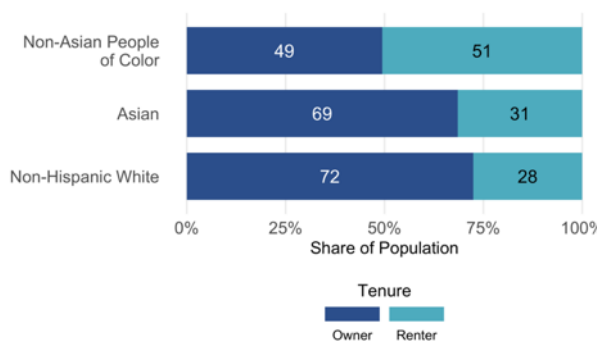
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 397. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 399. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

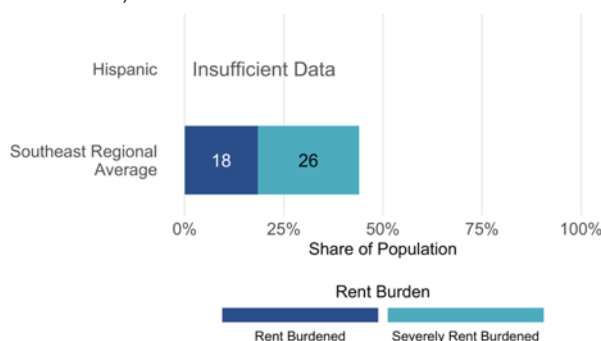
<sup>118</sup> We group these people of color together because there is not sufficient information to show differences in housing affordability and housing characteristics for each of the people of color in all of the regions. Subsequent sections present additional information about individual people of color by region, where data is available.

## Hispanic: Southeast

Below is information about housing affordability and characteristics of the Hispanic population. These charts compare information about the Hispanic population and the regional average.

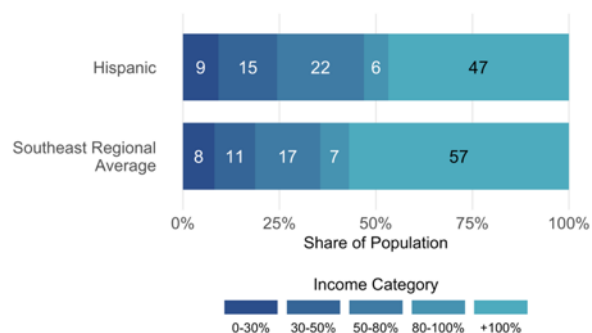
The Southeast region has 19,000 Hispanic persons, accounting for 18% of the region's population. The Southeast region has 400 people experiencing homelessness, of whom 24% are Hispanic, compared with 1% of Asian people, 60% of White people, and 16% of people of color.<sup>119</sup>

**Exhibit 400. Rent Burdened and Severely Rent Burdened, 2018**



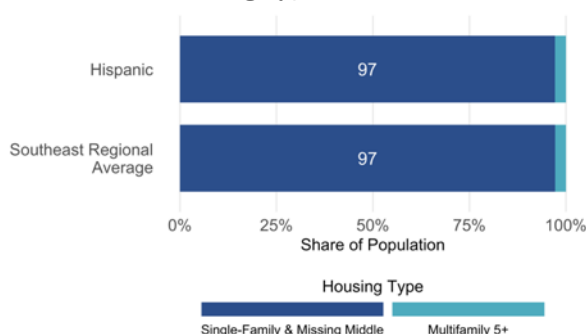
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 401. Household Income Distribution, 2018**



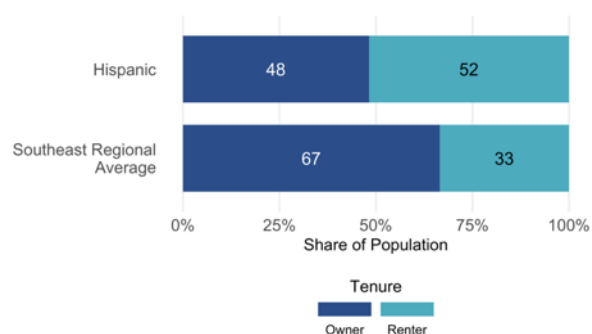
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 402. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 403. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>119</sup> This includes the following race categories: American Indian or Alaska Native, Black or African American, Native Hawaiian or Pacific Islander, and multiple races.

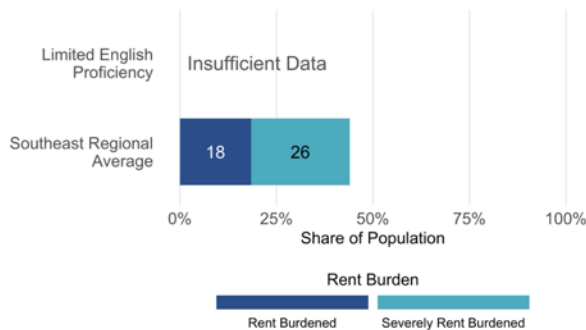


## Limited English Proficiency: Southeast

Below is information about housing affordability and characteristics of the population with limited English proficiency. These charts compare information about the population with limited English proficiency and the regional average.

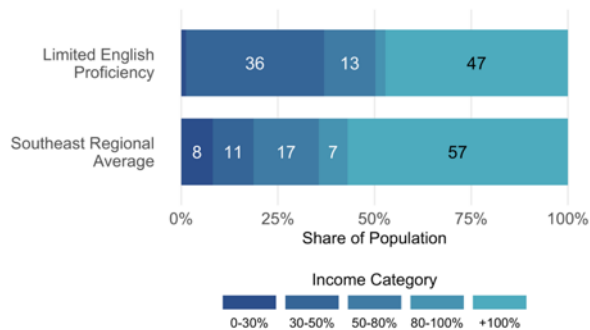
The Southeast region has 4,500 persons with limited English proficiency, accounting for 4% of the region's population.

**Exhibit 404. Rent Burdened and Severely Rent Burdened, 2018**



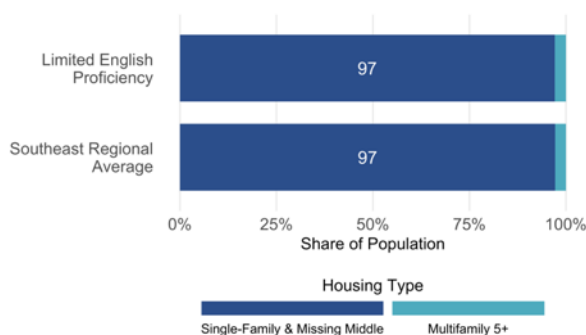
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 405. Household Income Distribution, 2018**



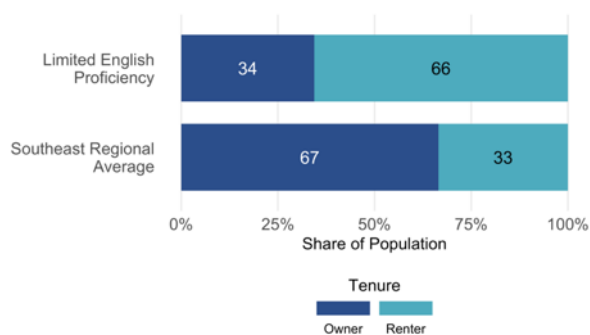
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 406. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 407. Tenure, 2018**



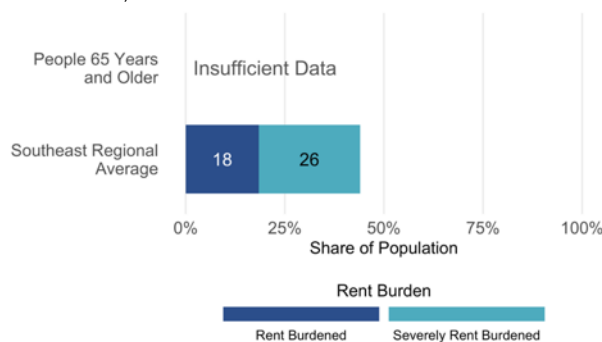
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## Seniors 65 Years and Older: Southeast

Below is information about housing affordability and characteristics of the population 65 years and older. These charts compare information about the population 65 years and older and the regional average.

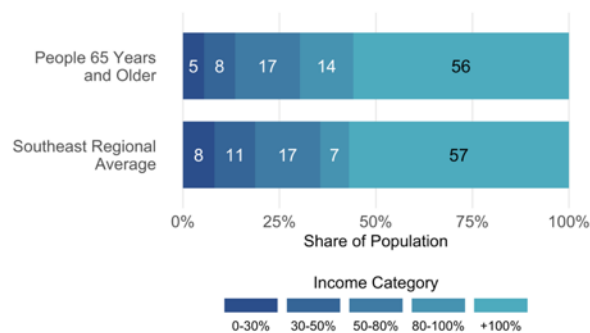
The Southeast region has 23,000 persons 65 years and older, accounting for 21% of the region's population.

**Exhibit 408. Rent Burdened and Severely Rent Burdened, 2018**



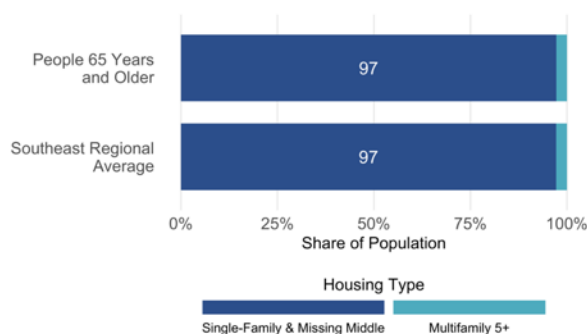
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 409. Household Income Distribution, 2018**



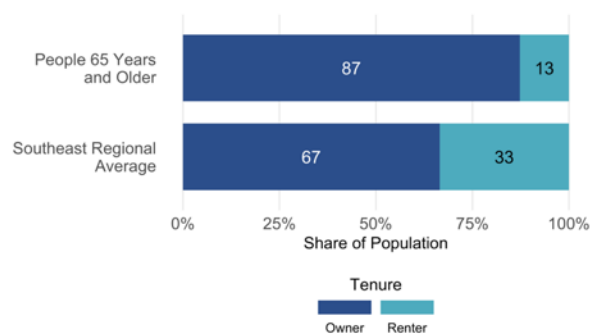
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 410. Housing Type, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 411. Tenure, 2018**



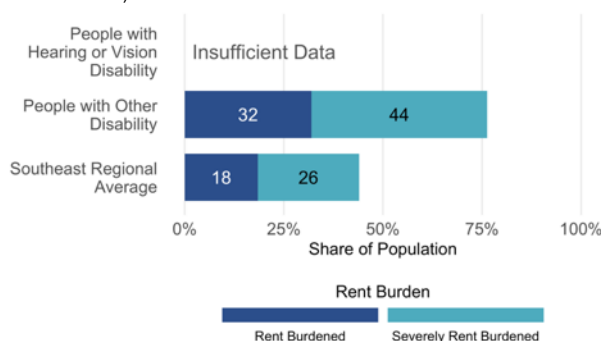
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

## People with Disabilities: Southeast

Below is information about housing affordability and characteristics of the population with disabilities. These charts compare information about the population with hearing or vision disabilities, people with another type of disability,<sup>120</sup> and the regional average.

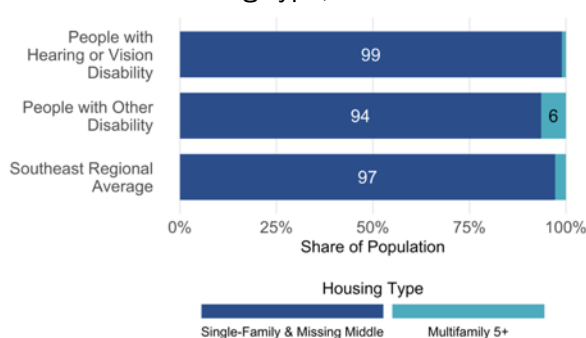
The Southeast region has 22,000 persons with disabilities, accounting for 20% of the region's population. Of these individuals, 6,000 have a hearing or vision disability and 16,000 have some other type of disability, accounting for 5% and 15% of the state's total population, respectively.

**Exhibit 412. Rent Burdened and Severely Rent Burdened, 2018**



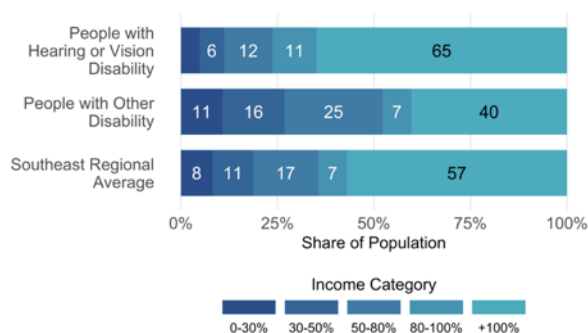
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 414. Housing Type, 2018**



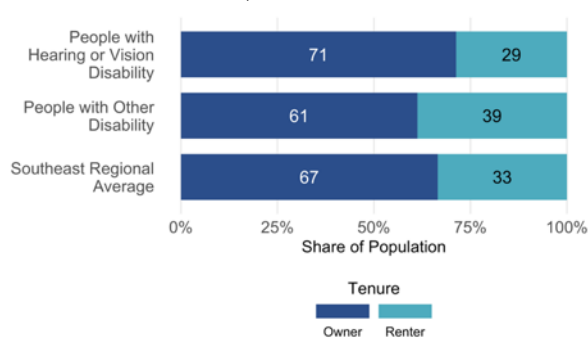
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 413. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 415. Tenure, 2018**



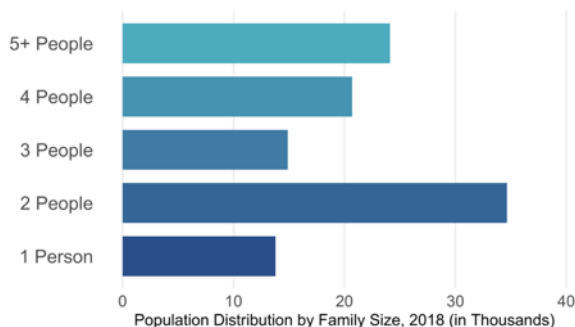
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>120</sup> Other types of disabilities include self-care difficulty (having difficulty bathing or dressing), independent living difficulty (having difficulty doing errands alone), ambulatory difficulty (having serious difficulty walking or climbing stairs), and cognitive difficulty (having difficulty remembering, concentrating, or making decisions).

## Family Size: Southeast

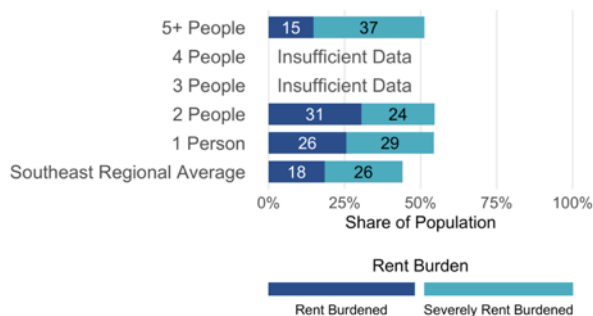
Below is a summary of family size characteristics in the Southeast region and the region's averages of the total population. These charts compare information about family size<sup>121</sup> and the regional average.

**Exhibit 416. Population Distribution by Family Size, 2018**



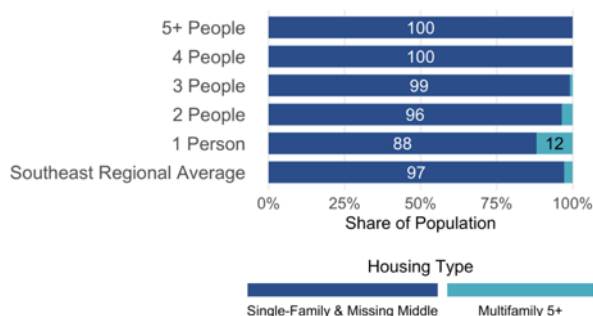
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 418. Rent Burdened and Severely Rent Burdened, 2018**



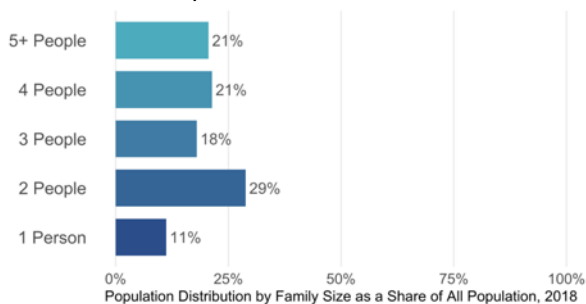
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 420. Housing Type, 2018**



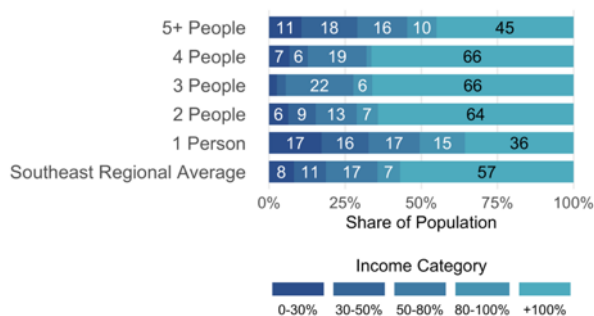
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 417. Population Distribution by Family Size of Total Population, 2018**



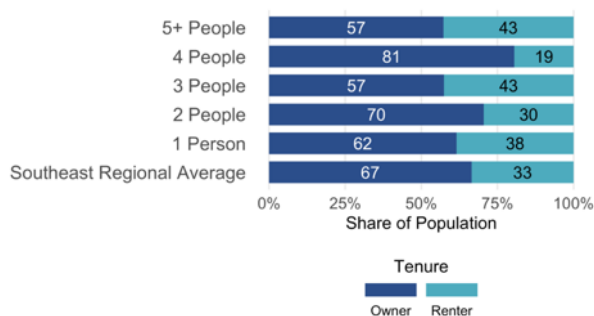
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 419. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 421. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

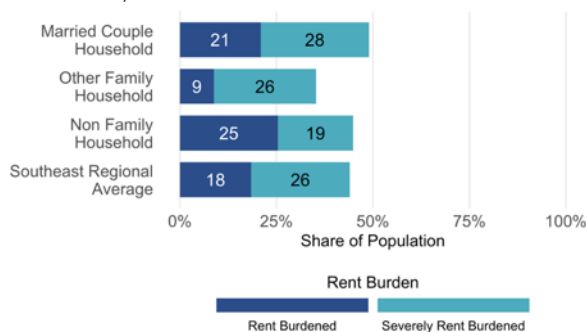
<sup>121</sup> For the purposes of this summary, family is considered to be all people who occupy a single housing unit, regardless of their relationship to one another.

## Household Type: Southeast

Below is a summary of characteristics of household types in the Southeast region and the region's averages of the total population. These charts compare information about married couple households, other family households,<sup>122</sup> non-family households,<sup>123</sup> and the regional average.

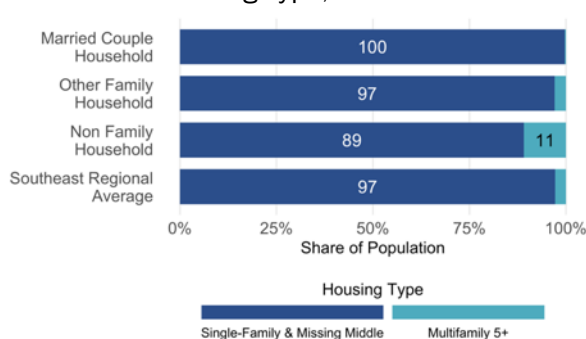
The Southeast region has 65,000 persons in married households, accounting for 60% of the region's total population. In addition, the Southeast region has 23,000 persons in other family households and 20,000 persons in non-family households, accounting for 19% and 21% of the region's population, respectively.

**Exhibit 422. Rent Burdened and Severely Rent Burdened, 2018**



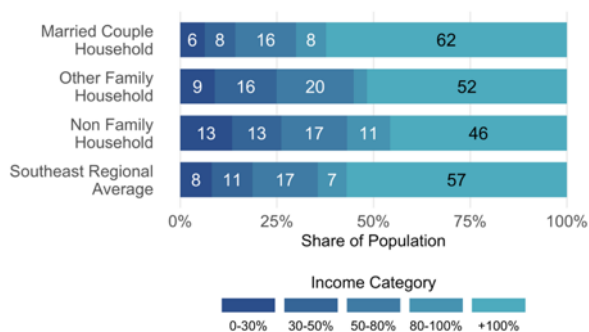
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 424. Housing Type, 2018**



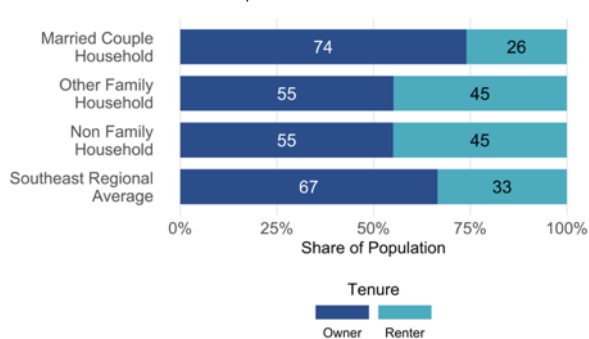
Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 423. Household Income Distribution, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

**Exhibit 425. Tenure, 2018**



Source: U.S. Census, 2018 ACS 1-year PUMS estimates

<sup>122</sup> The Census defines other family household as a householder living with at least one other relative, but with no spouse present.

<sup>123</sup> The Census defines non-family household as a householder living alone (i.e. a one-person household) or sharing the unit exclusively with people to whom they are not related to.

# Appendix G. Stakeholder Engagement

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This appendix summarizes the process of engagement of stakeholders external to OHCS as part of the HB 2003 RHNA development project. OHCS led the engagement process and created this appendix.

## Overview

Developing Oregon's first and the nation's second statewide regional housing needs analysis within the setting of Oregon's unique and storied land use and housing planning system was sure to be a hefty project from the start. The project required both careful attention to the technical details and choices involved in developing a new methodology as well as to the substantial impact and interest this would generate for the stakeholders with interest in housing development. Ideally, the research process to develop the methodology could involve stakeholders from start to finish in providing feedback on both the technical and non-technical (e.g. implementation) aspects of the project. In this way, the product developed is not only likely to be more technically robust, but also to be something that is able to be deployed and accepted within the existing system. Due to tight legislatively imposed timelines, stakeholder engagement began in earnest with a draft methodology for stakeholders to respond to.

## California's example

California implements the nation's only other comprehensive state-wide housing need methodology designed to integrate with local implementation. Its process has been in operation for over 40 years and provides one model for stakeholder engagement. Every 8-year cycle still involves an extensive stakeholder engagement process that can take a year or more to determine the precise calculations involved just in *one* of the steps of a RHNA: allocating regional need to local jurisdictions.

California's process is distinct in many ways from the requirements specified for Oregon's RHNA in HB 2003. In particular, the process for allocating regional need to local jurisdictions is left to local Councils of Government (COGs) in California, but in Oregon is part of the statewide methodology. The lack of official, coordinated stakeholder involvement (such as through COGs) in the allocation process in Oregon, however, makes stakeholder input on the allocation methodology that much more critical.

## Plan for engagement

OHCS recognized that the process of creating this methodology would be best served by an extensive and broad statewide stakeholder engagement as was possible. OHCS was motivated to engage in this process in keeping with the specific technical requirements and timelines for execution and completion of the work. As a result, the project team focused on delivery of a

research product by the stipulated timelines and made plans for stakeholder engagement that would fit within that. This included:

- **Preparation of the work plan.** OHCS consulted several other state agencies, local universities, COGs, city planners, Metro, California's Department of Housing and Community Development, and others while preparing the work plan for the project.
- **Initial review of and consultation on our work plan.** The scope of work developed between OHCS and ECONorthwest was distributed publicly by January 2020. OHCS took public comment on the scope of work for 30 days. We also held two 2-hour open events January 27 and 28 with an option to attend digitally or in-person in Salem and Portland to walk through an explanation of the scope of work and receive feedback on it.
- **Space to receive input and advice along the way.** Specifically, we considered that the most important time to receive feedback during our development process would be after drafting and running the Beta version of the RHNA so that feedback could serve as input for improvement to shape the Recommended version of the RHNA methodology. We established an advisory committee of technical experts that could focus and offer consultation on the most technical aspects of the project, while also providing opportunity for broader stakeholder and public input from those not serving on the committee. From April to July, 2020 OHCS virtually held a series of six 2-3 hour long meetings with a combination of the advisory committee and more general stakeholders and the public for this purpose.<sup>124</sup> Additionally, ECONorthwest and OHCS staff completed one-on-one interviews with a limited set of technical stakeholders to verify methodological choices and gather input. These interviews included technical experts familiar with (and sometimes critical of) California's RHNA methodology and implementation system.
- **Information sharing during development of the RHNA.** OHCS sent interested stakeholders monthly announcements about the RHNA. OHCS also established a website to post regular information related to the RHNA, and resources for project information including project timelines, links to recorded meetings, written summaries of the meetings, and slides from presentations, which was accessible to all interested parties. The information from all 8 engagement opportunities mentioned above will be hosted on the website <https://www.oregon.gov/ohcs/about-us/Pages/housing-needs.aspx> through at least August 2021<sup>125</sup>.
- **Final consultation on results and recommendations.** After the methodology, results, and a report are published in September 2020, stakeholder involvement is still critical as recommendations to Department of Land Conservation and Development (DLCD) and

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<sup>124</sup> Initial plans were likewise to offer both in-person and digital attendance for all of these meetings, but the disruption of COVID-19 in March 2020 moved our plans to online only participation.

<sup>125</sup> After this, the page will be archived but still available through public records requests.

the legislature about how to continue this work are finalized. Joint engagement between OHCS and DLCD with stakeholders is planned for Fall 2020.

## State agencies' contributions to the project

Coordination with the DLCD and the Department of Administrative Services (DAS) was a requirement of the legislation for the development of the RHNA. Within DAS, the Office of Economic Analysis (OEA) was the key player as part of the coordinated project team that led this work and consulted together on a regular basis, with other members from DAS contributing as well. The Governor's Office provided significant support. Other state agencies consulted on or involved in this work included the Oregon Department of Transportation (ODOT), Department of Human Services (DHS), Geospatial Enterprise Office (GEO), Oregon Employment Department (OED), and Regional Solutions Centers.

## Technical Advisory Committee

Members of the technical advisory committee included:

Andres Lopez, Coalition Communities of Color	Nikki Hart-Brinkley, Rogue Valley Council of Governments
Becky Knudson, ODOT	Rebecca Lewis, University of Oregon
Damian Syrnyk, City of Bend	Taylor Smiley Wolfe, Home Forward (formerly worked for Speaker of the House, the Chief Sponsor of HB 4003 (2019), during the 2019 Legislative Session)
David Williams, Opportunity Insights	Ted Reid, Metro
Dennis Yee, Metro	Tyler Bump, ECONorthwest
Dustin Nilsen, City of Hood River	
Marisa Zapata, Portland State University	
Matthew Gebhardt, Portland State University	
Michael Boquist, City of La Grande	

## Other stakeholders involved

A broader group of stakeholders were invited to listen in on meetings of the technical advisory committee and provide input through other stakeholder meetings. Stakeholders, including those not on this list, were also invited to submit written comments about the RHNA. Not all participants provided comments or feedback. Invitees and participants of the stakeholder engagement process included people from the following organizations, as well as some individual citizens:

1000 Friends of Oregon	Home Builders Association Metropolitan Portland
Angelo Planning	Housing Authority Clackamas County
Association of Oregon Counties	Housing Authority of Jackson County
Association of Realtors	Housing for All
Burns Paiute Housing Authority	Housing Land Advocates
Central City Concern	Human Solutions
Central Oregon Builders Association	Klamath Tribes Housing
City of Albany	Landye Bennett
City of Bend	Law Office of Mike Reeder
City of Corvallis	League of Oregon Cities



City of Eugene	League of Women Voters of Oregon
City of Grand Ronde	Metro
City of Hillsboro	Mid-Willamette Council of Governments
City of Hood River	Mid-Willamette Valley Homeless Alliance
City of La Center	Multifamily Northwest
City of Madras	North Bend City/Coos-Curry Housing Authorities
City of McMinnville	Northwest Economic Research Center - PSU
City of Newport	Northwest Housing Alternatives
City of Portland	Oregon Cascades West Council of Governments
City of Redmond	Oregon Home Builders Association
City of Salem	Oregon Housing Alliance
City of Tualatin	Oregon Smart Growth
City of Turner	Portland Community Reinvestment Initiatives
Clackamas County	Portland State University
Commonworks Consulting	Reach CDC
Community Partners for Affordable Housing	Sabin CDC
Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians	Siletz Tribal Housing
Confederated Tribes of the Umatilla Indian Reservation	Specialized Housing, Inc.
Coquille Indian Housing Authority	St. Vincent de Paul Society of Lane County, Inc.
Cow Creek Tribe	Think Real Estate
Energy Trust of Oregon	United Way Mid-Willamette Valley
Fair Housing Council of Oregon	University of Oregon
Farmworker Housing Development Corporation	Warm Springs Housing Authority
Hacienda CDC	Washington County

## Importance of stakeholder contributions

The contributions of stakeholders to this process and weight of their advice and consultation in the choices that were made to develop the project are woven into the Recommended version of the RHNA methodology presented in this report. We acknowledge that engagement was limited by the time requirements of the project and *we know that there is more engagement needed* in particular with tribal communities (see Chapter 7 Recommendations). We are grateful for the amount of involvement and input this project received in the interest of creating a product that is useful to Oregon in the long run.